Health Services in the Northern Territory – a History 1824–1970

VOLUME 2

Australian National University
North Australia Research Unit
Darwin 1991
Health Services
in the Northern Territory -
a History 1824-1970

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THE POSTWAR ERA: BEGINNING AGAIN

The sudden end of the war in August 1945 found the Commonwealth Department of Health unprepared to re-establish a health service in the Northern Territory. Although Mr CLA Abbott had been tactfully suggesting since early 1943 that the Department of Health begin to provide the nucleus of a health service again at Alice Springs in preparation for resumption of control, Dr JHL Cumpston always refused. No reason was ever given except that he would not move in the Northern Territory while the Army was in control(1). This attitude was carried a little too far. Dr Musso in Western Australia was carrying out extensive surveys for leprosy in the north and sought Dr Cumpston's permission to include some of the cattle stations on the Northern Territory side of the border; the answer was to the effect that while the army was in charge Dr Musso should not cross the border, an order which did not come from the Army.

As the war was moving away from the Northern Territory, an Interdepartmental Conference was held in Melbourne in February 1945 to plan the resumption of civil control. It was to be in two stages, the first stage being all the country south of Pine Creek and the second stage, as considered expedient, the area between Pine Creek and Darwin. Mr Abbott attended this conference(2). The Commonwealth Department of Health should have been alerted and had a plan in readiness. If they required further proof of the need for a civilian health service, the handful of civilians in Pine Creek wrote to Dr Cumpston and demanded the services of a doctor in that area. Dr Cumpston countered this by asking the Allied Works Council to have one of its doctors visit Pine Creek, but this was not feasible.

Dr Cumpston retired in May 1945 and was replaced by Dr Frank McCallum whose appointment was approved by Parliament on 25 May 1945. Some months earlier, on 24 November 1944 Brigadier RM Nimmo, Administration, Northern Territory Force, submitted a long report on the needs of the Territory under civilian administration(3). It included the health services and a copy was duly sent to the Commonwealth Department of Health.

Within days of taking over as Director General of Health, Dr McCallum sent one of the senior quarantine staff, Dr AJ Metcalfe, to take stock of the hospitals at Katherine, Tennant Creek and Alice Springs. The two latter hospitals had been occupied by army hospitals and were in usable condition but not so Katherine Hospital. Action was taken to recover from the army the equivalent in furnishings and equipment to that recorded in the inventories in 1942.

A few weeks after his appointment, Dr McCallum became seriously ill and died several months later. Dr Metcalfe, one of the senior staff in terms of long service, acted in the position of Director General of Health and a couple of years later his appointment was confirmed. Years of experience as a quarantine officer did not equip him for the role of a guiding force in the development of a health service in an underdeveloped territory. In a very short time Dr Metcalfe let it be known that his responsibilities did not extend beyond the four prewar hospitals, Channel Island Hospital and the Aerial Medical Service. He maintained that a health service to Aborigines was not his responsibility, so the Welfare Branch had to build its own outback hospitals staffed by Registered Nurses. Years later he
was of the opinion that Darwin would never develop; he thought it might have apparent peaks of development but that it would ultimately regress.

There was no one at the local level in the Northern Territory to organise a health service. The only remaining prewar officer was the Health Inspector, Mr Lyle M. Tivendale. The time was ripe for a policy document. Army doctors had provided an outline but no one in the Canberra office had a vision broader than the restaffing of the four prewar hospitals. There was an urgent need for one experienced medical administrator to provide direction and give the Public Service Board a clear outline of the staff required for the job. The position of Director of Health was not advertised; instead, Dr Metcalfe appointed and promoted a most inexperienced young man.

During the last year of the war it had been necessary to appoint an army doctor as Chief Medical Officer to provide the necessary authority in matters of civilian sanitation in the southern region. There were two doctors remaining with the Camp Hospital that replaced 109 AGH at Alice Springs and Dr John McGlashan, a 1942 graduate, was one of them. The Medical Board had lapsed from February 1942 and there was no authority to register doctors or nurses in the Northern Territory. Dr McGlashan was made the new Chairman of the Medical Board and on 1 November 1945 he and Captain AR Scott-Orr registered themselves. The first civilian registered was Dr Leigh Wallman on 18 February 1946 when he was appointed to Katherine Hospital.

**Emergency at Daly River**

In February 1946, well before the re-establishment of a health service in Darwin, there was an emergency medical call from the police station at Daly River. It was the northern wet season and the heavy rain had caused the usually beautiful Daly River to flood. Mrs Eileen Fitz, the wife of Constable Tas Fitz, was seriously ill and their transceiver was out of order. Mrs Fitz had done much to help others stranded in the outback and now it was her turn to need help. On 24 February Tas Fitz despatched one of his Aboriginal trackers with a note for the policeman at Adelaide River. It took two days for Nipper to circumvent the swamps and cross flooded creeks to reach his destination. The message was then passed by telephone to the police in Darwin.

There were few army doctors left in Darwin and it was quite impossible to land an aeroplane at Daly River. Father Frank Flynn, who was a doctor and recently demobilised from the role of an army chaplain, volunteered to go to Daly River if the Navy could provide transport. The boom-defence vessel *HMAS Kangaroo*, carrying an extra launch with two powerful engines, set out for the Daly River. Mr Leo Hickey, a Territorian with long experience in coastal waters, and familiar with the dangerous bores in the river, went as a guide. These bores are a flood of tidal water forced up the river estuary by the incoming tide. In under 24 hours *HMAS Kangaroo* was off the mouth of the river and the launch was lowered. Travelling against the force of the flood it took another day to reach the police station. Mrs Fitz was secured on a stretcher and taken aboard with only men to tend her during the journey. It was much more dangerous to go down the river than up it, but there were skilled hands to control the launch and they were back at the ship before dark that day. Mrs Fitz was delivered safely to Darwin Hospital but there were few service personnel still remaining to care for her. A few days later she was flown to Melbourne where she made a good recovery(4).
Postwar Appointments

Immediately postwar the Commonwealth Government decreed that ex-servicemen and women were to have priority in all job vacancies. This policy, strictly applied, eliminated some of the prewar nursing staff who wanted to return to the Northern Territory. The position of Medical Superintendent at Darwin drew several good applications, one being from Dr Stephen D Watsford who was still with the RAAF. Although Dr Watsford had served five years with the RAAF, they refused to release him. Dr Watsford did come to the Northern Territory later but by that time Dr Metcalfe was soundly entrenched in Canberra and would not delegate authority.

Apart from the lack of strong leadership, the next greatest deterrent to recruitment and retention of good staff was the lack of accommodation. Many houses had been destroyed or damaged by bombs and those remaining had been undermined by white ants. On top of that 'all baths, stoves, laundry coppers and other essential facilities had been removed by the Services', and there was great difficulty in obtaining replacements(5). Darwin Hospital had only three family homes. As the Department of Health was not a part of the Northern Territory Administration, it had no claim on Government housing or furniture. Mr AR Driver, who replaced Mr CLA Abbott as Administrator in October 1946, was quite blunt that other public servants required houses more than doctors did(6). He overlooked the fact that other people would not remain happy for long without the security of a well run hospital. Men had lived rough throughout the war but when wives with babies arrived to find houses without furniture, refrigerators, or even overhead fans they just wept and would not stay.

Army Huts Become Houses

The iron Sydney Williams huts in the many large army camps at Stuart Park, Parap, Winnellie and elsewhere at least offered a roof and a little privacy but these were excessively hot. The low folding iron beds of the army were the only furniture in abundance; they were uncomfortable and when enveloped in a mosquito net added to the airless atmosphere in the huts. However, people had to live somewhere. The cream of the army housing was the American Hospital at Nightcliff; it had a sewered toilet, shower and a utility room shared between two wards, and hot water services for those who moved in first. These wards were flywired and in that era, flywiring was a luxury. People planted papaws and bananas between their units and lived quite comfortably until the last occupants were rehoused in 1959. Some people managed to acquire a ward and transported it elsewhere as Nightcliff began to develop. The late arrivals were less fortunate and sought shelter in Vestey's meatworks on Bullocky Point where they divided up the floor space with partitions of old army canvas. This building was crowded and reminiscent of the camps for refugees in war-torn Europe with the exception that they were not cold. The meatworks was cleared about 1955 for the construction of Darwin High School which, shortly afterwards, became the first fully airconditioned building in Darwin. It was seen as a luxury when so many people were without houses.

The army camp at Winnellie was occupied by mixed race people who returned from Balaklava, South Australia and elsewhere. Without social workers, or welfare officers, Winnellie developed into a slum with all the associated problems of overcrowding. In the 1960s the suburb of Rapid Creek was built to rehouse the people from Winnellie, but by that time another generation had grown up under less than desirable conditions.

The Allied Works Council had built hundreds of very small huts, some in groups and others under any clump of shady trees. The largest camp of huts, dubbed Belsen, spread from Smith Street near the Catholic Church to Daly Street and through to Cavenagh
Street. Many single men lived in these huts for the first ten years postwar. The one compensating factor was that nobody paid rent for the wartime buildings.

The prewar slums in Cavenagh Street had been eradicated by the army and were not permitted again postwar. The Chinese community were the first to open shops but even they were restricted as their suppliers in Hong Kong and Singapore took many years to recover from occupation by the Japanese. It was the era of shopping by catalogue from David Jones’ and Anthony Horden’s large stores in Sydney.

**Free Medical Service**

No doctors were permitted private practice in Darwin for several years after the war. This policy had been introduced by Dr CE Cook in 1927 and was still upheld. The prewar Medical Benefit Fund was not recommended as it was the Labor Government’s policy to provide a free medical service, the Northern Territory being the starting point. As about two-thirds of the Northern Territory population were Aborigines without a monetary income, this was a practical policy. All medicines prescribed by Government doctors were free and included the medical kits provided in the outback. Mrs Hilda Abbott had been instrumental in having medical kits supplied once more, this time through the Red Cross and the army hospitals during the war; the Department of Health resumed this responsibility. The medical kits were expanded to meet the needs of large Aboriginal communities. The kits were also supplied to mining companies and other developing enterprises that could have afforded to pay. Everyone received free medical care and free medicine. There was no chemist shop in Darwin until September 1953.

**Restaffing the Hospitals**

The prewar staffing establishment for the four hospitals in the Northern Territory was resurrected and as no new policy had been developed, the Public Service Board had no alternative but to apply the previous standards. The opportunity to introduce change had been lost. Darwin Hospital was entitled to three doctors, nine Sisters and nine student nurses for an estimated bed occupancy of one hundred and twenty per day(7). The number of inpatients averaged about eighty due to a marked falling off in Aboriginal patient occupancy. The Aborigines had enjoyed hospital care during the army occupation, but with the cessation of medical visits during the first year postwar, the numbers in hospital decreased.

Advertising for staff was undertaken from the Canberra office while interviewing was carried out by Public Service personnel at each Customs House in the capital cities. There were over one hundred and fifty applications from Sisters for Alice Springs Hospital and another one hundred or more for Darwin. People were being told they were too late, that applications had closed. In spite of this many who applied were not available pending release from the Services.

Six Army Sisters in Darwin applied to remain and work there. The Principal Matron with the Army sent the applications to Canberra but none were accepted. All new staff were sent from interstate. In January 1946 Mr Abbott asked for a civilian doctor as a matter of urgency as all civilians had to go to the Army hospital at Berrimah. Dr Metcalfe replied there was no point in sending a doctor without nursing staff. Matron Mary Vie Roche (known as Molly) was appointed in charge of nursing at Darwin Hospital and took over that position on 6 April 1946, a role she filled for two and a half years. Matron Roche was well qualified, having completed general nursing, midwifery and infant welfare courses in Sydney. She then spent six years in the Australian Army Nursing Service in Greece,
Israel, Papua New Guinea and Morotai and brought with her to Darwin a strong sense of duty and discipline. She was to find the laissez-faire administration in Darwin almost a nightmare after the well run army hospitals. The RAN medical team had left Darwin Hospital on 22 March and had been replaced there by the remaining army doctors and nursing staff from Berrimah. Dr CR Wibur, a senior quarantine officer from Sydney, was sent to effect the handover which was officially achieved on 26 May 1946(8). As mentioned earlier, Army doctors, Sisters and some AAMWS remained longer. There have been comments that the Army walked out and left them but this is not so. If there had been a master plan the Public Service Board would have been more adequately equipped to provide the required staff in terms of cooks, cleaners, laundry and clerical staff. Mr Harvey Burton was the first member of the clerical staff. He knew the Territory well having been born and reared in Darwin; he joined the Army in Darwin and was demobilised there after the war. Harvey Burton knew how to get things done and it was he who helped Matron Roche with the rugged task of organising the wards as a civilian hospital. Both worked long and hard to get the hospital functioning.

Sister Eva May Stammers was appointed as Tutor Sister and Deputy Matron. Matron Edith McQuade White, a prewar Sister and Principal Matron with the Army for the first two years of the war, applied to return to Darwin. Her application was overlooked by the many people involved in recruitment; she did come back later but found the situation so chaotic she did not remain long. Others among the early postwar staff were Sisters Hilda M Hildyard, Evelyn A Harris, Georgina H Shaw, Emma MM Head, Elaine W Cooke, CV Davis, D Zapper, Alma M Mathews, Rita F Hill, EP Cobcroft and AG Evans. Sister Stammers worked in the wards as well as being a tutor to the student nurses. The student nurses, recruited by the Public Service Board and sent to Darwin, all lived in the prewar home on the Myilly Point side of the hospital. There were two homes; the student nurses used the home nearest the sea while the Sisters and matron occupied the home nearest to Mitchell Street. Of the three family homes attached to the hospital, one was occupied by the pharmacist, Mr Kelleher, and his family and the other two houses by doctors. When the Sisters Home in Lambell Terrace was built in 1952, the previous student nurses home was made available for single men and remained their accommodation for many years. There was no special room set aside as a school of nursing. The students were taught in the Board Room of the hospital in the main Administration Block.

**Repair of Darwin Hospital**

Darwin Hospital had not been reconditioned by the Services. Repairs and painting had been discussed on paper but not carried out. When the street end of Ward 1, damaged by bombing, was repaired it became the first postwar dental clinic and later the blood bank. Roofs still leaked and, all told, the hospital was a depressing situation. The front entrance was a dust bowl; it was not landscaped and sealed until mid-1950, due largely to disagreement over which Department, Works and Housing or Health, should pay the cost(9).

Dr Bruce Kirkland was sent back to the Northern Territory for a few weeks to instruct Dr John McGlashan, whom Dr Metcalfe had appointed Chief Medical Officer. This young man did not want instruction; he was enjoying himself and went on doing so. It was an embarrassing time for Dr Kirkland and as he had nowhere to live, he moved into the unoccupied pathology laboratory and slept on its narrow verandah. There was no yarning over a cup of coffee with Dr McGlashan in the evenings, a time when gems of information can be passed on without seeming to do so.

One of the first medical officers appointed to Darwin Hospital was Dr LW (Bill) Alderman early in June 1946. His cousin Tom Turner of the Northern
Territory Police had spun many yarns of adventure in the great outback and the young doctor, a 1944 graduate from Queensland, came to experience the outback for himself; he was not disappointed. Darwin Hospital had not been repaired and there was nowhere to live. Dr Alderman shared the pathology laboratory with Captain Jack Slade until his transfer to Katherine Hospital and later to Alice Springs.

The 'Kid from Koepang'

Excitement was not long in coming. On 7 August 1946 Darwin made front page news when a Dutch Air Force Dakota aircraft landed with an unconscious child draped across a wheel strut. Tough airmen were shocked but acted quickly when they realised the child was still alive. The flesh was torn away from the left shoulder blade, exposing the scapula and his legs and arms were severely burned. He was deeply unconscious from exhaust fumes and was rushed to the hospital to the care of Dr Bill Alderman. Questions were asked later. The twelve year old boy, Bas Wie from Sabu Island south of Timor, was a war orphan; he had been through enough to make him want to run away. Bas Wie was in Koepang on Timor when the Dutch Air Force aircraft, flying from Batavia (Jakarta) to Brisbane, landed to refuel. He climbed into the wheel bay (nacelle) and hid without thought of what might happen when the wheels were drawn up. During the three hour flight to Darwin he was overcome by exhaust fumes and when the aircraft touched down his limp body was caught on a wheel strut and did not fall onto the runway. Within days the story of the stowaway orphan won the hearts of Darwin people; they wanted to keep him. After about three months in Darwin Hospital, the Administrator, Mr AR Driver, gave the boy a job at Government House where he lived for the next five years. He then lived with another Darwin family until he grew up, married and set up his own home.

The next doctor to arrive in Darwin was Dr Bruce Cumpston, a son of Dr JHL Cumpston, who came by air in a DC3 in September 1946 accompanied by his wife and a two months old infant. After an all day flight they were taken to an empty house in the Myilly Point area. The shock was considerable as they had previously been with the British Colonial Service where conditions were comfortable in spite of the war. Dr Cumpston had spent five years in Tanganyika (Tanzania) and later set up a hospital on Mauritius to care for over two hundred victims of poliomyelitis; his experience was both valuable and relevant.

Overseas Airways and Quarantine

The workload expected of three doctors in Darwin, Dr McGlashan included, was enormous. They could have managed had it not been for quarantine duties. Overseas airways were developing rapidly and all flights from Britain, Europe and Asia entered the country through Darwin. QANTAS flying boats usually arrived about 4 pm and remained overnight but other airways arrived between 2 and 3 am at least five nights each week. Doctors had to be on time whether the aircraft was early or late; any delay was seen as a threat to the viability of the air service and was promptly reported to the Federal Government. The same few doctors were on call for the hospital and the public complained that they waited hours for a doctor.

QANTAS established a rest house at Berrimah in what had previously been the Army hospital. Passengers stayed overnight or were taken there for a shower and a meal before proceeding on their journey; meals were not served in flight. Sister Audrey Jaffer returned to Darwin and for several years was in charge of a medical clinic in the QANTAS complex. As well as passengers passing through, Sister Jaffer provided daily health care and an infant health clinic for QANTAS staff and their families. She had a warm personality and was held in high regard. There were over two hundred people, including
the children and the clinic held there kept some of the pressure off the outpatients department at Darwin Hospital. Over twenty thousand travellers per year were catered for at Berrimah(11). Although the work was not hard, the hours were long; Sister Jaffer was continually on call. Dr AJ Metcalfe considered his department should provide the service but the local QANTAS manager, Mr HE Shannon, insisted that as Sister Jaffer was accommodated by QANTAS she should remain on their staff. Sister Jaffer left in about 1951 to do a tutors course in London and was replaced by Sister PG Lord; when she resigned on 18 July 1953 the service was downgraded to a first aid clinic.

Dr John McGlashan established his headquarters office in the Administration block at Darwin Hospital. This gave him undue influence within the hospital itself. It also gave the impression that he was on the staff of the hospital and people complained that he was never there.

**Staffing of Katherine, Tennant Creek and Alice Springs**

The other three Northern Territory hospitals were staffed before Darwin Hospital. Two Army doctors, Mossy Hain and L Claude Lum were at Alice Springs, and Dr Peter Leslie at Tennant Creek. All were experienced men with a working knowledge of both the hospitals and the outback. Katherine Hospital was not so fortunate.

Nursing staff for Alice Springs arrived by train from Adelaide at 2 am on 16 December 1945. Among these first arrivals were Matron Ethel M Jackson and Sisters Evelyn Brown, Audrey E Dobb, Vera Ann Dunhill, Winifred Reid, Philippa F Becher and Nellie M Jacobs. The latter was promptly sent to Tennant Creek where Dr Leslie had just taken over as the first civilian doctor. There followed a coal miners strike which caused cancellation of further trains for some days; Sister Stella M Kerr was delayed in Adelaide by the strike. A country struggling to get back on its feet after a disastrous war could have done without strikes.

Dr Mossy Hain does not seem to have stayed long after the war and was replaced in April 1946 by Dr Jack de Vidas. The latter made a study of Aboriginal midwifery practices. He and Dr Lum did not get on. When Dr Lum transferred to Darwin for a time, Dr Alderman, who had been at Katherine, then took over as Medical Superintendent at Alice Springs. For most of Dr Alderman's time he seems to have been the only doctor providing medical care at the hospital as well as an aerial medical service. More is recorded of Dr Alderman in Chapter 18.

As already mentioned, Dr Peter Leslie was the first postwar doctor at Tennant Creek. Katherine Hospital was more difficult to staff. As soon as Katherine Hospital ceased to be a hostel for travelling service personnel, men with the Department of Civil Aviation moved in and occupied it. They even presumed to make structural alterations to suit their own convenience. That Department was given notice on 22 August 1945 to clear the premises for use as a hospital; the war was over. These men had nowhere to live and work so they remained where they were until removed in mid-March 1946(12). In January 1946 Dr Mossy Hain from the staff of Alice Springs Hospital was sent north to get things moving at Katherine and to find the hospital's missing equipment. The army hospital at Berrimah put together a box of equipment and despatched it to the care of Captain Sawyer, who was still providing medical care for the people of Katherine. The equipment sent from Berrimah was already old and worn out.

Dr Leigh Wallman from Adelaide arrived by air on the evening of 23 February 1946 having left his wife and children to follow later. There was little time for a medical hand over as Captain Sawyer flew out the next day. Katherine had not been without a doctor.
The hospital was still occupied and when Dr Wallman inspected it, he suggested it might be more practical to build a new hospital nearer to the people. No one heeded that gem of advice. In the meantime he camped in an iron hut and dined at Dooley’s Cafe. The Sisters Home at the hospital was the only building not in a state of gross neglect and suffering damage from white ants. There were only four beds, an old table and an unusable stove. To compensate a little the Army left an ambulance and a driver for a few months.

Prior to the arrival of Dr Wallman, Guinea Airways had flown patients to hospital in Darwin as necessary. Dr Metcalfe put an immediate stop to this; no patients could be flown without his prior approval by telephone from Canberra(13). It could take hours for a telephone connection and Guinea Airways could not wait. The RAAF ambulance was still flying but only until the end of March 1946.

Nursing staff could not proceed to Katherine until there was somewhere to live. Reconditioning of the hospital was the responsibility of the Department of Works and Housing. In the meantime Sisters MG Blackburney and J Kay left Sydney for Alice Springs on 25 February and worked there until they could be accommodated in Katherine. It was May 1946 before the hospital was ready to receive inpatients.

Dr Webster at Tennant Creek

Although there were only five doctors registered by the Medical Board in 1946, Tennant Creek was never without a doctor. Dr Leslie transferred to Darwin about November and was replaced by Dr Victor H Webster, a man with a reputation. Dr Webster had been the subject of a Royal Commission in Western Australia in 1934 when he had misdiagnosed tertian malaria as cerebral influenza and over two hundred Aborigines and several white men died before someone was sent to check on the diagnosis. Sisters with the Australian Inland Mission at Halls Creek and Fitzroy Crossing recall that epidemic as a nightmare; they knew they were dealing with malaria but Dr Webster was the officer in charge at Wyndham then(14). He had not mellowed with the passage of time. In January 1948 he was elected by the people of Tennant Creek as their representative in the Legislative Council, a body set up by the Commonwealth Government to provide a degree of local government. There were thirteen members in the Council, six senior public servants, six elected members and the Administrator of the Northern Territory as the President, with a casting vote. Dr Webster was a most vocal member and used the Council as a forum to attack senior officers in the Department of Health at both Canberra and Darwin levels. There was an element of truth in much of what he said and the local newspaper in Darwin gave him front page coverage. He had a harvest during the twenty-eight day industrial strike at Darwin Hospital in 1948 and convinced the Legislative Council that it should conduct an inquiry in the aftermath. The Chairman of the Inquiry departed in the midst of it and Dr Webster presumed to take over and to submit a report in which he slated other members of the medical profession.

A One Month Strike in Darwin

The North Australian Workers Union, which had become most aggressive and vocal, filed a log of claims for higher wages for all domestic staff, cleaners, laundresses, cooks and other kitchen staff, yardmen, orderlies and garbage collectors; in fact everyone except the doctors, nurses and a few clerks. In August 1948 the industrial staff were called out on strike and picket lines established to ensure no one worked. The nursing staff and doctors were intimidated. That strike lasted twenty-eight days before the Public Service Board gave in and granted every demand. People in the community were wonderful; volunteers cooked and served meals and did cleaning. Captain Jack Slade was thrown the keys to the
laundry by a reluctant striker, but after the first day he helped with the washing in domestic coppers under the staff quarters. Dr Bruce Cumpston dealt with the garbage and also delivered soiled linen to private homes and then picked it up again later. By the 28th day, without a day off, several staff had had enough. Matron Roche said it was the straw that broke the camel's back and, when no one in Canberra had the grace to say thanks for a job well done, she resigned at the end of the year. Dr Webster's report seemed to carry some weight and Dr McGlashan left in October and Dr Bruce Cumpston in December. Dr Webster unsuccessfully applied for the vacant positions.

Dr Bruce Kirkland returned for a few weeks to bring some stability to the situation prior to the appointment of Dr Edward B Gunson to the position of Director of Health. Dr Gunson, a physician, had graduated from Edinburgh in 1910 and had gained wide experience in administration. It is uncertain how he came to be appointed to the Northern Territory as a man with a monocle could have been wide open to ridicule. He had a quick wit but a kind tongue and in a short time was fondly referred to as Uncle Ted. It was said that he was conservative yet he did not hesitate to delegate medical work to Sister Jan Cowie in the Aerial Medical Service and he supported her decisions. There was an acute shortage of doctors until more staff arrived in the latter half of 1949. Dr Gunson let it be known that he was there to restore confidence in the Northern Territory Medical Service and not to become involved in local politics. However, Dr Webster, piqued over not being promoted, continued to attack his employers, this time over the epidemic of measles in Central Australia. He demanded a Royal Commission into the conduct of the health services and this brought comment from the Minister on Dr Webster's previous involvement in a Royal Commission. Oddly enough he was surprised and shocked when his services were terminated on 16 June 1949 and made one last bid for the Legislative Council to take up the cudgels on his behalf but the Council was cautious.

During his time at Tennant Creek, Dr Webster wrote a handbook, *Bush Medicine*, for use by people living in isolation. It was a crude little book in comparison with the earlier book compiled by Dr Mervyn Holmes. *Bush Medicine* was published by Jackhammer Press in Tennant Creek. Dr Webster asked Captain Jack Slade to promote sales around the outback at 30 shillings per copy. This book had not been vetted by the Department of Health and was never revised or reprinted.

Dr Thomas A Nowell, an Englishman, replaced Dr Webster at Tennant Creek and was later the pathologist at Darwin Hospital for several years. He was as quiet as his predecessor had been noisy. He in turn was replaced by Dr Jack Sunderman and then in December 1953 by Dr RC 'Dick' Webb for four years. In spite of the humble and inadequate hospital, the township of Tennant Creek enjoyed the services of excellent doctors for several years.

Dr EB Gunson gave the Canberra hierarchy clear guidelines on his requirements for an adequate health service but, as Dr Metcalfe pointed out to the Government, he could not expand the staff until he had houses to accommodate married men.

Drs Moses Sendak and Robert G Mair arrived in January 1949 and for a time were the only doctors in Darwin Hospital. Quarantine duties, often in the middle of the night, plus being on call for emergencies at the hospital, caused loss of sleep and this took a heavy toll on their stamina. Drs D Clark Ryan and Alfred H Humphry arrived in April 1949. At that time the Department of Health had four houses occupied by Dr Gunson, two hospital doctors and the hospital secretary. Dr Humphry spent his first ten days in the Darwin Hotel before the Navy offered him quarters in exchange for his professional services to the Navy. Other doctors who came later lived in second-rate private accommodation. The Administrator, Mr AR Driver, was emphatic that medical staff had no priority for housing.
It was only through Ministerial pressure that later Administrators began to make available some new houses that were being constructed in Schultz Street near the hospital. For several years single men on the staff resided in Ward 1 at the hospital. The dental clinic was still in the newly repaired street end of the ward and single men occupied the rest. Jack Slade lived apart in a small hut near the pathology laboratory.

**Dr Fenton's Last Fligt**

During the time of acute staff shortage at the end of 1948, Dr Clyde Fenton returned for three months and was housed with QANTAS at Berrimah. Still with a great yearning for the old days in control of an aircraft, Dr Fenton jumped at the opportunity to conduct a medical clinic at Katherine on 23 December 1948, right back in familiar country. Captain Harry Moss was to fly him but the airport was closed due to fog and they had to wait; Harry Moss walked back into the hangar and Dr Fenton taking advantage of the situation climbed into the aeroplane and took off without a clearance. He had a wonderful day. Civil Aviation grounded him at Katherine but he had a patient for Darwin Hospital so ignored everyone and even landed at Pine Creek for good measure. Dr Fenton has told his version of this episode as an epilogue in his book. That was his last flight; there was no longer any room in the air for pilots who would not abide by the Air Safety Regulations.

**Health Office at Larrakeyah**

Dr Gunson saw the need for a separate headquarters office apart from the hospital and the Army made available a ground level house within the Larrakeyah Barracks area. It was on the southern aspect of the main road about one hundred metres from the entrance to the barracks. This building required some minor alterations and was occupied in late August 1949. All staff required entry permits and these were issued on 8 September to Dr Gunson, Dr Humphry, Mr Lyle Tivendale, the two pilots Jack Slade and Harry Moss and Sister Meryl Nichol. In addition there were three clerks, Messrs C Gordon Rowe, John R Lucas and J Harvey Burton, two typists and two female assistants. The staff continued in this office until an elevated house on the western aspect of the Esplanade was made available in 1955. There was a great paucity of records for the first three postwar years and it was Dr Gunson who re-established a normal filing system. Among the early clerical staff Mr Harvey Burton is the one remembered for his thoughtfulness and practical help. He had been born in the Northern Territory and understood the needs of newcomers. He helped wherever he could.

Dr Gunson was a sound administrator and delegated work. Dr Humphry was given oversight of quarantine work, the leprosarium and the radio medical calls. Dr Clark Ryan was delegated the routine aerial medical visits to the outback; it was planned to put these visits on a regular basis. Prior to the arrival of Dr Clark Ryan, Sister Jan Cowie had been doing the aerial medical work; unfortunately Dr Ryan did not stay long.

After the departure of Mary Roche in October 1948, Darwin Hospital was without a Matron until the arrival, by bus, of Sister Cummings. Travel to Darwin by bus was new; before the war everyone arrived by ship and postwar by air. Alice Springs had a train service and new staff enjoyed the journey on the Ghan. The new Medical Superintendent, Dr Moses Sendak, arrived from India where he had served with the British Colonial Service. The culture in Darwin was somewhat different from that in India and no one jumped when the new doctor snapped his fingers. Dr Sendak was soon at loggerheads with the nursing staff and had Sister Cummings transferred to Alice Springs. As Nurse Hilary Montgomery had an arm in plaster and could not do physical work, she was put in
the Matron's chair and addressed as Matron. This lasted until the arrival of Matron Dorothy M Ross about mid-1949. Matron Ross was British and had also served in India. Having similar backgrounds the Medical Superintendent and Matron should have worked as a team but their only common ground was an intolerance of Aborigines, in particular the few working as gardeners and hospital cleaners. Dr Sendak stayed nine months before he packed his bags and went south by air. Matron Ross stayed a couple of years until replaced in 1951 by Matron Evelyn Lee Steere, who had earlier been the Home Sister.

**Dr Gordon Birks, the First Surgeon, 1949**

The Department of Health advertised at home and abroad for a surgeon. Dr W Gordon Birks, an Australian who had been in Britain ten years and was anxious to bring his children to a land with greater space and outdoor freedom, applied. In spite of the recent bad publicity given to Darwin, the advertisement was attractive with fares paid and accommodation provided. Dr Birks had grown up in Broken Hill and had visited Alice Springs while doing medicine in Adelaide. No one at Australia House in London had ever been to Darwin yet they were assessing the suitability of people to work there. Leaving his family to follow by ship a few months later, Gordon Birks flew to Darwin early in August 1949. The flight was delightful with overnight stops at Cairo, Karachi and Singapore on the way. Flying at about 18,000 feet the passengers enjoyed the scenery. There was no house available so he shared a house with another doctor. Dr Moses Sendak was still Medical Superintendent but he was not well and resigned a few months later; Dr Birks saw him off at the airport then hastily occupied the vacant house on Myilly Point so that he would have somewhere for his family. It was one of the earliest houses, with central rooms surrounded by wide verandahs. There was neither flywiring nor overhead fans and everyone sweated under mosquito nets at night. The Birks family arrived by ship in Adelaide and then flew to Darwin. It was the children who suffered most from mosquitoes. They scratched the bites which then became infected. Although the sea was on both sides of Myilly Point, they could not swim because of box jellyfish (*Chironex fleckeri*) with their wicked long tentacles. Dr Birks had first hand experience with the box jellyfish when he heard a man screaming on Mindil Beach; he raced down the steps to the beach but the victim was already dead. At a later date one of the doctor's sons was stung around the legs while in shallow water. At the time the treatment was to rub the area with wet sand to remove the tentacles.

For a time there was no Medical Superintendent of Darwin Hospital and Dr Birks found himself acting in that role when his only interest was in clinical medicine and surgery. He was involved with both the Medical Board and the Nurses Board and the latter took up much time as they thoroughly reviewed the nurses' training. Records of these meetings have since disappeared. On 11 February 1952, after the arrival of Dr Stephen Watsford, the Nurses Board was reconvened once more. However, the training school for nurses had been continuous throughout although the number of students was never more than twelve. Dr Bill Alderman, who had spent a year with the Royal Flying Doctor Service at Broken Hill, returned to Darwin Hospital in 1950 as the Medical Superintendent and remained until mid-1953 when he was replaced by Dr John V Quinn. The appointment of a Medical Superintendent released the surgeon, Gordon Birks, for clinical work.

Dr Birks visited Alice Springs, Tennant Creek and Katherine once a month for elective surgery if required. Apart from that he frequently flew to Alice Springs for emergencies. Dr Bert Welton would phone from Alice Springs but it took ages to receive a call since it was manually operated. Dr Welton would explain the case and then add a reminder to bring warm clothes as it was frosty at the Alice. Other operators along the telephone line would hear the call and frequently contact the doctor on his way through with Trans Australia Airlines which routinely landed at Katherine, Daly Waters and Tennant Creek.
One evening he had just finished speaking to Dr Welton when the operator at Daly Waters phoned to ask if the doctor would see his wife at the airstrip. On another occasion the operator at Tennant Creek knew an old man was in trouble with his blind eye so he let Dr Tom Nowell know Dr Birks was coming through next day. Dr Nowell phoned to say this man's blind eye had been seriously injured and should be removed. When the hospital staff at Tennant Creek heard TAA coming in to land they started the anaesthetic while the ambulance raced to the airport where the pilot let the doctor off on the airstrip before taxiing. The operation was successfully completed before the aircraft had refuelled; there was no delay. The operating theatre at Tennant Creek was still a crude section of the entrance hall and waiting patients had to go elsewhere. It was intensely hot but, as the atmosphere was dry, perspiration was not a problem although thirst certainly was. One emergency visit to Tennant Creek required an overnight flight with Harry Moss in a Dragon aircraft in the midst of the wet season. There were storms all the way and the aircraft lights shone out on a wall of rain. Dr Birks was weary so slept for a while on the stretcher and when he awakened there was about three inches of water over the floor of the aircraft. Harry Moss handed him a spanner to undo a part of the floor to let the water out. As daylight emerged the doctor was most relieved to see the Stuart Highway below and a short while later they had landed safely.

Much of the emergency surgery at Tennant Creek stemmed from drunken fights. It was a one street town with two pubs, but in spite of that doctors and nursing staff seemed happy to spend time there.

When Dr Joseph Hayes, an Irish surgeon, was appointed to Alice Springs Hospital in December 1950, this reduced the work of the surgeon in Darwin. With time to spare Dr Birks undertook a medical survey with Dr E Max Nicholls at Bathurst Island. No written report of this work has been found. The surgical workload was no longer sufficient to keep him really busy. On top of that most wives living in Darwin found life restrictive and that, along with the heat, lack of facilities and the never ending shortages in shop supplies, convinced the family it was time to leave. At the end of 1951 he accepted a position at Yalloom in Victoria in the beautiful Gippsland bush and for some months the Northern Territory was again without a specialist surgeon.

**Dr Stephen Watsford, Director of Health**

The Northern Territory was also without a Director of Health. Just as Dr EB Gunson had begun to win the respect of the news media and reporting had become more supportive, the doctor announced his retirement on medical grounds. Harry Moss had flown Dr Gunson to Tennant Creek and, as he was not feeling very fit, he had Dr Tom Nowell take a chest X-ray which revealed what he suspected, carcinoma of the lungs. Dr Gunson sought advice from physicians in Sydney who confirmed his own assessment; he retired on 9 December 1949 and died a few months later(18). Dr AH Humphry was left in charge of the Department of Health until the arrival of Dr Stephen D Watsford late in 1950. His arrival heralded a new era and lent direction to a health service that had been struggling against overwhelming odds since the end of the war.

For Dr Bill Alderman, life at the hospital was always busy and certainly never dull. The Aerial Medical Service kept up a flow of interesting patients from the outback. These included a man from Borroloola with a kangaroo vertebra stuck in his throat and a man from Gorrie station, southwest of Mataranka, who had swallowed a small denture. The latter awoke in the middle of the night gasping for air and realised he had not removed his denture before retiring. He drove himself 160 kilometres to Katherine from where he was flown to Darwin. Dr Alderman used his new oesophagoscope to recover the denture.
At that time Darwin was the end of the line for men who had shed their responsibilities elsewhere. During the buildup to the wet season, the heat and humidity overwhelmed a few each year. One old man waited until the wet season growth had filled every gully with grass ten to twelve feet (3 to 4 metres) high. He disappeared from a ward of the hospital and in spite of an extensive search by police and citizens he was not found. Months later when the long grass adjoining the steep gradient of Gilruth Avenue was burned, the skeleton was exposed.

Dr Alderman remained as Medical Superintendent until the end of 1952. In that year a new Sisters Home, known as Lambell House after the street in which it was built, was opened. This building was described as a masterpiece in tropical planning and had spaces between rooms for a free flow of air. During the monsoonal rain in February 1953 the three level home was flooded. The water could not readily escape and built up to about three centimetres on each of the bedroom floors. The wardrobes were minute and the staff hung both clothes and footwear on the fixed louvres between the bedrooms and central corridor. There were no balconies on the two upper level floors and shutters had to be added to keep out the rain. There was no flywiring to deter mosquitoes so much of the free flow of cool air was restricted by mosquito nets over the beds.

The office for vaccination of potential travellers was on the ground floor of Lambell House. For several years also all the medical examinations for insurance and fitness for employment were also carried out there. Further east towards the spacious lounge room a store was converted in 1954 to provide a flat for Dr Helen Phillipps when she was appointed as the first Schools Medical Officer. The student nurses continued to live in the original Sisters Home which was spacious and airy until their numbers outgrew the building. Temira House was built in 1967 to cater for students and to provide a nursing school with its own lecture rooms.

Early in 1953 Dr John V Quinn was appointed as Medical Superintendent. Prior to that there had been other staff changes. The Home Sister, Evelyn Lee Steere, was promoted as Matron in 1951 on the retirement of Matron Dorothy Ross. Her pleasant personality ensured her popularity socially but she was not interested in the development of the hospital and allowed the nurses training school to become run down to the point that she recommended that Darwin Hospital should cease to have a school of nursing. More is recorded of that in Chapter 24. Among the nursing staff were some who made a lifetime career in Darwin. Sister Honor M 'Honey' Hayes became the Sister in Charge of the Surgical Ward where she served for almost thirty years. Sister Olga Lucas was a tower of strength in charge of the ward for Aboriginal women and children. Following the resignation of the surgeon, Gordon Birks, the hospital was without a surgeon until the appointment of Dr EJ Burton in June 1952. He was followed by Dr Peter J Blaxland in August 1953 and the hospital was never again without a surgeon specialist.

When Dr Stephen Watsford was appointed as Director of Health he took action to provide two positions for the first Resident Medical Officers. These positions were filled by Dr Roderick W Fisher who married Sister Anna B Macleod from Scotland and Dr William A 'Spike' Langford who married Sister Rita Magner from the hospital staff. Apart from three years in Europe as an immigration officer, Dr Langsford remained until the end of 1972.

A District Nursing Service Begins

The foundation for a District Nursing Service started in 1948 but without any planning at that stage. Sister Rosslyn Gordon from Melbourne came to Darwin as an industrial nurse with the Department of Works and Housing which had taken over from the earlier Allied
Works Council to rebuild Darwin. The inadequate service at the hospital in 1948 meant men requiring outpatient treatment could wait for hours when all that was required could be done by a trained nurse. There were about five thousand people resident in Darwin, most of whom were living in very inadequate housing. Sister Gordon initially lived in the American hospital at Nightcliff but was then provided with a house in the vicinity of Belsen Camp. Part of this old house was used as a clinic as most of her work at that time was with the men dwelling in the small huts that made up the camp. This camp occupied most of the land between Smith and Cavenagh Streets north to Daly Street. As homes and government hostels were built, the men moved into better accommodation and Belsen Camp was deserted. However it was not completely demolished until about 1955.

For the first decade postwar there were no private doctors in Darwin. In line with Dr Cecil Cook's prewar policy of a completely government-run health service and the Labor Government's desire postwar to have a free medical service, any mention of private doctors was seen as a threat to the system. However, the community at large was not satisfied; they were tired of waiting in queues and having to consult whichever doctor was available. On top of that many people objected to the lack of privacy of medical records, this was particularly so among public servants who made up a considerable proportion of the population.

Doctors with the armed forces were not permitted to attend the families of servicemen but occasionally helped at Darwin Hospital when there was a staff shortage. During the late 1940s Dr Carl Radeski was the army doctor at Larrakeyah and Dr M Kater was with the RAAF. It was Dr Kater who developed a lotion for the relief of prickly heat rashes in the era before there were overhead fans and airconditioning. Everyone had Kater's lotion in their medical kits.

End of Free Medical Service, 1955

By 1953 the Liberal and Country Party coalition Government was discussing moderate charges for medical services and the possibility of allowing private doctors. Private medical insurance was functioning and people were encouraged to join. Sir Earl Page, a medical doctor and then Minister for Health, visited the Northern Territory to explain what was in mind and to seek public opinion on the matter. Charges were introduced from 1 October 1955 at the rate of twelve shillings and six pence for a consultation and six pounds, six shillings per week for a hospital bed. Private patients were to pay more and have it refunded through the private fund. Aborigines and disadvantaged groups would continue to be treated without cost(19). The Aerial Medical Service ambulance and medical consultations in the outback would remain free.

In 1953 Dr Stephen Watsford shocked the Legislative Council when he mentioned that charges were a possibility. The 1955 legislation provided for private doctors although it did not exactly encourage them. Early in 1956 two young men, Dr Jerry Campbell with the RAAF and Dr Jim Brotherton with the Navy, declared they were fed up with the limits imposed on them and decided to branch out into private practice. They rented rooms at the Darwin Club in Mitchell Street and it was soon evident that people preferred to pay and have privacy and not have to wait in queues. After a couple of years Dr Campbell departed to see more of the world but Dr Brotherton loved Darwin and made it his home. In 1962 Dr Brotherton invited Dr Ella Stack to join the practice. In the meantime other government doctors had also moved into private practice and in spite of predictions to the contrary this aspect steadily grew.
The First Chemist Shops, 1953

For many years Darwin had no chemist shop; even Aspirin for headaches had to be procured from Darwin Hospital. Some of the Chinese shops carried a few popular items but the era of proprietary lines was only beginning and chemists still made up most mixtures as prescribed by a doctor. Mrs Beatrice Sweetman had an agency for Parke Davis products. The first chemist shop in the Northern Territory was opened by Mr Norman Brunskill and Mr John Cummings in Alice Springs early in 1953 followed by a shop in Smith Street, Darwin on 28 September 1953(20). They took over Mrs Sweetman's agency but business was limited by the lack of prescriptions from private doctors. Mr Terry Irvine took over this first chemist shop in January 1956; he married a dental nurse, Annette Manly, and made his home in Darwin. Mr Roy Barden came in 1954 and initially functioned as a pharmacist in Mrs Sweetman's shop until the following year when he moved into his own shop on the opposite side of the street. Roy Barden married Sister Doris Buscall from the hospital and he too remained in Darwin. These shops began to stock the new baby foods that were coming on to the market.

Darwin and the Northern Territory had begun to develop but it was a slow process due largely to apathy in Canberra. Dr Metcalfe always maintained that the apparent progress was a passing phase and things would stagnate once again, however time proved him wrong.

Endnotes

1 CRS A1928, item 715/8, part 3, AA, Canberra.
2 NT Administrator, Annual Report, Govt Pr, Canberra, 1946.
3 CRS A1928, item 715/8, AA, Canberra.
5 NT Administrator, Annual Report, Govt Pr, Canberra, 1946.
7 CRS A1928, item 715/45, part 2, AA, Canberra.
8 NT Administrator, Annual Report, Govt Pr, Canberra, 1946.
9 CRS F1, item 46/558, AA (NT) Darwin.
10 Bas Wie, pers comm, 1986.
11 Dept Health File 10/12/3, Darwin.
12 CRS A1928, item 715/90, part 4, AA, Canberra.
13 ...
15 Humphrey.
18 H Moss, 1986, unpublished manuscript in possession of author, Melbourne.
19 NT News, 8 Sept 1955.
Matron MV 'Molly' Roche was in charge of nursing in Darwin Hospital April 1946-late 1948. It was a rugged time and the month long industrial strike September 1948 was too much (photo: courtesy MV Roche)

L-R: Dr John McGlashan, Chief Medical Officer, Matron MV Roche and Dr LW 'Bill' Alderman at entrance to Darwin Hospital late 1946 (photo: courtesy MV Roche)

Above: In 1978 Bas Wie, a Darwin resident, met Dr Bill Alderman again (photo: courtesy: LW Alderman)

Left: On 7 August 1946 Bas Wie, a war orphan from Koepang stowed away in the undercarriage of a Dutch Dakota and fell across the wheel struts when it landed in Darwin. After several months in Darwin Hospital he went to live with the Administrator (photo: MV Roche)
Dr John V Quinn was Medical Superintendent in 1953-54 and again in 1974 during the cyclone. His special interest was surgery (Dept of Health)

Dr Pauline Wilson (nee Pascoe) as a medical student Darwin Hospital 1951. Appointed to the staff in 1956-continuing. She reared nine children of her own (photo: courtesy P Wilson)

Mr Harvey Burton, the first clerk, helped Matron Roche re-establish the hospital in June 1946. He was a great help to all new staff (photo: LW Alderman)

Dr Alfred H Humphry came to Darwin 1949 and was Director of Health 1954-1957. He planned the East Arm Hospital for leprosy and introduced a more moderate approach to the disease. He did much to eradicate malaria in the NT (Dept of Health)
Dr Ella Stack CBE came to Darwin in 1961 and entered private practice. She was Mayor of Darwin during post-cyclone Tracy reconstruction and first Lord Mayor in 1979. In 1985 she became Secretary of Health (photo: courtesy E Stack)
The new Sisters Home, Darwin Hospital was occupied February 1952. A staff kitchen and dining room were attached. Overhead fans were added in 1967 but it was not screened against mosquitoes (Dept of Health)

The 'brown house', used by doctors and dentists at Darwin Hospital 1951. On extreme right the Sisters Home (Lambell House) is under construction (photo: R Brock)
CHAPTER SIXTEEN

AERIAL MEDICAL SERVICE, DARWIN

In the latter months of the war, and for the first seven months postwar, the RAAF’s Communications unit provided the medical care for the civilian population on the isolated church missions and the cattle stations. During the war Dr Clyde Fenton often spoke of the prewar Aerial Medical Service but there was no possibility of his resuming that role again after the war; he had played a few too many pranks with the RAAF and was therefore one of the first from that unit to be demobilised. It was Dr Bruce Kirkland with 107 AGH at Berrimah who suggested to Flt Lt Jack Slade that he remain in the Northern Territory and recommence the Aerial Medical Service.

A model for the service had been established by the RAAF which had been providing transport for army doctors to visit the outlying missions on a regular basis. Lt Col HM Owen from 107 AGH, accompanied by Colonel Thompson, visited Oenpelli Mission on 20 January 1946 and examined the entire population. They arranged for eight people to go to hospital and ordered treatment for seventy-six others. Some of those sent to hospital were suffering from leprosy while many of those treated at home had primary yaws. There was no Acetylarasan available in the Army medical store so a small quantity of the drug was sent from Goulburn Island Mission. As there was no nursing sister at Oenpelli, non-medical missionaries had to give the injections. Most said later it scared them stiff, but someone had to do it.

On 29 March 1946 Oenpelli received its last visit by the RAAF Service. On 4 April all outback stations received an identical message by radio, ‘Air and Mail service now finished’, signed J Slade, RAAF(I). Jack Slade went south to be discharged from the RAAF and to arrange the conversion of two wartime De Havilland Dragon aircraft for use as aerial ambulances. The Dragons were twin-engine biplanes but were without radios as there was no radio equipment sufficiently light weight to use in them.

Captain Slade returned to Darwin and the postwar Aerial Medical Service came into being on 21 June 1946. However the aircraft were not ready by then and the people in the outback were begging for help. There was a shortfall in medical supplies and no pharmacist at Darwin Hospital to dispense what did exist. On top of that there was no transport to deliver supplies. The first aeroplane VH-ASK was ferried from Coffs Harbour to Mascot on 25 June for conversion and it was available in Darwin on 5 September. The second aeroplane VH-ASL was taken from Darwin to Mascot on 14 August where it was overhauled and converted and returned to Darwin on 13 November 1946. A third aeroplane that had been damaged was retained in Darwin and used for spare parts. The two wartime aircraft gave long service, VH-ASK until 4 January 1954 and VH-ASL until 27 July 1955 when they were replaced by three-engine drovers(2).

The first emergency flight postwar was to Milingimbi on 9 September 1946 when Sister Shaw from the hospital travelled as the escort. For the first couple of years hospital Sisters were called upon before a Sister was appointed to the work full-time. Medical visits were re-established as from 2 October when Dr LW Alderman was flown to Snake Bay on Melville Island and to Bathurst Island Mission. That was a short flight and did not require an overnight stop or refuelling along the way. On 13 and 14 October Dr Alderman visited Goulburn Island, Milingimbi, Yirrkala and Elcho Island and stayed overnight with
the Shepherdsons at Elcho Island. A total of eighty-five patients were seen. There were then only three trained nurses at coastal missions, Sister Marita Scullion at Bathurst Island, Sister Hilda Villiers at Angurugu on Groote Eylandt and Sister Olive Peake at Milingimbi; the rest of the medical care fell to experienced people like Ella Shepherdson or whoever happened to be available. Occasionally, when there was a medical emergency during the absence of the official ambulance aircraft, one of two commercial pilots, Roy Edwards or Harry Moss, who were operating charter flights, were called upon to go to the rescue.

There were many hazards in flying, the biggest being the vast distances that had to be covered. At times, with a headwind, it could take up to seven hours to fly from Darwin to Groote Eylandt. Whenever possible long flights were made at first light in the morning to ensure sufficient daylight for the return flight. Fuel presented a problem as there was nowhere to refuel. The Department of Health could obtain aviation fuel duty-free if it could station drums of fuel at strategic centres. The cost of delivering fuel proved astronomical and all told, Jack Slade calculated the cost at about £1 per gallon. Fuel was delivered by the coastal boat *Cora* from Thursday Island to Borroloola, Roper River Mission, Groote Eylandt and the old RAAF jetty at Drimmie Head in Melville Bay. From there it was transferred in the Methodist Mission boat *Larrpan* to Elcho Island and Milingimbi. Supplies were sent inland to Victoria River Downs and one load of twenty-six drums was sent to Timber Creek where it was stored at the airstrip four kilometres from the police station. Being near the road to Wyndham, the entire consignment to Timber Creek was stolen so that centre could not be used again. A consignment sent to Mataranka to go by road to Roper River was robbed and the drums filled with water. The Victoria River Downs supply was seen by many as cheap Government fuel to which one could help oneself; one of the biggest offenders being a Captain with the Salvation Army who made regular visits around the country in a small aeroplane. Great care had to be taken to ensure the remaining fuel was not contaminated. In most places on the coast the drums of fuel were pushed overboard from a barge and floated ashore, then rolled up the beach; this frequently damaged the bungs when fuel that had been in the hot sun was suddenly immersed in cold water.

Aircraft fuel was hand pumped from drums into the aeroplanes using a farm-type rotary hand pump. These pumps were for the exclusive use of medical aircraft but some people saw no harm in using them as bilge pumps or to pump diesel oil. On top of the man-made hazards were the natural hazards of birds and beasts on the airstrips. A less conspicuous offender was the busy wasp ever looking for somewhere to build. Jack Slade had flown Dr Bruce Cumpston to Roper River Mission and was returning with a patient when one engine cut out 16 kilometres from the airport at Darwin. As the Dragon aircraft was rapidly losing height a landing was made on Casuarina beach; fortunately the tide was out. The aircraft was fitted with an auxiliary tank from which the fuel gravitated into the main tank. When the cap of the auxiliary tank was removed the air rushed in and investigation revealed that the air vents were blocked by wasp nests. After that, little plugs with conspicuous long streamers were made for the air vents, the streamers being to ensure the plugs were not forgotten before takeoff.

When fuel was not available in the outback, the number of persons carried had to be restricted to allow sufficient fuel for the return flight and a possible diversion if an emergency was reported in the same general area. The Department of Health was often criticised for not carrying the staff of other Government Departments, but every passenger carried meant their weight in fuel had to be left off leaving no spare fuel or a seat for an unexpected medical emergency.
During the first five postwar years none of the church missions enjoyed a mail service; it was many years before all of them received their mail on a regular schedule. Captain Jack Slade delivered the mail. He had an arrangement with the Darwin headquarters staff of the Methodists, the Church Missionary Society (Anglican) and the Catholics whereby he would phone them when an emergency medical call arose and if the first class mail was delivered to the airport he would take it with him. This transformed life for the mission staffs who would otherwise have had to wait months for news of their families at home. In October 1949 the Postmaster General’s Department put forward a proposal that the mail be carried on a regular basis but this would have committed the Department of Health to a mail delivery service that could have clashed with the unforeseeable needs of an aerial ambulance service. Furthermore, most of the flights were outside the normal post office hours, whereas mission headquarters staff had only to clear their mail boxes or deliver what was already on hand. While the Dragon aircraft were still in use, it was possible to drop mail from a window when passing over missions en route to somewhere else(3).

Some of the flights made to rescue sick people were fraught with hazards. The occasional mishap did occur but fortunately no one was ever seriously hurt. On Boxing Day 1946 a call was received from Mr EC Morey, the policeman at Pine Creek. An Aboriginal runner had brought a note from Jindare, a small cattle property south-west of Pine Creek, advising that an Aboriginal infant was seriously ill. Jack Slade set out with Sister Rita F Hill who became airsick and was not watching through the window. As the aircraft descended to land on a very narrow airstrip a sudden gust of wind caught it and tossed it so that it came down between two large trees that sheared off the wings. Sister Hill missed the drama and when she looked out the window she gasped, 'What, no wings?' The little patient died shortly after their arrival(4). An Aboriginal runner once more took a note to Pine Creek and they were rescued by Constable Morey. QANTAS staff helped salvage that aeroplane and transported it to Darwin just before the wet season closed in. They did an excellent job in restoring it.

The next precarious flight was to Tennant Creek on 23 March 1947. This time Jack Slade was accompanied by Sister Mary Coleman, who needed a competent and cool head for what lay ahead. The previous evening a family travelling by truck on a back road became bogged. As it was very wet they rigged a tarpaulin and went to sleep but not before they had imbibed so heavily they did not hear another truck approaching. The driver of the second truck saw the first vehicle and in swerving to miss it he ploughed through the tarpaulin and ran over the legs of the sleeping couple. The man received one fracture above the knee and his wife two below the knee. They were taken to Tennant Creek and from there the doctor advised the Aerial Medical Service that they needed to go to Darwin. The patients were strapped to a stretcher on each side in the aircraft, but as soon as they went aloft both became obstreperous. With the noise of the engine Jack Slade did not notice the struggle until warned by the changing trim of the aircraft. The male patient had seized Sister Coleman and punched and gashed her face while his wife managed to turn and grab her around the legs. Sister Coleman broke free and went forward to the pilot with the urgent request, 'land somewhere'. A 40 miles per hour cross wind made a landing on the Stuart Highway too precarious so Jack Slade headed for the airstrip at Newcastle Waters. Once safe on the ground and the engines cut, both patients were found to be talking nonsense; the man wanted to get out and buy a drink while his wife was screaming at her absent offspring to make less noise. Jack Slade secured this pair with sheets and the flight to Darwin continued with nothing more than bad language to rock the aircraft.

Other seriously ill patients were a little more appreciative of the service. An Aboriginal woman at Tipperary station, about eighty kilometres from the bitumen highway at Brock’s Creek, had given birth to an infant and was in serious trouble. The country was wet and the local truck became hopelessly bogged. A stockman then rode to Brock’s Creek on the
Stuart Highway with a message requesting the aerial ambulance to land at Tipperary. That message just missed Jack Slade who had gone to Goulburn Island for another patient. It was late in the day when he returned and was given the message from Tipperary. He made the decision to go immediately while there was still sufficient light to land on the bush airstrip. There was no time to wait for a Sister to accompany him. At the airstrip Jack Slade asked how they knew he was coming and the reply was, ‘We have been waiting here since early morning because we knew you would come’. Tipperary had no radio. The mother was too weak to mind her infant so Jack Slade wrapped it in a blanket and placed it between his feet in the cockpit and took off for Darwin(5).

An article by Hal Richardson from Darwin in a newspaper dated 3 April 1948 records his impression of two precarious looking Dragon aircraft with red crosses painted on the fuselage in which Jack Slade in the previous year had flown 61,028 miles (98,215 kilometres) criss-crossing the Northern Territory. The one pilot logged 667 hours, 91 of those hours at night. Sometimes there had been a doctor and at other times a Sister and occasionally he was alone. He had made 196 landings on licensed airstrips, 66 on unlicensed grounds and four on beaches. When asked about the unlicensed strips Jack Slade mentioned the paddock of peanuts he had landed on the previous week to pick up a 16 stone (101 kilo) woman. On that occasion, to lighten the load, the Sister was left in the peanut patch.

Some calls came at most inconvenient times. Jack Slade was enjoying his lunch on New Year's Day 1948, when a call came from the police station at Daly River. A white man on Peron Island, off the mouth of Daly River, had met with an accident. His mate made the injured man comfortable and then travelled by boat up the Daly River to the police station to seek help. Peron Island was one of the beach landings during that year(6).

On 18 May 1948 a serious problem arose at Alice Springs when Margaret Fan, an eighteen months old Chinese girl from Todd Street, was admitted to the hospital with poliomyelitis. This was an isolated case; the epidemic struck four years later. After two days care in an ‘iron lung’ the diagnosis was confirmed and a decision made to fly the infant to Adelaide. Captain Jack Slade and Dr John McGlashan left Darwin in a Dragon aircraft at 10.15 pm on 20 May. They stayed just long enough in Alice Springs to pick up food for themselves and the little patient, and arrived in Adelaide at 9.40 pm on the 21st(7). With short breaks for refuelling, the doctor and pilot were airborne almost twenty three hours. Prior to picking up the patient, Dr McGlashan had been able to sleep on the stretcher but Jack Slade endured hours of struggle to remain awake.

The next time a patient from Central Australia needed care in Adelaide, the Department of Health aircraft from Darwin was not available. A white stockman suffered a serious neck injury when he fell while loading cattle at Rumbalara railway siding. He was sent by train to Finke where Dr Alderman picked him up in a Connelan Airways aircraft and took him to Alice Springs. An X-ray revealed the need for specialist care. A Sister escorted the patient in a Dragonfly (a modified De Havilland Dragon) flown by Ralph Thompson. The aircraft departed at 3 pm on 2 September 1948 and the patient was cared for overnight at the AIM hostel at Oodnadatta. Next day the flight took a further six hours.

As the aerial medical work expanded, a second pilot was employed. A third aircraft, a Miles Gemini VH-BLN, was operated out of Darwin from 4 August 1948 until 14 July 1952 and during this period the Dragon VH-ASL was used progressively more for work in the Alice Springs area. The Royal Flying Doctor Service continued to operate at Alice Springs as it had done prewar with the Department of Health providing the doctor or Sister. Mr Eddie Connellan had a contract to provide the aerial ambulance for emergencies. The Department of Health needed an aircraft and pilot to provide a medical
service to the outback apart from the emergency service, but for many years there were not enough doctors to provide regular medical visits. During this time the cattle stations on the Barkly Tablelands could go for years without a visit by a doctor; they did not enjoy the same service as that provided for the stations in the Victoria River district. Eddie Connellan kept a keen eye on the use made of the Department of Health aircraft to ensure they did not lift the patients he was under contract to carry.

Captain Harry Moss was the second pilot employed by the Department of Health. He was an entertaining chatterbox who loved to help the doctor by taking notes, supporting patients and occasionally providing the treatment that had been ordered; he enjoyed being involved. Harry Moss had trained as an engineer at Ford Motors near Geelong in Victoria. He then worked with Charlie Pratt, a keen airman, providing joy rides in small aircraft and gliders. At the beginning of the war they moved to Essendon airport and later Charlie Pratt helped train many Australian men as pilots, including Harry Moss. The latter served as an engineer with the RAAF in Papua and New Guinea and towards the end of the war he joined Eddie Connellan's staff at Alice Springs. Harry Moss was qualified to maintain and service the aircraft he was flying. During his time with Connellan Airways he flew Major RH Elix, the Registrar with 109 Australian General Hospital, on many medical visits to attend the sick and bring in patients; the Army had provided a valuable medical service to the outback using Connellan Airways aircraft. After twelve months or more with Eddie Connellan, Harry Moss ventured out on his own in an aerial charter business based at Darwin. Using a five-seater De Havilland Fox-Moth purchased from Mr Roy Edwards, he undertook charter work for many interesting people including Mr CP Mountford's expedition into Arnhem Land. On other occasions the Native Affairs Branch engaged his services to rescue seriously ill or injured Aborigines from isolated airstrips in the buffalo country east of Darwin. The Hunter brothers were shooting buffalo for hides around Lake Finniss in country east of the Adelaide River. News filtered through to Mr Vincent White in the Native Affairs Branch Office that a woman had been hit on the head with a tomahawk and needed the care of a doctor. It was impossible to go by road or by boat so Vincent White phoned Harry Moss who knew the area from flying in stores and mail for the buffalo shooters. As the grass on the airstrip appeared long he dropped a note in a tin saying:

light a smoke fire if an injured girl is there; light two smoke fires if she can be brought in; light three fires if nothing can be done.

Two fires were lit so he landed and camped the night while the patient was being brought to the strip. He took off at daylight with the woman and her husband who had inflicted the wounds(8). This type of mishap was common as white men's tools in the hands of angry Aborigines did more damage than most traditional weapons. Indeed, Aborigines developed the deadly shovel-nosed spear when they acquired metal from white men and from the Macassans.

In 1948 Sister Jan Cowie from Melbourne was the first full-time Sister with the Aerial Medical Service. Harry Moss recalls that many times, when there was no doctor available to make the routine medical visits, Sister Cowie filled the role of doctor. This was with the full approval of Dr EB Gunson, then the Director of Health. In 1949 Sister Cowie left to be married and was replaced by Sister Meryl Nichol from Tallangatta in Victoria in May 1949. Meryl Nichol was regarded as the real pioneer as she spent twelve years in the aerial ambulance service. On many occasions it was necessary to remain overnight at an isolated cattle station or other outback settlement and bring the patient to hospital at first light the next day. The Dragon aircraft averaged about one hundred and thirty kilometres per hour so the flights were long and the noise inside the aircraft was tiring. Many patients had to be flown at low altitudes so as not to precipitate a spontaneous
haemorrhage or deprive the patient of much needed oxygen. Meryl Nichol was never airsick but not so with others who occasionally relieved her. One Sister recalls being more airsick than the patients.

For many months at a time Katherine Hospital was without a doctor. One of the medical staff from Darwin would visit Katherine by air each week and pay a brief visit to Pine Creek on the return flight. On Thursday 24 May 1948, Harry Moss had flown Dr Bruce Cumpston to Katherine and was still at the airstrip when an orderly came to tell him the doctor needed him at the hospital. As recalled by Harry Moss there was a middle-aged Aboriginal man face downwards on the floor with the steel tip of a spear protruding from his spine. That tip was 40 centimetres long and 1 centimetre thick with a sharpened point; it was a piece of building steel, the wooden shaft of the spear having been cut off. Sergeant Jim Mannon and Mr Mick Nudl had brought him in from the Pine Creek area where he had been the victim in a tribal feud. The spear tip was securely wedged in the vertebrae and would not budge. Harry Moss and Jim Mannon put the patient on the X-ray table and held him while the doctor took the X-ray and decided to operate. Harry Moss investigated the tool shed and found a Stillson wrench that was then cleaned and boiled while the doctor and Sisters prepared the theatre. The patient was anaesthetised, then the doctor, using the wrench with a slightly rotating motion and steady pull gradually eased the spear out without any serious damage to the vertebrae. There followed a spurt of blood which the doctor controlled with his thumb until a firm dressing was applied. Reporting by telephone the next day, the Sister in charge at Katherine advised that the patient had absconded during the night(9). His fate is unknown.

The Aerial Medical Service also flew a dentist around the outback centres when one could be spared. There were never enough dentists for the towns but the outback had been without a dental service throughout the war years. To give relief many teeth were extracted that should have been filled but there was not the staff, equipment or time. The development of the dental service is recorded separately in Chapter 29 but it did depend on the Aerial Medical Service for transport. The mobile road units that were introduced could only travel where there were roads whereas many large communities were without roads.

Late in 1950, when Dr Stephen Watsford was appointed as Director of Health, he initiated the use of individual medical histories for every Aboriginal in the Northern Territory and also for all Europeans and mixed race people living in the outback. The record, a firm card, was designed by the pilot Jack Slade. At a later date, when more record cards were required, the design of the card was adjusted to provide room for the names of immediate family relatives. When the first cards arrived Sister Meryl Nichol spent much time at the hospital copying essential information from the records. The records established by the Aerial Medical Service were for the use of that service and for all aspects of field work but when the hospital could not identify a patient the Aerial Medical Service could always help.

The most significant step forward in the provision of a health service to Aborigines came with the appointment of the first Medical Survey doctor. Prior to the war Dr Cecil Cook requested a doctor to do medical surveys to assess the health of the Aborigines and, in particular, to find people with leprosy. In 1939 Dr Kirkland unsuccessfully repeated the request. The Public Service Board in Canberra had absolute control and as there was no precedent for such a position, there was no way they would permit it. Dr Watsford put the proposal forward again and in January 1951 Dr R Richard A Brock, a 1949 graduate from Adelaide, was appointed. Prior to commencing Dr Brock was sent to Sydney where Dr Bruce Kirkland taught him how to diagnose leprosy.
Dr Brock commenced survey work at Delissaville (Belyuen) in May 1951 and from there he went on to Bathurst Island, Garden Point, Snake Bay and Croker Island. After that he was provided with a four wheel drive (4WD), short wheelbase Land Rover. This vehicle was an economy model with a canvas canopy over the back and no lining in the interior. The first long survey by road was to Borroloola and on to all the small cattle properties inland from the Gulf of Carpentaria. During 1952 he carried out full surveys at most of the church missions and government settlements. The medical records compiled by Dr Brock during his first two years formed the foundation of the medical records established by the Department of Health and maintained by the Aerial Medical Service.

Dr WA Langsford, who came to Darwin in 1952 as one of the first two Resident Medical Officers at Darwin Hospital, joined the survey section early in 1953. The first two were replaced in 1956 by Dr Dennis G Stanbury and Dr John C Hargrave; the latter gave a lifetime of service and did outstanding work. In April 1954 Sister Ellen Kettle (the author) became the first Survey Sister. Although the medical survey work was distinct from the Aerial Medical Service, the survey staff relied on the latter for contact with headquarters and for medical supplies. On top of that the Aerial Medical Service frequently provided transport when there was no alternative means of travel.

As medical surveys were carried out, extra cards were made available for the nursing staff in the outback to copy and retain a duplicate. Patients being sent to hospital, or being reported by radio for medical advice were identified against the duplicate record. These records were, for the most part, of illiterate people whose culture required a change in name when someone with the same name died. They could and did use different names when they travelled or changed their place of living. The names of near relatives were made on each card to help with the identification and as a cross-reference; for example if a child's card could not be found, the mother's card would be extracted to see what she had called him previously. The new name would be added and the original name retained in case he reverted back to it. With the Aborigines there were times when a person's name could not be spoken and someone else's name might be given; to overcome this, notes were added to the cards of physical signs such as scars, bowed tibiae or a corneal opacity. If the said scars did not fit the patient then the identification was judged incorrect.

The Department of Health medical records of Aborigines preceded by five years the official registration of all Aboriginal people. The official register, compiled by the Welfare Branch of the Northern Territory Administration in 1956, was the forerunner of excellent records built up by that Department over the years. A Register of Wards was published in 1956; it drew mean comments from cattle station people who nicknamed it the Stud Book. Others, more politically minded, considered it offensive to have people listed in a register. At that time the Register of Wards served a valuable purpose. All applicants for pensions, invalid, old age or otherwise, had to be identified in the Register. After the Referendum in 1967 giving all Aborigines in Australia full citizenship, the Register of Wards was not very different from the Electoral Roll. No records were without hazards; during the 1960s many linguists began recording the Aboriginal languages for translation of the Bible. Each linguist heard and recorded sounds differently. On top of that they all presumed to change the spelling of people's names although those names were registered. The original simplistic spelling was replaced by complicated spelling. The change caused chaos in the record systems of both the Aerial Medical Service and the Welfare Branch. As most hospital staff would not attempt to file the complicated spelling it was inevitable that European names were imposed or encouraged as an alternative. No names were ever removed from the records; the new spelling was added above the original. Aborigines moved about the country and as tribal barriers were broken down they became progressively more mobile. Their records were always filed under their home country; if someone filed them otherwise it was like
searching for a needle in a haystack to recover them again. In the late 1970s the use of computers helped to simplify the system and by that time also many people were literate.

Sister Meryl Nichol maintained the medical record cards for the outback and included on these a precis of all treatment given in the hospital. A copy of the precis was also sent home with the patient so that someone would know when he or she was due to be seen again by a doctor. This aspect of the work steadily grew but it was not until 1958 that a clerical assistant was appointed to assist.

In the meantime the flow of patients never ceased. On 16 October 1951 an urgent message from Borroloola advised that Mr Roger Jose had a piece of kangaroo bone stuck in his throat. It was 1.25 pm and late in the day for a long flight, but because of the danger of the patient choking, Jack Slade set out accompanied by Sister Meryl Nichol. There was just sufficient daylight remaining for a safe landing but by the time the patient had been assessed it was necessary to burn an old tyre at the end of the strip as a marker for takeoff. The Dragon aircraft VH-ASK had no radio and the slightest error in navigation could cause a considerable deviation. There was no moon that night but quite by chance Sister Nichol caught a glimpse of a flashing light through a rear window before the light was hidden again by clouds. There were a few anxious minutes before the pilot sighted the beacon at the airport and made a safe landing at 11.15 pm. The aircraft had flown 9 hours 15 minutes when the fuel capacity was 10 hours (10). The bone, a kangaroo vertebra, was removed by Dr Bill Alderman. A month later Jack Slade and Dr AH Humphry flew Roger Jose back to Borroloola during a routine medical visit.

As there were few commercial flights to repatriate patients, the medical aircraft seldom left Darwin without passengers who had come in as patients. Sister Nichol kept a list of patients who were ready to go home and would phone the hospital as soon as there was a flight going their way. When there were too many convalescent Aborigines at the hospital they were transferred to Bagot, but it was much more difficult to recover them from there at short notice. There was no accommodation for unattached people at Bagot and women without the protection of their husbands were immensely vulnerable. The occasional woman developed a new attachment and did not want to go home to her tribal husband. This led to some men refusing to let their wives go to hospital. Aborigines in the outback saw the Aerial Medical Service as the body that took women to hospital but did not always bring them back again. In later years, when commercial air services had developed and expanded, the Welfare Branch took over much of the responsibility for ensuring patients were repatriated.

Although Dr Watsford did excellent work, it was not without interference from Canberra. Shortly after his appointment in late 1950 an urgent medical request was received from the doctor in Wyndham. A woman in Wyndham Hospital required surgery but she was too ill to move in an aerial ambulance. There was no surgeon in Darwin Hospital and Dr Watsford was the only one with surgical qualifications so he was flown to Wyndham. The operation was successful and the two doctors agreed that they could help each other in times of emergencies as many patients from the Northern Territory were being treated in Wyndham Hospital. Out of courtesy Dr Watsford informed Dr Metcalfe of a job well done but his lifesaving work was not appreciated in Canberra. He was told in writing not to make a habit of crossing the border; he should have sent a doctor from the hospital instead of going himself and, most grievous of all, Jack Slade had to cost the trip in terms of time, distance and fuel consumption. Dr Metcalfe sent the bill to the Public Health Commission in Perth. It was the men at top level who shattered what could have been a good working relationship with neighbouring Wyndham.
Australia's overseas airline, QANTAS, had been involved with Reverend John Flynn in providing an aircraft and pilot for the first Flying Doctor Service at Cloncurry. Their mechanics serviced Dr Clyde Fenton's aeroplanes and when the Department of Health bought its first aerial ambulance in 1938, QANTAS mechanics, based in Darwin, provided the servicing. After the war QANTAS once again maintained the aircraft belonging to the Northern Territory Aerial Medical Service. Their enthusiasm was demonstrated by their prompt retrieval of the aircraft that crashed at Jindare on Boxing Day 1946.

The war was over just a couple of days when on 16 August 1945 the Labor Government in Canberra passed an Act to set up a national Airline, TAA (Trans Australia Airlines). This airline came into being on 9 September 1946. All Government contracts were given to TAA and this effectively killed Guinea Airways who had pioneered the carriage of air freight. QANTAS was restricted to overseas travel and could no longer compete with TAA in providing a service within Australia. In December 1949 the Government changed and Mr RG Menzies became the Prime Minister in a Liberal-Country Party coalition. From 1 March 1952 the Government handed the Northern Territory Aerial Medical Service to TAA(11). The Department of Health still officially owned the aircraft but TAA operated them and provided the pilots. Jack Slade and Harry Moss became TAA pilots but apart from that TAA did not interfere with the day-to-day conduct of the service.

A TAA Dragon was used in Darwin and then in Alice Springs during 1952 to 54 before the arrival of the first De Havilland Drover VH-AZM on 26 July 1952. The Drovers were three engine aircraft and although they were much more comfortable than the Dragons, their speed was only about 153 kilometres per hour. Three Drovers were purchased and saw service, VH-AZM until 12 September 1959, VH-AZN from 1 January 1954 to 26 April 1957 when it crashed, and VH-AZS from 11 July 1955 to 26 December 1961(12). The Drovers were equipped with transceivers and could receive messages while in the air as well as keep in touch with Air Traffic Control.

No one was particularly happy with the Drovers and when one crashed it was time to look for an alternative. TAA pilot Dick Paull was flying Dr Dennis Stanbury and his wife Jill, a trained nurse, on medical survey work around the Barkly Tablelands on 26 April 1957 when they received a police message asking them to watch out for a lone stockman who was overdue at Lake Nash. They sighted the man near the Queensland border and although they swept low over him, he failed to wave or otherwise acknowledge that he had seen the aeroplane. Mrs Stanbury scribbled a note to drop from a window and the pilot swooped low to ensure accurate delivery. The Drover, VH-AZN, did not handle well, the wing tipped the border fence and the aircraft flipped over into Queensland. Being on the wrong side of the fence caused consternation later when the crash had to be investigated.

Pilot Dick Paull scrambled from the cockpit but then experienced difficulty opening the main door to rescue the doctor and his wife. At the end of that struggle he collapsed unconscious from a subdural haemorrhage. Mrs Stanbury, who had been standing to throw out the note, received a fractured arm. The missing stockman went on his way as if nothing had happened and when he reached Lake Nash he mentioned seeing an amazing thing; an aeroplane had fallen down. As Lake Nash station was not permitted a transceiver they had not heard that an aeroplane was missing. The manager made a phone call to Mt Isa to report the accident before setting out by truck for the crash site. In the meantime Dr Stanbury used a blanket and sheet tied to the fence and secured to the ground with the stakes from the aircraft to provide shelter for the two injured persons. A further couple of sheets were laid out on the grass to attract anyone searching for them. The first to arrive was the Royal Flying Doctor Service aircraft from Cloncurry which landed on the open plain. Dick Paull was taken aboard and flown to Cloncurry where a BOAC
(British Overseas Airways Corporation) Bristol Britannia aircraft, on an inaugural flight from London, was diverted to pick him up. No one warned the pilot to stay on the tarmac and the big aeroplane sank in the soft wet apron and had to be dug and pulled out(13). Dick Pauli was flown to Brisbane where he made a good recovery and eventually resumed flying. Dr Stanbury and his wife were taken by road to Mt Isa in the Lake Nash truck from where Captain Harry Moss picked them up in the Alice Springs Aerial Medical aircraft the next day and flew them to Alice Springs(14). The irony of it all was that the missing stockman was a simple fellow who could not read. He was following the fence and just taking his time; he was overdue but not lost.

Following the crash of VH-AZN the De Havilland distributors lent on charter for evaluation a Dove VH-DHE from 17 July to 23 August 1957. This aeroplane was purchased by the Department of Health and came into service on 19 November. It was the first of several Doves, VH-DHH on 12 September 1958 and VH-DHK on 30 September 1961. In the 1960s there were six Doves in use between Darwin and Alice Springs. With extra fuel tanks and a speed of 290 kilometres per hour the aerial ambulance work was transformed. The Drover aircraft had radio transceivers that had limited value but by the time the Doves were available, transceivers had been greatly improved.

Having a fleet of Doves undoubtedly simplified maintenance but the Dove required a longer runway and could not land on many of the smaller airstrips in the Northern Territory. This placed restrictions on the provision of medical visits to the smaller centres, leaving both medical and nursing staff no alternative but to spend days travelling overland to centres lacking roads and isolated by rivers. One small aircraft would have been a most valuable asset. When medical emergencies occurred at these isolated centres the charter companies were engaged to pick up the patients in Cessnas or other small aircraft.

Sister Meryl Nichol did almost all the aerial ambulance work for twelve years. It was exacting and tiring. With the exception of annual holidays she was on call continually as all flights, emergency or routine, had to be organised. Captain Slade plotted and logged the flights and arranged the refuelling while Sister Nichol organised people for repatriation. All people and equipment had to be weighed and this weight was offset in fuel. The hospital had to be notified of a pending admission and the ambulance ordered to meet the aircraft on its return. With improved radio and the cooperation of the Department of Civil Aviation the ambulance service could be given the estimated time of arrival in time for an ambulance to be on hand on arrival.

After the attack on Sister Coleman by the patients from Tennant Creek, care was taken to ensure mentally sick patients were secure. In spite of this the occasional disturbed patient went undetected. On 11 April 1958 the doctor at Tennant Creek phoned the Aerial Medical Service to say he had a patient requiring surgery. Dr Pauline Wilson accompanied Jack Slade in the Dove VH-DHE. During the return flight the patient became violent. This aircraft had a rear vision mirror that revealed the patient with a strangulation on the doctor and endeavouring to open the aircraft door. The door of the Dove was locked until a button was pressed to release the handle and the patient missed seeing that. It was a nightmare journey for Dr Wilson who arrived in Darwin feeling sick and shaken. From then on anyone suspected of being even mildly disturbed had their arms secured in a jacket and the seat belt then restrained them.

The press button on the door of the Dove prevented another near tragedy. Jack Slade flew Sister Kettle to Hooker Creek in 1955 and when the manager at Victoria River Downs saw the aircraft passing overhead he called on the radio to say he had three Aboriginal patients, a man and two women, to go to hospital. The pilots were reluctant to pick up patients without an escort Sister but on this occasion the patients were going in for review; they
were not ill. On the way to Darwin the rear vision mirror showed the old man at the back of the aircraft trying to open the door. He only wanted to relieve himself; one shout from Jack Slade and he sat down and hung on. There was a urinal in the back of the aircraft but it was difficult to tell an old bushman where to find it and how to use it. Children could be told to empty their bladders before going aboard but it was more difficult to tell adults to do so when no toilet existed at most airstrips; many did not think of these natural hazards until nervousness affected them in flight.

Medical Calls Through Darwin Radio Station VJY

Radio transceivers provided the vital link between the Aerial Medical Service and the outback. The base stations established by the Royal Flying Doctor Service existed to provide a direct radio contact with a doctor. The base station at Alice Springs was the only one in the Northern Territory, but the station at Cloncurry in Queensland covered much of the Barkly Tablelands and Wyndham station in Western Australia served the Victoria River or East Kimberley area. Darwin's radio station was established by AWA (Amalgamated Wireless Australasia) for business purposes. In the 1930s the coastal mission stations used the long distance bases at either Cloncurry or Wyndham and the urgent medical calls went almost around Australia before being delivered in Darwin where they were then passed to Dr Clyde Fenton. With the war emergency the missions were provided with AWA radios and telescopes to provide a coast-watching service and all reports were sent to Darwin. This was expanded to include medical calls and business telegrams. AWA continued to operate until 1947 when the station was taken over by OTC (Overseas Telecommunications Commission) with the call sign VID. The Postmaster General's Department replaced OTC in about 1970 to provide the radio medical calls and telegrams within the Northern Territory. The new call sign was VJY. In Darwin there were two sessions daily for medical calls with the base station giving priority to emergency cases followed by calls only requiring medical advice. A doctor would be on roster to go to the radio station to handle these calls and all doctors at the hospital took a turn whether they were familiar with the outback or not. While the radio station was situated near the Botanic Gardens it was convenient to the hospital, but when it was moved to Gregory Street in Parap it took much of a doctor's time going there.

About 1954 when Mr Scotty Hamilton was manager of the radio station there were changes in policy. All medical calls had to be sent by telegram and phoned to the doctor. The calls had to be paid for which meant revenue for the radio service but a great loss of contact with the doctor. This was a most unsatisfactory arrangement but it continued until November 1957 when Dr John Hargrave went to the radio station to speak with Maningrida on the coast before that centre had an airstrip. A patient was dying. Mr Hamilton was angry over this action and it led to a healthy discussion which resulted in a much needed revision of policy. Dr RC Webb, the Director of Health in 1958, took the matter up with the Postmaster General's Department and the service was brought into line with that provided by the Royal Flying Doctor Service base stations. A telephone link was provided whereby the doctor on call could speak by telephone through the radio station to the outpost stations. The base operator stood by to control the 'receive and transmit switch' and at times when the reception was poor, the operator recorded the message and repeated it to the doctor. It became an excellent service.

Dr Webb negotiated other changes in 1958 and over the next few years these gradually came into being. The Aerial Medical Service was providing regular medical visits to many cattle stations and some government settlements whose radio connection was with the Royal Flying Doctor Service base in Wyndham. Most of the stations affected were in the Victoria River area but also included Mainoru which is east of Darwin. The doctor in Wyndham gave advice and then forwarded a message to Darwin when someone needed to
be evacuated. It was no longer a practical arrangement and some stations were ready for a change but others were not. The stations on the Victoria River side of the country obtained their stores through the port of Wyndham and most sent their cattle there for killing and were anxious to retain that contact. Permission was given for people with Traeger sets to have an extra coil for their transceivers that would allow them to call VID for medical advice. The change was gradual as station people came to appreciate the advantages of radio communication with the doctor who was visiting them and who also had a medical record for everyone.

Sister Meryl Nichol retired from the Aerial Medical Service about June 1960 after twelve years with hardly a break. The workload had steadily increased and although the Public Service Board in 1959 permitted one clerical assistant to help maintain the medical records, there was no one to do on call work at the weekends to give her a rest. Occasionally a visiting doctor would do an actual flight but she still had to make all the arrangements. Sister Nichol gave up nursing and shortly afterwards married Jack Slade.

Sister Marie T Yapp from Bairnsdale in Victoria filled the vacancy and at that time Mrs Edna Ferguson worked as her assistant. Early in 1963 Sister FM 'Peg' Cass, a general trained nurse, became the assistant. Sister Cass was an applicant for the midwifery course that should have commenced in 1963 but was cancelled at the last minute by Dr Langsford. Sister Yapp enjoyed her work and developed a good working relationship with the people in the outback. Also, at this time Sister Eileen Saxby (Mrs Croft) was often allowed to relieve both her and Sister Cass and to do much of the flying work.

Sister Margaret Lyons (Mrs Doherty) replaced Marie Yapp in the Aerial Medical Service in July 1964 when the latter left to become Matron of Mildura Base Hospital in Victoria. During the two days handover, Sister Yapp assured her replacement that there were never any deliveries in aircraft as most babies were born in the bush and without complications. The first emergency with which Sister Lyons had to cope was a woman at Port Keats in obstructed labour. Captain Slade was out flying a party of eminent visitors from Canberra and no other medical aircraft or pilot was available. Mr Ossie Osgood, who so often helped out in emergencies, said he would postpone another flight for a few hours. Sister Cass accompanied Sister Lyons in case help was needed. On arrival at Port Keats the aircraft taxied to the door of the hospital where many onlookers were concentrated. An elderly retired nurse was relieving in the hospital. A quick examination of the patient left little doubt that the obstruction was due to a full bladder, but with so many curious people Sister Lyons decided to take the woman and to pass a catheter after takeoff, which she did. As the bladder was emptied labour recommenced and within minutes the baby was delivered without further complications. Ossie Osgood announced on the radio that he had another passenger. Over the next eight years Sister Lyons delivered four more babies in aircraft but most were in the medical plane which had a little more space.

The work steadily expanded with a Sister accompanying a doctor on every routine medical visit. The Sisters gradually expanded their role to immunisations and later conducting an infant health clinic while the doctor examined patients. When another position was created Eileen Saxby became a full-time member of the team, followed by the appointment of Sister Dawn Hayes and later Sister Yvonne Worrall.

Work with the Aerial Medical Service was always interesting, often exacting and occasionally dangerous. The air-sea rescue jacket that Jack Slade had acquired from RAAF disposals at the end of the war served its purpose well as a restraining jacket for mentally disturbed patients, but during the 1960s the Sisters decided the jacket was a bit too severe and an order was placed for a modern type of jacket made of nylon mesh. It was meant to be used for all disturbed patients but when, late in 1969, Sister Dawn Hayes
and a visiting medical student went to Nhulunbuy for a difficult mining employee, they were assured that the patient was well sedated and as he walked quietly on to the aircraft there seemed little ground for apprehension. As the aircraft was nearing Darwin the patient became agitated and unfastened the seat belt declaring that this was not Darwin. He was strong and after shoving his escorts aside he headed for the pilot and grabbed the controls. As the aircraft dived towards the ground it threw both the staff and patient off balance and the pilot was able to pull out of the dive just in time to land on the grass verge. The next day he said to the Sisters, 'don't ever do that to me again', and the order was given once more that all disturbed patients must be in a straitjacket.

A few years later there was another close brush with disaster when the relatives of a sick woman on Groote Eylandt refused to allow the use of a straitjacket and the Aerial Medical Sister gave way before the pressure. As the aircraft rose into the air the woman went beserk and the pilot quickly circled and landed again. No one liked a straitjacket but safety had to prevail in the air.

The Aerial Medical Service, operating from Darwin, increased greatly over the years. The method of presenting statistics changed a little also and this has made comparisons difficult. There were routine flights carrying a doctor to provide medical clinics and there were emergency flights to evacuate sick or injured people. Mercy flights were those of a lifesaving nature carried out after normal daylight flying time. A doctor and occasionally a Sister made the decision on the urgency of a patient's condition while the pilot considered the prevailing weather conditions. During the wet season, from November to April, the pilots preferred to fly very early in the morning and return to Darwin, or elsewhere, before heavy clouds reduced visibility in the late afternoon. There were times when some outback airstrips were closed for days due to heavy rain or cyclonic weather.

**Aerial Medical Service Flights from Darwin**

<table>
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<th>1953-54</th>
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<th>1969-70</th>
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<td>Number of landings</td>
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Table compiled by J Slade

By 1970 there were six Dove aircraft, one of which was based at Alice Springs. There was usually one aircraft at a time away for servicing.

Captain Jack Slade MBE, AFC, retired from active flying in June 1970 and became the operations manager for the Aerial Medical Service for a further ten years. Time caught up with him and on 21 June 1980 he retired to a home in the bush down the Stuart Highway from Darwin. His earlier home built at Fannie Bay from Elcho Island cypress pine was destroyed in Cyclone Tracy. Both Jack and Meryl Slade realised the importance of history and retained their logbooks which have proved invaluable in compiling this record.

Many changes have followed since and one aircraft has been based at Gove airstrip near Nhulunbuy to provide a regional service to East Arnhem Land.
Endnotes

1. NTRS 1099, CMS Records, NTAS, Darwin.
5. ...
6. ...
13. ...
Captain Jack Slade MBE, DFC served with the RAAF at Batchelor during the war and stayed to restart the Aerial Medical Service on 21 June 1946. He retired 21 June 1980 after a long and distinguished service (Dept of Health)

Sister Meryl Nichol speaking to Constable John Gordon at Timber Creek about 1952. The 'Miles-Gemini' aircraft was flown by pilot Jack Slade (photo: J Slade)
Refuelling a 'Dragon' aircraft at Milingimbi May 1952. Rev Edgar Wells is in foreground (photo: R Brock)

The first postwar Aerial Medical Service aircraft were De Havilland 'Dragons' bought from RAAF. The tall man on the left is Jack Slade (photo: R Brock)
Sister Meryl Nichol who flew with the Aerial Medical Service 1949-1960 and established excellent records. She later married the pilot Jack Slade (photo: J Slade)

Sisters Mabs Cooke and Ellen Kettle (r) beside the Dragon aircraft, Rosewood airstrip October 1954 (photo: E Kettle)

Early medical surveys were conducted under hot and rugged conditions. Dr Richard Brock at McArthur River station in October 1951 (photo: R Brock)

Sgt Jim Mannion and Mick Nudl brought this man to Katherine Hospital by truck on 24 May 1948. Dr Bruce Cumpston removed the thick metal tip of a spear wedged firmly in the vertebrae. That night the patient slipped away into the bush (photo: M Nudl)
Captain Harry Moss MBE beside a three engine 'Drover' aircraft VH-AZS. Drovers, fitted with the first transceivers began replacing Dragons in 1952 (photo: courtesy H Moss)

On 26 April 1957 the 'Drover' aircraft VH-AZN tipped the Queensland boundary fence while searching for a lost stockman. It flipped over into Queensland (photo D Stanbury)

Pilot Dick Paull (note feet) and Sister Jill Stanbury rest while awaiting rescue. An RFDS plane from Cloncurry landed and took the unconscious pilot. The doctor and his wife were rescued by truck and taken to Mt Isa (photo: D Stanbury)
Australian built 'Nomad' aircraft replaced the 'Doves' in the Aerial Medical Service in 1978
(photo: J Hargrave collection)

A de Havilland 'Dove' aircraft was loaned after the crash of the 'Drover' in 1957 and became the first of a fleet of Doves. This photo in 1964 shows four Doves at Darwin airport (Dept of Health)

Staff with the Aerial Medical Service in 1963. L-R: Sisters Peg Cass, Marie Yapp and Eileen Saxby in their office on the Esplanade, Darwin (photo: courtesy MT Yapp)
Visiting the outback with the Aerial Medical Service in 1971. L-R: Dr A Dyting, Sister D Hayes and Dr GO 'Pat' Cowdy, and English psychiatrist who came in 1966 but died suddenly on 28 August 1973 (photo: JJ Duffy)

Sister Margaret Lyons served with the Aerial Medical Service from July 1964-1974. She married Mr Bill Doherty in January 1971 and continued nursing (Dept of Health)

Jack Slade with Bathurst Island beauties, late 1960s before he retired from flying (Dept of Health)

Sister Dawn Hayes who flew with the Aerial Medical Service during the 1960-1970 era takes a small patient home from hospital (photo: JJ Duffy)
CHAPTER SEVENTEEN

THE LEPROSARIUM

Channel Island leprosy hospital survived the upheaval of the war years. A few patients, three white men included, had remained on the island throughout and considered they had a proprietary interest. Brother McCarthy of the Catholic Mission was supposed to be in charge of the general management but he delegated his authority to whoever was willing to work. All supervision fell to the three Sisters whose watchful care was resented by the white men. Some of the mixed race people worked as cooks under the supervision of Mrs N. She had the keys to the store and the issuing of food was left to her discretion. This gave her power as those who cooperated with her received more than those who did not. Mrs N found an ally in a Greek man whom the Aboriginal girls later stated was always after women. In June 1946 there were fifty-nine Aborigines on the island of whom twenty-six were women. Several of the women were teenage girls from Bathurst Island whom the Sisters tried to protect from the advances of the Greek and some of the mixed race men, but Brother McCarthy tended to withdraw from the situation and leave all discipline to the Sisters.

There were several difficult white men on Channel Island. Some respected the Sisters but others did not. One was so obnoxious that the Sisters sought to have him removed to a leprosy hospital elsewhere. They wrote to their Mother Superior in Sydney who wrote to the relevant Minister. Mr Abbott was still the Administrator and he informed the Minister that the man concerned was wanted by the police for cattle duffing and as soon as he left the island he would be arrested. No Government wanted leprosy patients in the jail as the warders, through their Union, would demand risk money. The Sisters had no alternative but to put up with him. Warders, on the other hand, wanted risk money and threatened strike action but none of the people in direct contact with leprosy patients ever received any special allowance for personal risk.

After the departure of Dr Bruce Kirkland in September 1945 there was no doctor with specific knowledge of leprosy. The other army doctors did their best but everything was winding down as the army withdrew and at that time the civilian medical service had still not resumed responsibility. Without a doubt the patients felt apprehensive, but then so did the Sisters who found themselves without the support they needed. Early in August 1946 Matron Molly Roche from Darwin Hospital was asked to visit Channel Island to assess and report on the needs. Food supplies were organised from Darwin Hospital, the bulk of which was good quality but the meat was being tampered with before it left Darwin and the few good cuts removed. There was no separate box of rations for the staff and as Sister Michaeline reported later, all food was unloaded from the boat on to a truck to be taken up the hill to the hospital while the workers sat on top of the food for the ride. The same old truck was used for sanitary purposes. The army had unsuccessfully tried to obtain civilian clothes for women and children and these patients were in dire need. Matron Roche and the Sisters assessed sizes and quantities and an order was placed. Dr McGlashan had then to convince the Canberra staff of the Department of Health that the supply of clothes for the patients should not have to depend on the generosity of the Native Affairs Branch.

There was an upsurge of union activity immediately after the war and union leaders, who had heard that patients on Channel Island were working, considered it their duty to investigate pay and conditions. As Channel Island was still officially a quarantine station, it was promptly closed to all visitors; special permits were necessary. This action incited the news
media and articles were published about patients being made to work; those who could work wanted to work as they earned a little pocket money. The alternative was soul destroying boredom. Banning visitors in turn brought a reaction from patients who looked forward to the occasional friend coming on the official boat.

The Army paid all workers up to 17 June 1946 and left a list of those who were on the payroll. However, the Department of Health was not organised; all decisions were made in the Canberra office and all money was handled by the Adelaide office. On top of that the Public Service Board had to approve the employees; positions for cooks had existed prewar but the other part-time jobs such as hygiene staff, woodcutters and cleaners had not been paid before the war. Some people considered it would not hurt the patients to work in exchange for free board and lodging and it had to be argued that the patients were not there by choice. It all took time and led to delays in payment.

Walkoff and Inquiry

Meanwhile, on Channel Island, Mrs N and the Greek man were fomenting rebellion and on 15 October 1946 at low tide, they led a walkoff from the island. Most Aborigines involved went to the camp at Berrimah or to Bagot while the two ringleaders headed for the news office. The police found them and they were at the police station when Dr McGlashan was contacted(1). Everyone was promptly returned to the island and the newly arrived Administrator, Mr AR Driver, assured the patients there would be an official inquiry. On 9 November an official party comprising Mr Reg S Leydin, Government Secretary; Mr AV Stretton, Superintendent of Police; Mr Vincent J White, Native Affairs Branch and Dr JG McGlashan visited the island to examine the conditions and to interview all who wished to speak(2). Two of the white men were vocal and the third concurred. Their biggest complaint was that Aboriginal girls were being taught to do their dressings; they did not mind the mixed race girls giving their treatment but they objected to the black ones. They frankly considered the Sisters should care for them which included sitting up all night with sick people instead of delegating this role to one of the mixed race women employed as Nursing Assistants. Stopping visitors was what rankled most.

At the time of the inquiry there were 76 patients, 47 males and 29 females. Of these 3 were white men, 14 mixed race, 2 Chinese and 57 Aborigines. The use of housing on the island revealed personality clashes and racial distinctions imposed by the patients themselves. The Greek man occupied a building 50 feet by 50 feet with a 12 foot verandah while the other two white men lived in a small shack built by themselves. The two Chinese shared a similar large hut with 11 mixed race people including two women. Three mixed race girls were in one dormitory and 12 Aboriginal girls in another. The remaining Aborigines shared 14 huts and worked out for themselves who would live with each other. Brother McCarthy did not interfere anywhere and did not really know what was going on; all responsibility fell on the Sisters who found it well nigh impossible to deal with the white and mixed race men.

Boredom was probably one of the greatest problems on Channel Island and the Inquiry recommended a regular picture show. The supply of at least three radio sets and some gramophones and records was also recommended along with regular newspapers and magazines. It was proposed to invite the Red Cross to supply recreational materials and possibly an occasional concert on the island. On top of this were some basic facilities such as the installation of electricity to provide lighting and power for refrigeration. In the meantime it was recommended that they should have ice chests and regular supplies of ice. A radio transceiver was to be installed or their long lost morse signalling lamp restored. Cooking facilities needed to be improved and strict supervision provided to ensure adequate supplies of good quality food at all times.

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There had been four Sisters on Channel Island earlier in the year: Sisters Michaeline Mugavin, Campion Bryant, Eucharia and Augusta. Sister Eucharia was their housekeeper. Sister Campion who had been there from 1943 left a week before the Inquiry so that Sisters Michaeline and Augusta were the nursing Sisters there in November 1946. Sister Benedicta Carroll came in January 1947 and remained two years; she returned again later as the Sister in charge. Others who worked on Channel Island during the first seven years up to 1950 included Sisters Mary Inigo, Bermadine, David and Vincent(3). The Army had paid an honorarium of ten shillings per week, said to be a uniform allowance; this was continued by the Department of Health. During 1949 the Catholic Archbishop's Secretary, in residence at Goulburn, met with Dr Metcalfe in Canberra to discuss remuneration for the work of the nursing staff on Channel Island. Their first salary was paid on 15 June 1949; retrospective payment was not sought(4).

Following the inquiry in November 1946, prompt action was taken to obtain a transceiver radio for use on Channel Island. This involved the Postmaster General's office as only they could give a permit for a transceiver and issue a call sign. An application brought the reply that a transceiver had been sent in February 1942, possibly just before the bombing and it had to be accounted for before another would be provided; the call sign given then was 8VZ. Eventually, on 27 October 1947, permission was given for a new Traeger transceiver and the order was placed in April 1948. Late in 1948 a transceiver was eventually provided and messages were sent through radio station VID.

More housing was needed on Channel Island and plans were made to dismantle ten ex-army iron huts and reassemble them on Channel Island. However, care had to be taken not to commit too much money as there were plans afoot for a new leprosy hospital on the south coast of Melville Island. Mr Vincent White objected to a site on Melville Island as it was an Aboriginal Reserve; he suggested again the site at Gunn Point. Dr Metcalfe wanted an island from which the patients could not abscond and on 11 September 1946 the area on Melville Island was gazetted as a leprosy station(5). By early 1950 construction was about to commence when Mr FG Vidgen, Director of the Department of Works and Housing, pointed out the enormous costs involved in building on an isolated island because of the extra freight, an airstrip, drilling for water and special camp facilities for the workmen. He asked why the Department of Health could not find a suitable site on the mainland. Dr AH Humphry, Mr Hugh Barclay, the Director of Lands, and the new Catholic Bishop JP O'Loughlin, went exploring and selected a site on the mainland directly opposite Channel Island. Once again Mr Vidgen said it was too far from Darwin and would need a special camp. By this time some citizens of Darwin had been publicly suggesting the obvious; why not use the quarantine station. Of course it was the right place and the land already belonged to the Department of Health. Dr Humphry and Bishop O'Loughlin selected a beautiful site on undulating country on the 786 acres still set aside as a quarantine station. The site was only 11 miles (17.7 kilometres) from Darwin which would allow easy access for a doctor. As for isolation, all that was needed was a high fence and a gate that could be locked. When Dr Stephen Watsford took over as Director of Health late in 1950 he fully supported the proposed site and Dr Metcalfe saw the advantages. The beautiful hospital on this new site was not occupied until August 1955 and much happened in leprosy control and on Channel Island in the meantime.

Prior to the arrival of Dr Humphry it had been difficult to find a doctor who was genuinely interested in the treatment of leprosy. New drugs had become available but the use of these needed careful study as there were dangerous side effects. Dr John Couani and his wife Dr Stefania Couani (nee Siedlecky) had both graduated from Sydney University in 1943 and arrived in Darwin about September 1948 after completion of the Diploma in Tropical Medicine and Hygiene at the School of Public Health and Tropical Medicine in Sydney. Dr John Couani was keen to care for the patients on Channel Island but difficulties soon
arose. Firstly, the Sisters had always ordered the treatment and it was they who decided when patients needed to be in bed in the hospital, the accommodation being about four beds, two each for men and women. Certain people would not tolerate being nursed in the same room as others; it was the patients who were colour conscious. An Aborigine, Harry, discharged himself from hospital when he considered he was well enough. Harry died suddenly about an hour after Dr Couani had left the island after an early morning visit. The timing of visits was governed by the tide so stores could be unloaded at the stone ramp. Harry was buried and a notice of death sent to Darwin on the first stores boat two days later. However, workmen building on Channel Island got the news out first to the local paper and to Dr Couani and the latter came to Channel Island in a rage. Dr Bruce Cumpston accompanied him to ensure fair play. This was the first time Dr Couani had heard of anyone being buried without a doctor first certifying them as dead and determining the cause of death; he demanded an inquest. A police inquiry was conducted on the island and they found no cause for further action. There was nowhere to keep a body in a hot climate but under the ground.

**New Medications**

New chemotherapy called Diasone was introduced first in 1947. American doctors were still feeling their way with the new medication and very little had been written about the side effects. A ten year old girl from Port Keats was already in an advanced condition with leprosy when she was diagnosed and admitted to Channel Island in December 1945. After two years treatment with injections of chaulmoogra oil she was commenced on one tablet of Diasone per day. A few months later she was reported as pale but she could not tolerate the iron mixture given for anaemia. On 16 November 1948 Dr Couani realised the child was dying. The Sisters already knew this and had been reporting her condition to Dr Bruce Cumpston by radio each day. Dr Couani removed the child to Darwin Hospital where she was given a blood transfusion but she died the next day(6). There was considerable misunderstanding and strained relationships without anyone really understanding that the Diasone may have contributed to the anaemia. With many advanced cases of leprosy the prognosis was poor so the secret of success lay in finding this condition at a very early stage. Dr EB Gunson had just taken over as Director of Health and he appointed Dr Couani as pathologist at the hospital. When Dr Alfred H Humphry, from Adelaide, arrived in April 1948 he was asked to take over the care of leprosy. From this time on the treatment and care of the patients began to improve.

Dr Humphry, a kind and gentle personality, did much of the aerial medical work and went searching for those people hiding away with leprosy. In 1949, 29 new cases were admitted and a further 57 patients in 1950. Dr Richard Brock, doing medical survey work in 1951, found another 41 patients(7). Of these 127 new admissions only two or three were people who had earlier been discharged and were no longer taking medications. There were almost two hundred patients on Channel Island with accommodation for half that number. Two more Sydney Williams huts were erected in 1950 but the inadequate water supply became a nightmare.

In mid-1949 Brother McCarthy retired and was replaced as Superintendent by a government officer, ex-policeman Mr VC Hall. This man sought to solve problems through adverse publicity in the local newspaper. It was November, the weather was excessively hot and the supply of fresh water restricted as it had always been during the dry season. The increase in patients did not help the situation. Vic Hall complained that there was no water for bathing or washing the floors of huts, to which Dr Gunson replied that there was no shortage of sea water and sufficient drums in which to carry it. The water contractors, Messrs Johnny Wilshire and Bobby Wilson (Robert Tudawali) protested that 18,000 gallons of fresh water had been delivered in six weeks, some of it by the Navy. That amount of fresh
water would allow about two gallons (approximately 9 litres) per head per day, half of which was consumed in drinking and cooking. All able-bodied patients had always bathed in the sea. Dr Gunson visited Channel Island and found his Superintendent absent without permission; shortly afterwards he was replaced by Brother Lilwall of the Catholic Church. No further government staff were employed until the move to East Arm Hospital.

During his time in charge of the work with leprosy, Dr AH Humphry reviewed the situation in a paper published in 1952(8). He did not complain about the paucity of records but Dr Stephen Watsford, the Director of Health, informed the Canberra office that there were almost no records. No one was aware of government policy in regard to records. At the time the Commonwealth Department of Health took over responsibility for Health in 1939, all the existing records in the Northern Territory belonged to the Administrator's Department and were despatched to the Archives. The same happened in Canberra. All questions in regard to official records brought the stock reply that they must have been destroyed during the bombing. Individual patient records, started by Dr Kirkland in 1940, did not always give details of home and families. Sister Michaeline kept meticulous records of each patient's treatment but these were of little help in reviewing the prevalence of leprosy. Dr Humphry, working without earlier records, did an excellent job in surveying the situation. He considered that all the areas of highest incidence had been surveyed by Dr Richard Brock. He calculated then that the prevalence of leprosy in the northern half of the Territory was 37 per 1000. This did not include the people in the Liverpool River area who were not examined until mid-1957.

For three years after the war Dr Cecil Cook was the Commissioner of Public Health in Western Australia. He then rejoined the Commonwealth Department of Health in Canberra where he was considered an authority on hygiene and on leprosy. In this capacity he was made a member of the National Health and Medical Research Council, a body set up to advise the Government on some aspects of health policies. On 2 November 1950 this Council determined criteria for the admission and discharge of patients suffering from leprosy. The recommendations required that all persons with leprosy, or suspected of developing leprosy, should be isolated in a leprosarium. The criteria for discharge was tough and ensured that very few would ever be allowed to leave hospital:

For a period of two years there had to be uninterrupted and progressive improvement with twelve consecutive negative smears for bacilli from nasal mucosa and other lesions.

The Committee considered that:

Good results with new methods of treatment can only be expected...when the patient is under close and constant medical supervision for lengthy periods(9).

All infants born in the leprosarium were to be immediately removed to a separate institution. All contacts of leprosy patients had to be examined every three months for the first six years then every six months for another six years. As all patients qualifying for discharge had to obtain the prior approval of the Central Health Authority, this ensured that very few, if any, could be discharged. These criteria were not modified until 1963.

The criteria for admission and discharge of patients left nothing to the wisdom and medical knowledge of the doctor in charge of leprosy control. Dr AH Humphry wisely elected not to admit anyone in whom the diagnosis was not confirmed. All cases of leprosy had to be notified and once admitted to hospital it could take years for permission to discharge them again. He noted what later records confirmed, that many children develop the early skin lesions of leprosy, but in a quarter of these the body overcomes the infection without
treatment; the signs disappear. If these children were admitted to the leprosarium they would be exposed to a much greater risk of infection from other patients so they remained at home until the diagnosis was certain(10).

Trade names for the new medication varied, Sulphatrene, sulphone, DDS, and eventually Avlosulphone (or Dapsone) was the drug most widely used over a decade or more before further new drugs became available. Sudden severe anaemia did occasionally occur but once the nursing staff were aware of this complication they were vigilant in watching for it. Patients were given extra iron in tablet form to help offset anaemia. Prior to this all iron mixtures were of powder dissolved in water.

During his time in charge of the leprosy hospital, Dr Humphry introduced biannual holidays of a fortnight on the mainland south of Channel Island where patients could hunt and fish and live on their natural bush foods. This holiday did wonders for their morale and assured the Canberra staff that no one was about to abscond. The concept of a break from Channel Island was not entirely new as some patients had been allowed a holiday in the old isolation huts at Mud Island in the late 1930s(11). During the 1960s all holidays were spent at Bynoe Bay south of Darwin.

Dr Humphry continued to care for the leprosy patients until he went to do a Diploma in Tropical Medicine and Hygiene course in Sydney during 1953. Dr John J Elphinstone from Aberdeen, Scotland, then looked after the leprosarium for several years and at the same time he provided routine medical visits to cattle stations and church missions with the Aerial Medical Service. Dr Elphinstone did some teaching of nursing staff in the recognition of signs of leprosy. Sister Ellen Kettle accompanied him to Channel Island during September 1953. The water supply was towed behind the supply boat and on that occasion the pump was not working and all the water was carried up the hill by patients using buckets. The next nurse to visit Channel Island for instruction was Sister Jessie Smith in December 1953 prior to leaving Darwin for Milingimbi Mission. Her introduction proved rugged. Sister Smith wore strong glasses and as she stepped from the wharf the boat moved away and without a gentlemanly hand for support she fell into the sea. Undaunted, she swam out and the boat waited while she returned to the Methodist Mission headquarters to change her clothes. Over the next twenty-seven years Sister Smith made a major contribution to leprosy control and the domiciliary care of patients in central Arnhem Land.

The transfer to the new hospital, known as East Arm Settlement, took place over several weeks. The last patients were transferred on 16 August 1955. Several months later some of the building iron was brought from Channel Island to build a large garage, but apart from that the island was abandoned forty years after the first quarantine station had been built there and twenty-four years after it had become a hospital for leprosy patients. No one regretted the closure of Channel Island; it had been a grievous mistake from the beginning. The new hospital had water and electricity from the Darwin city supply. One of the first solar water heating systems in the Darwin area was installed and the children among the patients had to learn not to throw stones. In 1974 this solar system was destroyed during Cyclone Tracy.

East Arm Hospital had been designed to cater for four hundred patients but along the way the design was reduced to two hundred. At the time of opening, 187 patients were transferred from Channel Island and the following year the number had increased to two hundred and five. Over the years ahead more accommodation, both wards and living quarters had to be added. A sixteen bed ward block was completed early in 1958 and in 1959 four small flats were added for white people and four more for married mixed race people who had met and married while inmates of the hospital.
From the time of its occupation, the new East Arm Hospital had a government officer as a lay Superintendent instead of a religious brother. The first officer was Mr Val Thompson. The following year Mr C Ogilvie was added to the staff as an assistant administrator when there were over two hundred inmates. New problems started to arise which called for supervision seven days per week. Mr Frank Shaw replaced Val Thompson in 1958 and Mrs Peggy Shaw took over the supervision of the laundry.

Sister Benedicta Carroll designed the dressings clinic which was unique in Australia. The hands and feet of leprosy patients needed much care. Due to the loss of sensation both hands and feet suffered burns and other traumatic injuries that quickly developed into ulcers. Troughs for soaking feet and hands were built in with reticulated water. The patients sat on high concrete benches where the nursing staff could treat them without bending. This saved the staff much backbending strain. However, at that time the Sisters were given virtually no surgical equipment. Many considered leprosy a medical condition and surgical equipment was not provided.

Six Sisters staffed the new hospital with Sister Benedicta Carroll in charge. Four were nurses and included Sister Cuthbert (Aldegonda Vander Lee), Sister Eulalie (Patricia Ryan) and Sister Virginia (Jean Harper). Sister Eucharia continued as their housekeeper while the sixth Sister was a school teacher. The new convent was a luxury after the crowded house on Channel Island but the greatest blessing of all at that time was the unlimited supply of good water from Manton Dam.

The following year both the Catholic Missions and the Aborigines Inland Mission built churches. People still had to obtain written permission to visit the settlement.

As the new hospital was on quarantine land, the official quarantine area was bounded by a high fence and by the sea. There was one road and a locked gate. After the transfer three Aborigines absconded, two of whom were soon returned but the third, a man, headed for central Arnhem Land and was not found. Many years later he reported to the Sister at Maningrida settlement and was disappointed not to be returned to East Arm Hospital where he had heard conditions were good. He had apparently received sufficient medication and the disease had not reactivated.

In this new and spacious complex more patients were employed as nursing assistants, wardsmen, yardmen, gardeners and a wide range of jobs. Some did full-time work and others part-time as their health permitted. This meant money to spend and a canteen was provided. Mrs N was quick to make the most of the new situation and in a short time much of the newly earned money was passing through her hands and into her pockets. It was illegal for Aborigines to drink alcohol but in a short time many were becoming drunk and aggressive. Mrs N had her Darwin contacts and whether rightly or wrongly, taxi drivers were blamed for delivering alcohol to some prearranged site from which it was recovered. Alcohol, known locally as 'winya', created havoc in an otherwise very happy community. During 1958 a gatehouse was built at the entrance to the settlement and although an officer and his wife were in residence, alcohol was still delivered. Mrs N considered no one dared touch her until one day she was called to the office and given two options, the first that she would be charged with supplying alcohol to Aborigines and be sent to Fannie Bay gaol, or she could go to an isolated settlement where there were nursing staff but no alcohol. She chose the second alternative and was away for six months. Some of her closest associates were also sent home to church missions where there was no alcohol. Her power was never quite the same again once she knew she could be punished.

Dr Laurie O Mocatatto was the first doctor delegated the care of the patients in 1955. It was not a full-time appointment but he was able to visit by road whenever the Sisters needed his
advice. Dr AH Humphry had become the Director of Health and it was difficult to find another doctor who would make a specialty of the disease. Dr Mocatto later did a postgraduate course in dermatology and as a private practitioner he was the first in Darwin with that qualification. He recognised leprosy in a number of white patients referred to him by other doctors and in this way made a valuable contribution to the control of the disease.

Dr John C Hargrave, a new graduate from Adelaide University, came to the Northern Territory from Perth in January 1956. Leprosy was uppermost in his mind when he applied for a position as a Survey Medical Officer. After a brief introduction in Darwin he was posted to Alice Springs where he spent the next twelve months. Medical Surveys were carried out on all the settlements and missions and his work in that area was climaxd when he joined the Lake Mackay Expedition in May 1957 to look for desert Aborigines. This expedition is recorded in Chapter 21. Following this expedition he undertook the first medical survey of the Aborigines at the new government settlement of Maningrida at the mouth of the Liverpool River. Chapter 12 records the pioneering of this new settlement.

**Leprosy at Maningrida**

David and Ingrid Drysdale travelled to Maningrida by boat and set up camp ashore on 9 May 1957. Mr Gordon Sweeney had been through this area again on foot two years earlier to record people for the Register of Wards. Many were missed from the census but there was no doubt there were hundreds in the area. They had been told beforehand that a settlement would commence and many Aborigines were there to welcome the new arrivals. There were many cases of obvious leprosy and in a few days Ingrid Drysdale had started a treatment camp upstream that the local people called Alamace.

Dr Hargrave accompanied by Aboriginal assistants Phillip Roberts (Wodjari Wodjari) from Roper River and Nabilya from Groote Eylandt arrived by boat on 11 September 1957. Molly Wadaguga, a young Burara woman who had already spent ten years at the leprosarium, returned home with the doctor. Molly had been healed without a blemish but she could not immediately communicate with her own people as she had forgotten her language.

In 1937 the anthropologist Dr Donald Thomson had reported a high prevalence of leprosy in the Blyth River area nearby. Mr Syd Kyle-Little reported many people with leprosy in the same area in 1946. This was followed by disastrous epidemics of measles and whooping cough that undoubtedly wiped out many of the advanced cases of leprosy. Dr Hargrave was the first doctor in the area, twenty years after the infection was first reported.

Conditions at Maningrida were crude in September-October 1957 but from the first three hundred and seventy people examined, twenty-four new patients were notified. There were many more people in the bush who were not seen. It was Dr Hargrave who initiated the courtesy of inviting people to go to hospital instead of trying to force them. The old policy of force and using the police had never worked; people vanished into the bush and were not found again. As Dr Hargrave stressed most forcibly, 'they are sick people, not criminals. Leave the Police out of it!' A temporary isolation camp was established at Maningrida; some patients still left, but others who wanted care steadily came in. The airstrip was opened in June 1958 and by January 1959 many people were ready to go to Darwin for specialist care. They had been told they could not go to Darwin unless Dr Hargrave said so, but when Mr Les Penhall was to visit by air in January 1959, the patients were told five people could go and they could select who the five privileged ones would be. The lepromatous patients and those with the most damage to their hands and feet were among the first.

When Dr Cook in Canberra heard of twenty-four new patients he immediately recommended that a boat be sent to pick them all up and take them to Darwin. His advice was never
implemented as the patients would have disappeared and those still in the bush would have remained hidden. Many more sick people were found and diagnosed until in 1969 there were one hundred and eleven people being treated at Maningrida in a population of about eleven hundred.

**Leprosy on the Cattle Stations**

The number of cases of leprosy, some of recent development and others very advanced cases found and diagnosed for the first time, steadily grew. Sister Kettle had the use of the Department of Health's economy model Land Rover from 1959 onwards. It was the oldest Commonwealth vehicle on outback roads but it made possible visits to many small isolated cattle properties that had not had a doctor visit since army days. In 1961 alone, seventy-eight new patients were diagnosed, a high percentage of these were from the cattle properties between Darwin and Katherine, the buffalo country including Mudginberri, Munmalary, Goodparla, Gimbat, Marrakai and Woolner stations much of which later comprised Kakadu National Park. On the western side there was Legune, Mistake Creek, Pigeon Hole, Gordon Creek and Willeroo, all without airstrips. New patients were found on all these places and most patients were prepared to travel to hospital by road with Sister Kettle. Much of the success at that stage was due to Dr Hargrave having photographed all of the patients at East Arm Hospital and copies of the photographs were available for survey work. Many Aborigines had considered their relatives as dead until they saw the pictures. Extensive records were steadily compiled of the relations and close contacts of most of the leprosy patients as people readily volunteered their relationships to those in the photographs.

**Leprosy Register**

At East Arm Hospital Dr Hargrave, with the help of Sister Kettle and the Nuns, established a register of the leprosy patients. This register was backdated to include everyone known to have had leprosy. This project was greatly hampered by the absence of the records that were carefully locked away in the archives in Canberra. No one in Darwin was aware those records existed. However, there had never been registers of either leprosy or tuberculosis prior to this. It is difficult to understand why Dr Cecil Cook, who wrote a thesis on the epidemiology of leprosy in 1925, did not continue his work by establishing a register. Dr Hargrave also photographed each patient and compiled an album but this was destroyed in Cyclone Tracy in 1974. The new register laid the ground work for a thesis by Dr Hargrave.

Steps were taken to improve the primitive operating theatre at East Arm Hospital. Any major abdominal emergency that occurred from time to time was sent to Darwin Hospital but hundreds of damaged hands and feet needed surgical repair at East Arm Hospital. Dr Hargrave asked for and acquired more surgical instruments and equipment and obtained the airconditioner from the Darwin Hospital theatre when it was extended in 1960. Reconstructive surgery among leprosy patients did not exist elsewhere in Australia until introduced by Dr Hargrave in Darwin. It was pioneered by Dr Paul Brand at Karigiri near Vellore in India and the first reconstructive surgery was started in Darwin in 1962. There were critics and many snide remarks but the doctor knew he could transform the lives of most of the patients and was determined to do so.

Sister Marion Whelan, who had been at Port Keats Mission for several years, replaced Sister Benedicta Carroll in charge of the nursing at East Arm Hospital in 1959. The staff had increased to seven Sisters, five being trained nurses, one school teacher (Sister Vincent) and their housekeeper Sister Eucharia. The nursing Sisters were rotated with those on the church missions but those at East Arm in the late 1950s and early 1960s included Sister Christine North, who was there four years, Sister Mary Inigo, three years, Sister Naomi Fogarty and
Sister Lorna Walsh. They were later replaced by Sister Patricia Menhinnitt, Sister Kathleen and Sister de Lourdes all of whom created a very happy atmosphere for the patients.

In 1959 Dr Dick Webb, as Director of Health, appreciated the type of care Dr Hargrave was proposing to provide and he gave every assistance. Dr Webb wrote to the Department of Repatriation (later Veteran Affairs) in Adelaide early in 1959 to explore the possibility of receiving specialist assistance from their Artificial Limb Factory. As most of the war disabilities had long been dealt with, officers from the Department of Repatriation were most interested to explore new fields of work. Dr DA Dowie and Mr SJ Gleeson from the limb factory visited East Arm Hospital on 21 August 1959 and assessed and measured many patients(13). Dr Dowie was astounded at the amount of work needing to be done and felt challenged by the difference between war injuries and those of leprosy patients. Most of the leprosy deformities resulted from anaesthesia, or loss of sensation due to the destruction of nerves; patients could not feel pressures that should have caused pain. These deformities were very different from war time amputations and required different remedies.

The first artificial limbs were ready by October 1959 and Mr Gleeson returned with Mr WJ Kain to fit the limbs and appliances. The results were excellent and excitement ran high as people confined to wheelchairs learned to walk on their artificial legs. This was just the beginning and Dr Hargrave already saw the broader application for accident cases and the victims of poliomyelitis. The Welfare Branch, with the written approval of the Department of Health, had been sending the paralysis patients to Adelaide. Dr WFH Crick in Canberra was given the task of assessing the total costs and it was agreed to allow Dr Hargrave to visit the limb factories and rehabilitation centres in Melbourne and Adelaide to learn how to assess requirements and to measure feet and limbs. He in turn taught the Sisters at East Arm Hospital.

On 11 February 1959 Mr Patrick Pallabu from Port Keats became the first patient to be sent to Adelaide to obtain an artificial leg. An Aboriginal girl, Wingathana, a victim of poliomyelitis from Numbulwar, became quite a seasoned traveller having been to Adelaide several times. It was an expensive exercise. On top of that the Airways were touchy about carrying leprosy patients following publicity in the news media.

The boots provided by the Artificial Limbs Factory had to be maintained and Mr Les Heaven of Heaven's shoe shop in Darwin agreed to make adjustments to footwear and effect sole repairs. By the end of 1962 the repairs required far exceeded what Mr Heaven could handle and he withdrew. However, his contribution had revealed the amount of work needed and Dr Hargrave urged the appointment of a full-time craftsman.

When the scope of work needing to be done in the provision of surgical footwear and prosthesis was assessed, it became obvious that a full-time craftsman was required in Darwin. Mr Roy Clarke, a maker of surgical boots with the Repatriation Artificial Limbs and Appliance Centre in Adelaide, was the first person appointed to East Arm Hospital. Mr Steve Gleeson often came as well to measure people and fit prostheses and eventually a full workshop was established.

In the meantime changes were taking place in the hierarchy of the Department of Health that could affect leprosy policy. Dr Hargrave, with the full support of Dr Dick Webb had modified leprosy policies without the official policy being changed. Dr Cecil Cook fought doggedly to retain his policy of strict isolation and in the Northern Territory he was supported in this approach by Dr WA Langsford, then Medical Superintendent of Alice Springs Hospital. As Dr Langsford told the nursing staff, 'regrettably there is only one way to wipe out leprosy and that is to lock them all up; you have to be cruel to be kind'. (The author was present when Dr Langsford said this.) Dr Ian Donald Byrne was sent to the Northern
Territory as Deputy Director in July 1960 shortly before Dr Metcalfe retired. Dr Byrne had no special qualifications apart from his experience in quarantine and as an immigration officer in Rome for three years. Dr Metcalfe retired in September 1960 and was replaced as Director General of Health by Major General William D Refshauge, a highly qualified medical officer with a keen mind. In March 1961 Dr Webb left to take up an appointment at Australia House in London for the next four years. Dr Ian Byrne became Director of Health. Dr Langsford applied for the vacant position and became the Deputy Director of Health. He was in Darwin in time to write the Annual Report that year.

Within days of Dr Byrne's promotion to Director, a white schoolgirl in Darwin was diagnosed as having leprosy. This could have been handled discreetly except that the girl was in the same class at high-school as Douglas Lockwood's son. This child's parents had taken her to Adelaide to consult a dermatologist and the diagnosis had been missed. When her skin lesions flared again and the child was ill she was taken to Darwin Hospital where a British doctor, who had been in Borneo, recognised the skin lesions. Within half an hour the diagnosis was confirmed but special arrangements needed to be made at East Arm Hospital as there were no other white girls there. In the meantime one of the Department of Health staff happened to be standing beside Douglas Lockwood in the post office and saw what was being sent to the Herald in Melbourne, almost before Dr Refshauge in Canberra had been informed. It made headline news and caused the child and her family great distress.

Other people did not take the news of leprosy so badly. Dr Michael Ryan checked the health of the preschool children at Batchelor and found the teacher hugging a little mixed race boy with obvious signs of early leprosy. This child's white father brought his son for admission a couple of days later. Dr Langsford was the only doctor in the office and he took smears from the father's forehead just as a precautionary measure and the smears were positive for leprosy. Dr Hargrave interviewed the father and as he owned a cattle station he was given a week to put his affairs in order. He was to be admitted to East Arm Hospital on a Monday, so on Saturday night he visited all the pubs in Darwin and advised his drinking mates that, 'They say I've got leprosy; one last drink before they lock me up on Monday'. Some thought he was joking while others phoned their private doctors for advice. As soon as this man started medication the leprosy became manifest but he did cooperate and several months later he was trusted to return to his property and report to the doctor every few weeks.

Dr Byrne was inclined to be nervous about leprosy and Dr Langsford drafted, for his signature, a tough recommendation that leprosy control be brought back under the requirements of the existing official policy(14). This was forwarded to Dr Refshauge on 4 April 1961, but fortunately Dr Refshauge had already visited the East Arm Hospital in December 1960 and had been most impressed by what he had seen and heard. Dr Hargrave submitted a request for five patients to be discharged from hospital and Dr Byrne refused. This became the catalyst for the letter on policy. Dr Byrne wrote:

As seen by Dr Hargrave, the problem is simply that they (the five patients) are ready, in his opinion, for discharge and if Departmental policy stands in their way, then Departmental policy should be changed ... Dr Hargrave foresees that we will lose the confidence of the Aborigines by failing to discharge those who have been inmates at the leprosarium...

We have little to pride ourselves on to date in our leprosy program ... there is nothing whatever to indicate that leprosy is on the decrease... On the contrary, there is every reason to believe that the number of patients is increasing. On this point there are no reliable statistics.

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There were excellent statistics started by Dr A.H. Humphry in 1952 and continued by Dr Hargrave. Dr Byrne foresaw that if all patients were in the leprosy hospital it would need a major building program to house them, none the less he recommended that:

_We maintain and enforce our present Departmental policy in full and even render it more stringent and apply it more vigorously... That we commence now, a drive to isolate all lepers in the leprosarium... That we be prepared ... to lose the services of the Sisters who now staff the leprosarium and to lose the services of Dr Hargrave and prepare to replace them if they find themselves unable to accept our policy and all it implies(15)._

He further suggested a satellite leprosarium in Arnhem Land with Maningrida as the likely site. He warned that if strict isolation was not rigidly implemented the whole Northern Territory and even Australia was endangered.

Apart from case finding during his couple of years as a Survey Doctor, Dr Langsford had no experience with the diagnosis and treatment of leprosy. Dr Hargrave had been appointed during Dr Langsford's three years overseas examining potential immigrants. Dr Hargrave was both scientific and humane in his approach to leprosy. Dr Refshauge's opinion is not recorded but in 1963 Dr Hargrave was in a position to write that:

_It is pleasing to be able to record that the change from a custodial-care type institution to a specialised treatment and rehabilitation unit has now been accomplished(16)._

Most patients were being treated as outpatients with admissions to hospital for reconstructive surgery. Had they all been locked up it would have necessitated a town for over eight hundred people with all races included.

During 1962 Dr Hargrave was granted a WHO (World Health Organisation) Fellowship and spent six months overseas studying leprosy and its treatment in South East Asia. He visited Hong Kong where Dr Grace Warren was doing reconstructive surgery, having learned from Dr Paul Brand at Vellore in India. After spending time in the Philippines, Thailand and Malaysia, Dr Hargrave spent a few months at Vellore. Dr Paul Brand, the son of missionary parents, had been reared in India and returned there after completing his medical degree. He specialised in the care of leprosy of Karigiri which adjoined the hospital and medical school at Vellore. It was Dr Brand who first realised the connection between loss of sensation in hands and feet and the traumatic injuries experienced by leprosy patients. They burnt or otherwise seriously injured themselves because they could not feel it happening. Pain is a warning which most had lost. Dr Brand was also transplanting tendons to correct foot drop and to restore movement to fingers that had become fixed in flexion due to damage to key nerves. Dr Hargrave was a keen student and returned to Darwin to greatly expand the scope of reconstructive surgery offered at East Arm Hospital. Dr Brand spent Christmas 1963 in Darwin.

Dr Brand had developed new instruments and Dr Hargrave bought his own in India to overcome delays that would occur when he ordered them. Dr Langsford promptly directed that Dr Hargrave was not to practise surgery as he was not a qualified surgeon. It was Dr Refshauge who stated that the specialised surgery was to go ahead and as Dr Hargrave was the only doctor in Australia with the necessary knowledge, there were no more delays.

Dr Hargrave did much corrective surgery to hands and feet and tendon transplants to correct foot drop and restore flexibility to fingers and thumbs. Patients who had decided to have surgery were well prepared beforehand and manually exercised fingers over which they no
longer had mental control. Other nerves would be educated to direct the transplanted tendons. All of the Sisters at East Arm took a turn assisting in surgery.

Sister Naomi Fogarty was the first to undertake the specialised physiotherapy necessary for the patients until replaced by Sister Lorna Walsh on 1 July 1963(17). With the exception of occasional holidays, Sister Lorna did most of the physiotherapy until the arrival of an experienced physiotherapist, Mr Melville Furness, from Karigiri in India in July 1971. Many of the finger exercises were done together with everyone happy and singing in unison.

In 1963 when a position was created for a Medical Superintendent of East Arm Hospital Dr Hargrave was promoted. The following year when Dr Langsford became the Director of Health he directed Dr Hargrave to work full-time at the leprosarium while a Survey Doctor, Noel Vawser, a 1963 graduate, was to look after the patients in the outback. Dr Vawser's general medicine was sound but he had no special interest in leprosy. It was Dr Vawser who was sent to leprosy conferences overseas and in September 1963 Dr Langsford sent himself, as Australia's expert on leprosy, to an international conference at Rio de Janeiro in Brazil. Dr Hargrave, who had been invited to join Dr Paul Brand in the assessment and classification of deformities, paid his own expenses to attend.

Dr Hargrave had discharged many patients to the care of nursing staff on missions and settlements. He needed to follow up on these and to assess their deformities for later surgery. There was a waiting list, according to priorities and the readiness of the patients to cooperate in the period of physiotherapy that would follow. As people saw the restorative work done on their friends and relatives, progressively more people asked what could be done for them. As the order to remain full-time at East Arm Hospital had been verbal, Dr Hargrave claimed his right to visit his patients and he did so. By this time the Survey Sisters were carrying out the surveys for leprosy and Dr Hargrave examined all those patients referred to him. Other patients were brought by road to East Arm when it was not possible for the doctor to see them at home.

A swimming pool was suggested for East Arm. As well as a source of relaxation it would provide an opportunity for exercises. Dr Cecil Cook retired in 1963 but he remained a member of the National Health and Medical Research Council and through that council he endeavoured to block the move for the pool. Dr Cook stated in writing that the pool would spread infection, to which Dr Hargrave replied that as those who would use the pool all already had leprosy there was no risk. On top of that there was no reason to believe that leprosy bacilli would survive in chlorinated water. With the support of charitable organisations a small above-ground pool was installed. The Department of Health later provided an in-ground pool and the children among the patients spent many happy hours there.

The patients were encouraged to have pets but dogs were excluded as the hospital was surrounded by natural bush and teemed with wallabies and other bush life. A donkey foal was donated along with a couple of horses for the men from cattle stations. After dark the wallabies grazed on the extensive lawns. A very happy atmosphere was created and no one absconded as they knew their stay would be short.

Dr Paul Brand from Vellore

Dr Paul Brand at Vellore in India recognised the urgent need to prevent anaesthetic feet from becoming damaged and designed sandals that did not cause pressure either on or under the feet. The footprints of patients readily showed the areas most in need of protection. Through trial and error Dr Brand had discovered that microcellular rubber of 15 shore density and about 1.5 centimetres thick was the most suitable for the soles. An Australian manufacturer
was found who would accept a large order for a specific style of footwear and Dunlop rubber manufacturers produced the required rubber. Most of the patients had never worn footwear and had to be taught the importance of protecting their feet. While at East Arm Hospital everyone was wearing protective sandals but when they went home they felt conspicuous and it needed much encouragement to keep the sandals in use. Men would go hunting, shed their sandals and return to the mission clinic with newly forming ulcers. Cooperation steadily improved and greatly reduced the damage to feet.

Babies of Patients

Other out of date practices needed to be modified until they could be removed. Since 1940 the newborn infants of leprosy patients had been removed from their mothers. It was believed that leprosy bacilli did not pass the placenta and if the baby was removed from its mother it was not likely to develop leprosy. Although none of the babies have since developed leprosy, neither have babies of women on medication or those considered cured; it is debatable whether it was ever necessary to remove the babies but it was policy. From 1943 to 1957 almost all babies born at the leprosarium were sent to Bathurst Island mission. Dr Hargrave ensured babies were sent home to the care of relations so they would be restored to their mothers at a later date. The separation caused great distress. By the late 1960s Dr Hargrave arranged, whenever possible, for deliveries to be done in Darwin Hospital and the mother was then repatriated to her home with the baby. Mothers who were not ready to go home kept their babies, there being never more than two or three at the hospital at any one time, but the very presence of babies transformed the morale of all the women.

Training of Paramedical Staff

Dr Hargrave saw the need to train paramedical staff to help care for the hundreds of patients now residing at home. Aboriginal people needed to be more involved in the health care of their own people. Training for Aboriginal nursing assistants is described in Chapter 27. Dr Hargrave had, by this time, travelled widely in Asia and Africa looking at training programs and methodology; he knew how training should be done to be effective. Once people were trained they needed to be paid, but Dr Langsford said the Public Service Board would never agree so he did not ask them. About 1968 Dr Hargrave convened a meeting of five interested people at East Arm Hospital, including Mr Edwin Milliken, Deputy Director of the Welfare Branch, along with representatives from the Catholic, Methodist and Anglican mission headquarters in Darwin. Edwin Milliken assured the meeting that his department would initially provide training grants and then take the next step as appropriate.

The first group of trainees were Sister Agatha, an outstanding Aboriginal nun (not a patient) and her uncle, Patrick Pallabu, both from Port Keats Mission, Peter Galarla from Maningrida and Isaiah Burunali from Oenpelli. Peter Galarla was the class funny man and although his English was of recent years, he could crack witty jokes in the most serious situations. At the time Isaiah Burunali had been diagnosed in January 1954 his hands were already damaged. He was one in whom the bones of his fingers had been partially resorbed. Ancient legend had it that fingers dropped off when in fact the body resorbed the bones, leaving a deformed fingernail as evidence. Calcium was given to the patients to hopefully counteract this as the cause was not understood. With care and exercises Isaiah achieved much with what remained of his hands. He had already provided invaluable support for Sister Kettle and Sister June Armstrong during the outbreak of typhoid fever at Oenpelli in 1962 and was keen to learn more. He transferred his whole family to Darwin to enable him to do the course.

The course of training was specialised and intensive, a point not appreciated by people teaching Health Workers at a later date. Where the basic level of education is minimal, a
high degree of efficiency can only be achieved in a specialised field. Practical experience is essential or the knowledge is quickly lost. The course provided at East Arm Hospital was to equip the trainees to recognise early signs of leprosy in others, and to provide physical care for those with already damaged hands and feet. The first course was of three months duration and the length of time was steadily increased to a year. Many of the people trained later became the stalwarts when Health Worker training was introduced in 1972. Mrs Liyapidiny Marika, MBE, of Yirrkala received her initial training in the one year course and went on to do most valuable work for which she was later honoured.

Dr Hargrave considered leprosy care warranted specialist status but there was no precedent in Australia for a specialist in leprosy. Dr Langsford considered he could not recommend this classification until Dr Hargrave obtained an MD (Doctor of Medicine). Dr Langsford demanded of others what he never attempted himself. Dr Hargrave was undaunted but the research was a massive undertaking that took several years. There was no computer in the Northern Territory on which to record and analyse data so he sought the assistance of IBM in Sydney. By the time he completed the thesis there were computers available in Darwin and, to the consternation of most, Dr Hargrave was advocating computerisation of Aboriginal medical records and hospital records. He certainly led the field in this area and his recommendations were implemented. Professional staff at Sydney University supervised and evaluated the thesis. Progress on the thesis was slow as Dr Hargrave endeavoured to do the research in conjunction with his normal workload. It was not until 13 February 1973 that Dr Desmond Travers asked Dr Age Dyrtning to take over the leprosy work and release Dr Hargrave to complete his research. Dr Langsford had transferred to Canberra in November 1972 and been replaced by Dr Travers. Dr Dyrtning, from Sweden, had spent several years in Guyana and came to Darwin in August 1968. He was the right person for the job. The long awaited thesis was submitted to Sydney University early in December 1974 and a few weeks later Cyclone Tracy destroyed the whole office block at East Arm Hospital. Many Darwin citizens lost research material and historical collections, some of which could not be replaced.

Cyclone Tracy 1974

When Cyclone Tracy struck in the early hours of Christmas morning 1974, Dr Hargrave was living in a house near the quarantine station a few kilometres down the road from East Arm hospital. The roof was blown off the house and his valuable collection of books was saturated. Although the house was on concrete stilts, the water in the house could not escape past the door steps. The doctor found his brace and bit and bored holes to let the water out, then at daylight he walked from the Quarantine Station, climbing over rubble and fallen trees to reach East Arm Hospital.

There were seven Sisters at the convent at East Arm Hospital on Christmas Eve. They contemplated going to midnight Mass but the wind and rain made them change their minds. Just after midnight they all retired to bed, two of them, Sisters Cabrini Lees and Loreto McColl, downstairs where they slept soundly. For the five on the top storey it was a dramatic night as recorded by Sister Annette Barron. The wind gathered force and rain blew in through the glass louvered windows; no one slept. Radio communication ceased about 2 am and from there on they were alone not knowing what was happening elsewhere. A door blew open and four Sisters managed to close it and push a solid desk against it. Then the window over Sister Columbana's bed shattered: she was rescued from the glass and rain and moved under a table. There followed a terrible screaming as nails and bolts were drawn out and the roof vanished. With the aid of torches an attempt was made to move to the most secure room but it was already gone and the walls of the room they were in were beginning to lean. Three joined Sister Columbana under the table and hung on to the legs while Sister Mary Hackett
went under the desk. Four hours and many prayers later the wind began to abate and daylight revealed the devastation.

There were no stairs left and the five Sisters on the top floor could not reach the ground. Sisters Loreto and Cabrini emerged from the ground floor safe and well but they could not help. Then they saw Dr Hargrave coming, climbing over fallen trees and other debris - no vehicle could move on the road until it was cleared later by a bulldozer. Sisters Loreto and Cabrini shared their clothes with the others who had lost everything and they were soon over to the hospital to see their patients. Apart from one Colles fracture (radius and ulna near the wrist) and a few minor cuts and scratches no patients were injured in spite of widespread damage to almost all the buildings. In addition to the convent, the boys dormitory and the administration block, which included the operating theatre, were destroyed. The school was badly damaged. As equipment was rescued it was stored for safe keeping in one large building which, a few days later, was destroyed itself by a fire started by an electrical fault.

No one at East Arm Hospital knew what had happened in Darwin as they were without telephones and radio and the road was blocked. Once a bulldozer cleared the road, Bishop O'Loughlin and one of the priests drove out and brought news of the widespread devastation in Darwin. As soon as transport could be arranged most of the patients were sent home to their respective missions where there were nursing Sisters to care for them. A group of them also went to Bamyili (Barunga) for a few weeks.

Medical care at home had been transformed by the introduction of long-acting sulphone injections. The first of these drugs, introduced in the late 1960s, came from Malaysia and was not particularly successful. In 1971 Hansolor (Acedapsone) was developed in Brazil, a country with a considerable leprosy problem. Later it was manufactured by Parke-Davis in Barcelona in Spain. Hansolor was, and still is, given by injection every three months and a record of all treatment maintained by the Leprosy Control section in Darwin. By 1975 there were 350 people receiving Hansolar.

The hospital at East Arm was restored. While awaiting a new convent some Sisters lived in the cottage built earlier for a couple of white patients. When discussing restoration, Dr Hargrave and Dr Dyding asked for an operating theatre. It was considered a luxury and all surgery was to be done in Darwin Hospital. They then asked for a room in which to do biopsies and once built, they soon turned it into a good theatre. Dr Hargrave not only achieved an MD but later was made a Fellow of the Royal Australasian College of Surgeons for his contribution to leprosy and to microsurgery.

After the cyclone the number of patients at East Arm Hospital was seldom more than forty. There were over eight hundred leprosy patients still alive in the Northern Territory and as a few died each year from old age, an average of about fourteen new cases were being added. Many of the new patients were from outside Australia but with regular surveillance patients were found, diagnosed and treated before there was any damage to their hands and feet. The need for admission to hospital steadily decreased and the hospital was closed, for all purposes, in April 1982.

Endnotes

1 CRS A1928, item 715/38/1, AA, Canberra.
2 ...
3 CRS A1658, item 756/11/1, part 1, AA, Canberra.
4 ...
5 CRS A431, item 47/334, AA, Canberra.
6 CRS A1658, item 756/11/1, part 1, AA, Canberra.
8 ...
9 CE Cook, Paper presented at National Health and Medical Research Council Conference on Management of Leprosy, Govt Pr, Canberra, 1950, 1-5.
10 Humphrey.
12 JC Hargrave, pers comm, 1957.
13 Dept Health File 59/362, Darwin.
14 Letter from ID Byrne to Director General, Dept Health, 4 April 1961, copy in possession of Dr JC Hargrave, Darwin.
15 ...
16 Department of Health, Annual Report, NT, 1963/64, in Central Medical Library, Royal Darwin Hospital.
17 Dept Health File 79/1109, Darwin.
The Channel Island leprosarium about 1948. The three square roofs were the original quarantine station. The curator's house where the Catholic Sisters lived was outside this picture (Catholic Missions collection).

A landing ramp was built on Channel Island in 1914 and extended later. This postwar picture shows the barge bringing supplies and the 'lighter' used to carry fresh water. (courtesy: J Hargrave)
Small patients on Channel Island February 1951. Revised policies allowed children to be treated at home (photo: R Brock)

Early lepromatous leprosy in a child, Channel Island February 1951 (photo: R Brock)

Advanced case of lepromatous leprosy, Channel Island February 1951 (photo R Brock)
The new East Arm Hospital for leprosy was occupied in August 1955. This picture in 1960 shows the Catholic church (left) and Administrative buildings (Dept of Health).

East Arm Hospital showing the medical clinic designed by Sister Benedicta and the Aborigines' Inland Mission church (Dept of Health)
New limbs for leprosy patients. Mr Don Freeman from Rehabilitation Artificial Limb Appliances Centre fits a double prosthesis at East Arm Hospital, August 1960 (photo: J Hargrave)

Mother Marion Whelan OBE (centre) and Sister Jean Harper (Virginia) attending a patient's feet (J Hargrave collection)
St Patrick's day 1982 just before the closure of East Arm Hospital. L-R: Sisters Kathleen Leahy, Lorna Walsh (rear) and Joan Donnelly with Nancy Croft and Jack Gibbs (courtesy: A Dyrting)

Early leprosy in a three year old girl, Maningrida 1959. She was cured without a blemish (photo: E Keule)
Dr John C Hargrave MBE specialised in the eradication of leprosy, reconstructive surgery, then microsurgery and has transformed the lives of many. Here he contemplates the damage by Cyclone Tracy (Dept of Health)

Dr Age Dyrting and Sister Eileen Jones check the families of leprosy patients south of Katherine in 1973
(courtesy: A Dyrting)

The Governor General Sir William Slim, Mother Marion Whelan, Lady Slim and Dr Dick Webb (Director of Health) at East Arm Hospital (Sisters House) in 1959 (photo: R Webb)

Some of the leprosy control team attended an international conference in Mexico City in 1978. L-R: Sister Pat Chalmers, Dr Dyrting, Melville Furness (physio), Sister Eileen Jones and Sister Annette Barron (courtesy: A Dyrting)
East Arm Leprosy Hospital in April 1982 shortly before it was closed. The hospital is on the left and in the centre the Sisters Home (photo: T Knight)
CHAPTER EIGHTEEN

ABORIGINES AND MEASLES, 1948-1949

In the aftermath of the devastating Second World War there was a great upsurge of good will and an international desire to improve the lot of mankind and reduce, if not eradicate, poverty and sickness. The World Health Organization (WHO) came into being with far reaching plans to train health personnel and establish rural health centres and aid posts throughout the underdeveloped countries. Australians in Papua New Guinea were soon involved in this new and creative thinking and in fact pioneered the development of aid posts. Army doctors in the Northern Territory saw what was needed and provided the Department of Health with sound guidelines. In the Alice Springs area Dr Claude Lum proposed hospitals (health centres) staffed by trained nurses and with regular visits by doctors(1). Brigadier RM Nimmo wrote in similar vein in December 1944(2). These recommendations were overlooked or ignored and were certainly not considered by the Department of Health.

Men with the Native Affairs Branch expected the Department of Health to shoulder responsibility for the health of Aborigines. Mr Vincent White expressed his shock and concern when he realised that prewar policies had not changed. Dr AJ Metcalfe, as Director General of Health in Canberra, stated clearly that his responsibilities covered the provision of four hospitals, a leprosarium and an Aerial Medical Service. At that stage the Public Service Board said that in their opinion all health services should be the responsibility of the Department of Health but Dr Metcalfe disagreed.

Bagot Settlement

Bagot Settlement for Aborigines provided the first postwar bone of contention over who was responsible for Aboriginal health. Aboriginal men with the Black Watch were transferred by the Army from their camp at Koolpinyah, near Howard Springs, to Bagot late in 1944. Sister Ena Harvey (Mrs Ron Ryan) was employed by the Allied Works Council at Bagot where she lived with a group of AWAS (Australian Women's Army Service) in the two storey quarters built for mixed race children. At the end of the war large numbers of Aborigines moved on to Bagot from the abandoned camps at Mataranka and Katherine. In a short time there were over four hundred people living in inadequate accommodation and health problems began to arise, particularly among the infants. The Administrator, Mr CLA Abbott, asked Dr Metcalfe to establish a health clinic and continue the services of Sister Harvey. Dr Metcalfe firmly stated that Bagot was not his responsibility.

Miss Amelia Shankleton of the Aborigines Inland Mission returned from the south in June 1946 with a group of mixed race children. These children reoccupied their earlier home at Bagot and although they attended school in Darwin, it all added to the overcrowding at Bagot. Mr Vincent White applied for another reserve for Aborigines and was granted a site at Honeysuckle Flat about 1.5 kilometres from the army hospital at Berrimah(3). There were ex-RAAF buildings at Honeysuckle Flat and many former Darwin Aborigines took up residence there, leaving Bagot to the Bathurst Islanders and Arnhem Land people. In 1951 this camp was closed and the remaining Aborigines returned to Bagot(4).
During 1947 an attempt was made to send the Arnhem Land people home. For want of a more accurate description this large group was referred to as Milingimbi Aborigines when in fact many were Burara people from the Blyth River. Launches were organised for transport to take them home but they disappeared into the thick bush at Bagot. Their camps were raided and the paperbark parcels of their relatives' bones were seized and taken aboard the boats. The people then reluctantly went home but many soon disposed of their bones in ancestral country and walked back to Darwin. It was an era of great restlessness that was not resolved until a settlement was opened at Maningrida on the eastern bank of the Liverpool River estuary in 1957.

Sister CE Lalor replaced Sister Harvey at Bagot Hospital in April 1949. The hospital then contained thirty-eight beds and mattresses. The place was congested and eighteen beds were removed to the store at Bagot and were redistributed to the home for mixed race children without any prior fumigation. Scabies had been introduced during the war and as the mites live in bedding, it all should have been fumigated. Sister Lalor protested but no one wanted advice.

Darwin Hospital also offloaded patients to Bagot so that Sister Lalor was treating as many as thirty-two inpatients in twenty beds. Several of the patients were on long-term treatment such as required in tuberculosis(5). There were just the two main wards with nowhere for infectious patients. The Medical Superintendent at Darwin Hospital visited Bagot when he could afford the time, but medical visits were not on a regular basis and certainly no one had any concept of the load of work imposed on one Sister. She was in fact on duty around the clock seven days each week. As she lived in a house near the Bagot hospital, she was frequently called at night. There were no penalty rates or overtime; Sister Lalor received the basic salary for a registered nurse as paid at Darwin Hospital where the staff did manage one day off each week.

On 6 June 1949 Darwin Hospital sent a four pound (1.814 kg) premature infant to Bagot Hospital without asking Sister Lalor if she could cope with him. She could not and she sent him back to the hospital. There were no facilities for infants without mothers. Darwin hospital developed a policy of not cluttering the hospital with the mothers of sick babies, or, as in this case, the mother of a premature infant. Bringing bush mothers to Darwin tended to crowd aircraft and posed problems in transporting the mother home again whereas an infant could be carried in the lap of any passenger. Mothers who were not allowed to stay at Darwin Hospital usually had to stay at Bagot without their husbands and some formed new attachments and did not want to go home. This led to many husbands refusing to let their wives go to Darwin. With few exceptions most of the staff at Darwin Hospital saw nothing wrong with establishing bush babies on artificial feedings. A later review of many of these infants showed that about half of them died after returning home, the survivors being those in the direct care of a nursing Sister.

At Bagot Sister Lalor was already grossly overworked. The facilities were inadequate; the kitchen was of black iron with a burnt out wood stove; there were no infant cots and no supply of oxygen should a premature infant require it. Somehow the reporter, Douglas Lockwood, gleaned news of an argument and did not hesitate to fan it into a fire. He wrote on the shortcomings of Bagot Hospital and the scandalous shortfalls, as he saw them, at the Bagot Settlement. Mr Reg McCaffery, a senior officer with the Native Affairs Branch, obtained some basic kitchen equipment, eating utensils and a cabinet in which to lock the drugs in the hospital. By early 1950 improvements had been made to the kitchen facility but there was still only one Sister doing the work.

After the war Mr Frank Moy replaced Mr Chinnery as Director of Native Affairs and he continued to develop the policies established by his predecessor. Mr Moy visited all
missions and settlements to assess the situation and to gauge their needs; his many reports reveal a man with insight and understanding. However the Administrator, Mr AR Driver, was not sympathetic to either Health or Welfare and did not give Mr Moy the support he needed. There was always much criticism of the Native Affairs Branch; it was fair game for anyone who wanted to criticise the government. However most of the men and women who abandoned the comforts of city life for the rigours of the bush to pioneer the Aboriginal settlements did their best under very difficult conditions.

During 1948-49, long before there were the staff to cope with a major epidemic, measles swept through the country. The measles story is told in conjunction with the beginnings of each settlement and not necessarily in sequence.

During the latter half of 1949 measles swept through Bagot with up to eighty people ill at one time. No extra help was forthcoming as the epidemic was also widespread at the time. Darwin Hospital did not have staff to spare. Someone had made the grave error of advising the Public Service Board that sick Aborigines needed less nursing care than other people. It took many years to overcome that fallacy. In the meantime the district hospitals and the health services on Aboriginal Settlements were both seriously disadvantaged. In desperation Sister Lalor wrote to the Minister for Health in Canberra. Dr Metcalfe expressed concern and directed that a doctor visit Bagot each week and admit all really sick people to Darwin Hospital. He directed that Bagot hospital was an outpatient service for the Settlement and to care for long-term conditions such as tuberculosis. The Sister at Bagot was also in the intolerable position of having two bosses, the visiting doctor from Darwin Hospital and the non-medical Superintendent of Bagot Settlement. Over the years ahead similar situations existed on all the government settlements.

As mentioned earlier the nucleus of many settlements developed during the war to supply food for hungry people and to keep them away from the army camps. Each new settlement developed differently according to the background experience of the Aborigines and the initiative of the Superintendents appointed to supervise development. Several of the early Superintendents were ex-policemen whose knowledge of the outback and its hazards proved invaluable.

The greatest drawback to any rapid development in the outback was the lack of housing for staff and this took many years to overcome. Most of the early buildings were second-hand Sydney Williams huts bought during the sale of army camps and equipment. These iron huts were excessively hot in summer and cold and draughty in the winter. Most of the early postwar pioneers who went into the outback to help implement the new policies for Aborigines lived in Sydney Williams huts. Some of these pioneers did enjoy the luxury of pressure lamps, kerosene refrigerators and transceiver radios. Most had to wait a few years for electricity. Water, or the lack of it, influenced where a settlement could be developed and much time and money was spent locating an adequate supply of potable water. Windmills were erected and pumps installed and the man in charge of the settlement had to know how to maintain these. Aborigines, unfamiliar with taps, would fail to turn them off. Also, a tap could be turned on when the tank was low or empty and not be turned off. There was never enough water for anyone to be wasteful.

Aborigines who had enjoyed the activities of the war situation, experienced a great restlessness and reluctance to return to the peace of the bush. This was particularly so in the Katherine and Darwin areas. They were not permitted alcohol so they turned to Methylated Spirits mixed with powdered milk. This craze spread and householders had to lock away the Methylated Spirits used to prime pressure lamps and primus stoves. Several chronic drinkers were sent to Delissaville (Belyuen) and others to Snake Bay (Milikapiti)
rather than incarcerating them in gaols, but this practice had a demoralising effect on the local people who had to put up with their complaints.

**Haasts Bluff and Areyponga**

In Central Australia, Haasts Bluff was the first new ration depot established in 1942. It effectively drew off many of the Aboriginal people frequenting the highway north of Alice Springs. Later that year, Pastor FW Albrecht was in Alice Springs on business when he was sent for by the Chief of Police. His first thought was that he was about to be interned as a German citizen but this was not so. The Army was pressuring the small police force to get rid of the many Aborigines frequenting the railway line south of Alice Springs. Soldiers travelling north were giving away their army rations and all attempts to stop this had failed. Pastor Albrecht was asked to draw off the Aborigines and he in turn sought financial assistance from Mr CLA Abbott to provide water at a new ration depot but no help was forthcoming. He was expected to achieve a miracle without help but once he took action to develop another ration depot for the Pitjantjatjara and Loritja people then some assistance was provided. Aborigines selected Areyponga, south-west of Hermannsburg, and when the news spread many people were there in advance of the missionaries. Aboriginal men from Hermannsburg cut a road to Areyponga with their picks and shovels(6) and by late 1942 an experienced Aborigine was issuing rations at Areyponga. In the 1950s when the mission could not finance the required building program, the Native Affairs Branch took it over as a government settlement. Missionaries remained and it was they who provided the first nursing Sisters and school teachers.

In 1946 there were 198 adults and 40 children living fairly permanently at Haasts Bluff. The site of this settlement near the base of the bluff was beautiful but there was never sufficient water found to allow it to expand. Papunya, 15 miles (25 kilometres) to the north, was eventually developed to replace Haasts Bluff as a major settlement and the population built up to over one thousand. That story is told in Chapter 21.

**Yuendumu**

Due to prolonged drought there was widespread starvation among the Wailbri (Warpiri) people in the country north-west of Alice Springs and extending to the border with Western Australia. Airstrips had been cleared at both Tanami and the Granites for mining enterprises so Mr Vic G Carrington, Acting Director of Native Affairs, and his assistant Mr Vincent J White were aware of the conditions. There was little mining activity but Connellan Airways pilots were landing there with mail and freight. Mr Frank McGarry who had proved his worth under rugged conditions at Arltunga was asked to go to Tanami to assess the needs of the Wailbri people, to distribute rations and attend to the sick. Frank McGarry had no qualifications except his willingness to work. He arrived at Tanami by government truck on 15 April 1945 after a journey of five days. There were then ninety Aborigines, twenty-six of them children residing at, or migrating between, the two mining sites. He described the men as wiry but the women and children were 'a thin emaciated lot'. 'Food is so scarce that only the fittest may survive, which is probably the reason why so few old natives are to be seen'(7). In his first report Frank McGarry asked for a doctor and a dentist to be flown out as there appeared to be much trachoma, three cases of granuloma and many other distressing conditions. Captain King (doctor) from 109 AGH Alice Springs visited Tanami by air in May 1945. He was appalled by the site and the condition of the people and recommended that a new site be found as a matter of urgency.

Nothing could be done as quickly as the doctor might recommend as people could not be moved until adequate water had been found elsewhere. The Government authorised the
purchase of meat from Nicholson cattle station across the border in Western Australia but Connellan Airways could only carry a small portion of what was required. Without refrigeration, meat did not remain edible much past two meals, one in the evening of the day of delivery and midday the next day. Hungry people overate once each fortnight.

Following a report by Frank McGarry that seven people had died over the Christmas-New Year period, Dr Mossy Hain was flown to Tanami on 13 January 1946. All seven deaths had occurred away from the ration depot when people had gone searching for extra food that did not exist. Frank McGarry considered they had died from starvation. Most others were suffering from a marked degree of scurvy:

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\text{with typical bleeding, swollen gums, haemorrhages into joints, sub-periosteal haemorrhages, wasting of muscles, extreme debility and in two cases, emaciation(8).}
\]

Their diet was almost exclusively flour. Frank McGarry himself was also suffering from malnutrition. The one well, 182 feet deep (55 metres) was producing 30-40 gallons (182 litres) per day all of which was lifted by bucket and windlass. There was another well 6 miles (9.6 kilometres) away but it had partly collapsed and was too dangerous without prior maintenance. The people were too weak to do hard work. Dr Hain recommended vitamin rich fruit and vegetables plus powdered milk and cereal for babies. He was most scathing that nothing appeared to have been done since the report by Dr King eight months earlier.

The Native Affairs Branch, with very few officers, was endeavouring to solve the problem. Mr Bill Harney, who had been a Patrol Officer during the war, had inspected the Catfish block (Hooker Creek-Lajamanu) south of Wave Hill station and reported that there was good grazing country and every prospect of finding underground water. Mr Gordon Sweeney had covered all the Mt Doreen and Vaughan Springs area and selected a block that was later named Yuendumu, the local name for a nearby range of hills. Once again a supply of water had to be found before a decision could be made. Both of these sites did become Aboriginal settlements.

Trucks arrived from Alice Springs within days of Dr Mossy Hain's report being made available and all the Aborigines were shifted 60 miles (96.5 kilometres) to the Granites. There was ample potable water at the Granites where Mr Gordon Chapman agreed to let the Aborigines remain until transferred to the new site at Yuendumu. There were several different groups of Wailbri people there and old enmities soon flared into ugly fights. The anthropologist, Miss Olive Pink, was sent to investigate but Frank McGarry considered she only caused more trouble. Then Gordon Chapman made a demand for Aboriginal labour, failing which, he would cut off the water supply that he owned. As there was no government bore, there was no alternative but to move the people.

Early in May 1946 a policeman arrived from Alice Springs with a convoy of three trucks and orders to shift all the Aborigines to Yuendumu where a bore and windmill were operating. Two Sydney Williams huts had already been erected, one for stores and the other for staff accommodation. Late in 1946 when the workload and inadequate food had taken a severe toll on Frank McGarry's own health, he went to Alice Springs and there learned that many changes were pending. Mr EWP Chinnery and Mr VG Carrington, who had been his mainstay, were leaving; a new Director, Mr Frank Moy, would arrive in a few months. On top of that two Baptist missionaries would arrive soon to provide for the spiritual welfare of the Aborigines at Yuendumu and to set up and run a trade store. A young man, Mr Russell Hewitt, was sent to assist Frank McGarry and it was he who established a garden to provide fresh fruit and vegetables.
By the end of 1946 there were over four hundred Aborigines at Yuendum. These illiterate people had to be 'identified' to ensure they did not double-up on rations. Able-bodied men were supposed to work for their food but this needed supervision. Even the few white contractors erecting overhead tanks needed supervision. When the first 20,000 gallon overhead tank was filled with water, the new tank stand collapsed.

There were many problems, not the least being fights. Without a hospital or a nursing Sister, all the medical emergencies fell on the Superintendent and there was seldom a night that some group of Wailbri were not involved in a dispute with their neighbours. A radio transceiver was provided during 1947 and allowed contact with Dr Bill Alderman in Alice Springs. Aboriginal men were employed to clear the airstrip area of thick mulga and once the strip was open, Connellan Airways was able to land and evacuate the seriously injured. The first kerosene refrigerator was delivered in 1947 for domestic use but the bulk supply of kerosene was not as clean as it needed to be and the flue of the refrigerator was solid with soot within a week. Maintenance of the refrigerator could not be delegated; to do so was to court disaster. A specified time each week was set aside to thoroughly clean the flue, fill the tank with kerosene and trim and adjust the wick. The writer recalls an Aboriginal assistant filling the fuel can with petrol instead of kerosene. A visitor with a sensitive nose recognised the mistake, grabbed the fuel can and promptly removed it to the yard before the fire in the wood stove touched off a disaster. Many such tasks could not safely be left to others and staff on all new settlements and church missions experienced similar problems.

Dr Claude Lum visited Yuendumu early in August 1946 and stated that the current food ration would lead to serious malnutrition. The ration was seven pounds of flour per week for each adult plus tea leaves and sugar. Someone introduced a practice of mixing the dry tea and sugar and it was years before it was stopped. Aborigines would spend hours gently winnowing on a barada (coolamon) to separate the two. In that era supplies were limited and transport was a major problem. Mt Doreen station, 30 miles (48 kilometres) west of Yuendumu, had a contract to supply 700 pounds (317 kg) of freshly killed beef each week. Once a flyproof meathouse had been built it was possible to salt the meat and issue a ration each day for four or five days. On top of that kangaroos were still plentiful in the vicinity of Yuendumu. However, a large group of people soon reduced the naturally occurring bush fruit and yams unless there were good rains to ensure regrowth. Another disadvantage of a large group was their destruction of the mulga trees for wurlies and cooking fires. The mulga trees should have provided shade. Once an area was denuded, the Wailbri people moved camp and repeated the process. This also occurred at all other new settlements until most were left without shelter from the hot sun or the cold winds of winter.

The garden at Yuendumu was cultivated by Aboriginal men and did very well. A wide range of European vegetables grew during the cool months but in the heat of summer there was little more than watermelons. It was soon observed that some vegetables did much better than others and enquiry elicited that the Aborigines watered the things they liked. Carrots and pumpkin, served in stews, were not appreciated. However one day a large patch of carrots, much enjoyed by the Europeans, just disappeared. The only evidence was many small footprints; Aboriginal children had discovered raw carrots.

Communal feeding of one cooked meal each day was introduced. As there was no kitchen, coppers of the type then used for boiling clothes were set up in the open; kitchens came much later. With hindsight it can be seen that communal feeding was less than desirable but the reasons for its introduction can be understood. The physical condition of most women and children was not good and there seemed little doubt that the choice food
such as beef was being eaten by the men, with little or nothing for their families. In later years this was largely confirmed during medical surveys when blood tests showed the men had markedly higher haemoglobin estimations than the women and children. This was in an area where hookworm infestation did not confuse the issue. The greater intake of red meat ensured a higher haemoglobin content. Stews were prepared with meat and vegetables and were served into billies made from three pound milk tins. All of the needy received this food but although they were obviously lean and hungry many did not appreciate the vegetables. They had participated in growing the vegetables but, even so, many were suspicious and reluctant to even try them. They were never suspicious about damper with jam or golden syrup but the white community knew that fruit and vegetables were essential to prevent scurvy.

The population at Yuendumu continued to grow and this led to more fights and terrible injuries. Frank McGarry sent for the police and Dr Lum visited again with a policeman. Ten men were arrested and taken to Alice Springs. Dr Lum was still most concerned over the health of the women who were so thin in comparison with the men. Good rain followed the visit and a few weeks later many people went hunting which relieved the pressure and tensions among the Aborigines.

Two Baptist missionaries arrived at Yuendumu on 13 February 1947. One of these, Pastor Laurie Reece, had undertaken a journey by camels throughout the area during June and July 1945 with a view to the Baptist Church commencing a mission in the area. Accompanied by Aboriginal guides he left Haasts Bluff on 30 May and visited Napperby, Coniston, Mt Doreen homestead (since abandoned), Vaughan Springs and further west to Ethel Creek. In the Ethel Creek area there were people with gross sores (possibly yaws) and damage caused by the contractures from burn scars. The women showed marked evidence of brutal injuries inflicted by their menfolk. All told he saw about two hundred and fifty people but heard stories of many more in the country west of Ethel Creek towards Lake Mackay(9). (Later a government expedition visited the Lake Mackay area in 1957.) At Yuendumu the first task of Pastor PJ Steer and Pastor Reece was to erect houses from ex-army materials supplied by the Native Affairs Branch. As soon as the houses had four walls and a roof their wives joined them. The houses were ceiled, lined and cement floors were added little by little as time permitted. A large species of vigorous white ants devoured just about everything and even made a tunnel through newly laid cement before it had time to dry. Everyone had to contend with them.

The missionaries opened a trade store and sold goods to the Aborigines at cost price. Kangaroo skins and dingo scalps were traded in exchange. Apart from that there were the small wages paid to many part-time workers at Yuendumu and the Aboriginal employees from the nearby cattle stations. Work in the store was time consuming as the people bought one item at a time and examined their money to see what they could buy next. However, it gave the missionaries access to the whole community and it was they who started and continued births and deaths registers at Yuendumu.

Late in January 1948 supplies arrived by truck from Alice Springs bringing news of widespread measles there. One Aboriginal man, a measles contact, returned home on the truck. On 19 February there was a wild fight with spears and boomerangs at the new airstrip resulting in serious injuries to six people. The women relatives bashed their already battered heads with rocks as an expression of grief and were spattered with blood. Frank McGarry called Alice Springs on the radio and the following day Dr Alderman and a Sister came by air, having given instruction that the patients were to be at the airstrip. As the aircraft was too small for so many, the Assistant Superintendent had to take the patients 185 miles (297 kilometres) by road to Alice Springs. Four days later on the 23rd, Frank McGarry reported at least sixty people with measles and he was again instructed to
have them all at the airstrip for a visiting doctor to examine. He was asked to do the
impossible as the settlement truck had not yet returned from Alice Springs. Pastor Steer
was away so Pastor Reece used his bus to assist. Matron Woolmington came on the
aircraft, gave all the sick a dose of medicine and then flew back to Alice Springs. In all
fairness to the Matron the complications of measles were not manifest at that time but a
few days later the situation was much worse and a government truck brought Sister Olive
O'Keefe (nee Harvey) from the Bungalow in Alice Springs.

In the midst of the measles epidemic a policeman and welfare officer arrived to investigate
the recent big fight and took several men to Alice Springs for prosecution. Any of these
men could have been incubating measles. The epidemic continued to spread and involved
most of the community. Sister O'Keefe, who lived in the second mission house, worked
long and hard. Heavy rain fell (100 mm in one day); the temperature dropped and the sick
people, with no shelter apart from their own brush wurlies, were exposed to chills and
complications. By mid-March Sister O'Keefe had returned to Alice Springs. No sooner
had she departed on the newly implemented mail service than complications set in. The
one missioner worked immensely hard supplying meals for those who were still sick while
Frank McGarry did his best to cope with bronchitis and pneumonia. Sister O'Keefe
returned to Yuendumu but too late to save eight babies, three women and one man(10).
Twelve died as a result of the epidemic.

The Baptist headquarters in Sydney were in touch with the Minister responsible for the
Northern Territory and urged that a nursing Sister be appointed to Yuendumu as a matter
of urgency. They outlined the injuries from the recent fights and the heavy mortality
following the measles. They were prepared to nominate a Sister if the government would
employ her. Mr Frank Moy saw the need for a Sister but the Administrator,
Mr AR Driver, stated that:

*it is unlikely the presence of a Nurse ... would have prevented the fighting
or the injuries ... The injured natives required hospitalisation and the
services of a doctor were essential. All have recovered(11).*

No one had suggested a Sister would, or could, prevent fights but she could certainly deal
with the aftermath. Northern Territory Administrators had far too much power to make
decisions on matters they did not understand.

In some aspects Wailbri culture led to serious injuries and their practices had to be
modified or stopped. The use of human kidney fat for sorcery was particularly serious as
the fat was removed from the living. Some of the Wailbri people were back at the
Granites goldmine and on 15 June 1948 Connellan Airways, whilst on a routine mail
flight, brought to Alice Springs a teenage girl whose brother had removed some of her
kidney fat(12). Dr Bill Alderman repaired the damage. He also recalled operating on a
man from Yuendumu, knocked unconscious during a fight, who lost the fat from around
one kidney. In the latter the kidney was ruptured and had to be removed(13). Both
patients did recover but it was a grim situation in which they could not live safely among
their own kinsmen.

In mid-1948 a new Government policy stated that only married men could hold the
position of Superintendent in an Aboriginal settlement. This was the last straw for Frank
McGarry and he retired in June. He died in Sydney 21 November 1955. His replacement
at Yuendumu, Mr Walter Langdon, had long background experience with the police force
and was a sound practical man. Wally Langdon left no doubt he needed a hospital and the
services of at least one Sister.

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Reverend Tom Fleming and his wife Pat replaced Laurie Reece late in 1949 and were eventually the only missionaries. They spent almost thirty years at Yuendumu. Reverend Tom Fleming and Wally Langdon built a humble little hospital with ex-army iron. The walls retained their camouflage paint and the scores of nail holes from earlier use. Everything that happened inside could be observed through the nailholes from the outside. An old wood stove was partly protected under an iron lean-to while a fuel drum was cut in half lengthwise to form a bathtub.

Sister GL Parnell was the first Sister appointed on 30 May 1949. She stayed seventeen months and placed an order for basic equipment for the hospital. Sister Dorothy Hall followed with her daughter Diane. She stayed six months and as there was no house she was boarded by the missionaries. After her departure Wally Langdon and Reverend Fleming took it in turns to do the medical work until the arrival of Sister Ellen Kettle from Victoria on 4 February 1952. From that time on the settlement was never without one or two Sisters. In spite of the presence of an ex-policeman, the Wailbri continued to fight among themselves. During a major row in 1951 two men were killed outright by spears and following that many people left Yuendumu for fear of reprisals.

Hooker Creek (Lajamanu)

While Yuendumu was being established, the Catfish block was acquired by the Government and renamed Hooker Creek (Lajamanu) after the creek which flowed through it. No Aborigines were seen on the block when inspected by Mr Gordon Sweeney in April 1945. It had been leased to Vestey's who owned Wave Hill station but the lease expired in 1945. Mr WF Grimster and his wife started work on the new site during 1948 and in October that year, after the measles epidemic, Patrol Officer EC Evans transferred a group of Wailbri people by truck from Yuendumu. The Aborigines, all northern Wailbri, volunteered to move north. In 1952 a further 140 Aborigines were also transferred but some of these later elected to walk back to Yuendumu via Tanami. By June 1949 a road had been cut and cleared to Wave Hill and a landing strip opened shortly afterwards. Two bores were providing good water but the piping used in reticulation was second-hand and rusted and all household linen boiled in the water turned orange-brown in colour.

Stockmen from Wave Hill station removed most of the station's cattle leaving only a few unbranded cows as food for the new settlement. To counteract theft, it was a Vestey policy not to sell horses or cattle carrying their brands. All Vestey beef went direct to the meatworks or to other Vestey properties in Queensland for fattening. In April 1951, 340 head of breeding cows and 26 horses were brought to Hooker Creek from Beswick Station by a droving team. Cattle yards and holding paddocks had to be built. Hooker Creek settlement now had beef. Planners considered the people could eat those cattle and breed from them at the same time with no concept that on the light feed available it took about four years for a calf to grow to economical maturity. Because of this the people on that settlement were often hungry. Even the staff's domestic cats were eaten. The delivery of stores such as flour was haphazard. Road freighting was all by contract and the lowest contract was given the job irrespective of the condition of his truck. Several times the supplies for Hooker Creek were left on the side of the road where a truck had broken down. Supplies were delivered before the wet season and after the rains ceased, the roads being impassable for about six months or more. All food not in cans was devoured by weevils and all too often the flour was putrid. Flour could only be securely stored in the large Sydney Williams iron sheds. The more experienced cattle stations had special sheds for flour. Roofs were of necessity made of iron and extended down to about four feet (1.2 metres) from the ground. Walls were of small gauge wire netting to deter rodents. The flour was stacked on a rack in a manner that ensured the maximum flow of air under and between the bags. This reduced the build up of weevils and kept the flour sweet. In that
era the flour on some of the government settlements and missions was so putrid from weevils that people experienced neuritic pains from lack of thiamine in the bread. The Methodist missions were better off as they bought whole wheat and gristed it for bread and porridge. Whole wheat was not as subject to weevils as flour.

An experienced bushman, Mr Jack Hawley, was appointed to Hooker Creek as Superintendent in July 1953 and he established an excellent garden. Even with the garden early signs of scurvy, namely bleeding gums and loose teeth, were noted among the infants in April 1954. These responded well to ascorbic acid tablets(14).

Dr Stephen Watsford, the Director of Health, paid a brief visit to the new settlement in June 1951 and again in September 1952 just prior to the transfer of 140 more people from Yuendumu. He was most impressed with the progress made and the vegetables being produced in the garden.

In July 1953 Dr WA Langsford carried out a medical survey and examined 109 people. At least half of those Aborigines would have earlier been seen by Dr Richard Brock at Yuendumu in June 1952. At that time Dr Langsford was in the midst of a survey by road of the cattle stations in the Victoria River area. He had organised a rather large survey party comprising himself and his wife and a Patrol Officer, Mr Creed Lovegrove and his wife. Both women were trained nurses. In addition to these four, there was an Aboriginal driver-mechanic, Mr Phillip Roberts (Wodjar Wodjarj) from Roper River Mission. During the survey Dr Langsford taught Phillip Roberts how to examine faces for hookworm and thus delegated that unpleasant task. This was the beginning of Phillip Roberts's long and distinguished service with the Department of Health.

Dr Langsford found that hookworm had been introduced to Hooker Creek. This was a shock as the area should have been free of infestation, but Aboriginal prisoners had been sent there from Darwin. There was scope for the spread of hookworm as the most popular lavatory was the long grass growing where Hooker Creek flowed out on to the plain and ceased to be a creek. Mantoux tests for tuberculosis gave a 38 per cent positive result and the remainder were given BCG vaccination. Dr Langsford recorded 35 people (32 per cent) with trachoma(15). This was prior to the classification of trachoma as required by the World Health Organization hence the degree of damage was not then recorded. In June 1957 when 126 were examined for trachoma, 91 per cent were infected, 7 were totally blind and a further 8 had lost the sight in one eye(16).

Dr John Elphinstone, from Aberdeen in Scotland, arrived in Darwin in January 1953. As he had a qualification in tropical medicine from Liverpool he was, for a time, in charge of leprosy control and also the supervision of the treatment of trachoma. Officially, he was looking after Hooker Creek settlement and the health of people on the western cattle stations but his brusque manner frightened the Aborigines and angered the white people. 'Barcoo rot' was still prevalent and a number of white men who presented with chronic sores were told by the doctor that they needed soap and water. With few exceptions most chronic sores responded well to ascorbic acid (Vitamin C) tablets.

The treatment of hookworm and trachoma at Hooker Creek was the first task given to Sister Kettle in her new role as a Survey Sister. The flight to Hooker Creek on 8 May 1954 was by commercial aircraft (TAA to Katherine and then Connellan Airways to Hooker Creek with an overnight stop at Coolibah station) and took two whole days. Mr Jack Hawley was the Superintendent with his wife Rene doing the medical work. Most of the buildings at Hooker Creek were Sydney Williams huts, one of which served as a hospital. The so called hospital had no equipment apart from a wood-burning stove and some folding army type beds. As Sister Kettle had been told there was a hospital, she
arrived unprepared and had to place a request for survey equipment a few days later when Dr Elphinstone visited with the Aerial Medical Service.

Treatment for hookworm was unpleasant and very difficult to administer to children. They were given a purgative, sodium sulphate, in the evening, followed by tetrachlorethylene on an empty stomach at daylight. This was followed by a further dose of sodium sulphate on the third day. The tetrachlorethylene was encapsulated in gelatine, but small children could not swallow these so they had to drink it mixed with water. It was a dangerous preparation to administer to reluctant children as they could catch their breath and have to be resuscitated. The men enjoyed the intoxicating sensation that followed and those who missed out on a dose protested.

Treating trachoma was a time consuming task as sulphasalazine tablets were issued twice daily for six weeks. No one enjoyed the aureomycin ointment in their eyes and tried to wipe it out as soon as they left the clinic. The Survey Sister’s work covered everything that needed to be done as there was no one else to do it. A few days after the Sister’s arrival, Mr Hawley reported a young man with an infection too painful for him to ride a horse. He had granuloma venereum (Donovanosis) and agreed to be treated in Alice Springs Hospital where he was flown by Connellan Airways. The Wailbri people at Hooker Creek were afraid of Darwin as it was too far from the safety of their own country but this fear was gradually overcome.

In 1954 and for the next few years radio communications were difficult. Hooker Creek operated on the Royal Flying Doctor Service radio from Wyndham; Wave Hill station to the north used the Alice Springs circuit, while the Aerial Medical Service was provided from Darwin. The staff at Hooker Creek did not have direct contact with their nearest neighbors at Wave Hill, 112 kilometres to the north. As mentioned elsewhere this problem was steadily solved over the next few years.

Although there were no further medical surveys by doctors at Hooker Creek, Sister Kettle visited each year to examine everyone for leprosy and to check the health of the infants. Successive Superintendents, whose wives were paid to conduct a medical clinic, recommended to the Director of Welfare that a nursing Sister was not needed. This delayed the appointment of qualified staff. In the meantime a hawkery visited by truck and sold red and yellow glass beads. More of the beads were found in ears and up noses than were worn around necks. Several children had to be flown to Darwin Hospital where the beads were removed under anaesthesia. Prior to the beads it was common to find small red and black bean seeds in ears. As these were soft they could be gripped with forceps or gently syringed out. Apart from beads and seeds, the children’s ears suffered much damage from chronic infections. With some the damage started with otitis media. When there was discharge, small bush flies intruded, became bogged and added to the foul mess. On other occasions mothers had used twigs to remove seeds or small stones and undoubtedly caused damage which then attracted flies. Occasionally when ears have been cleaned and treated more hygienically, mothers have been seen to add a squirt of breast milk.

There was still no trained nurse when Sister Kettle was there again in June 1957. The weather was cold and the Sydney Williams hut far from ideal when, on the 17th, a woman came in carrying a naked newborn infant in one hand. The infant, later named June, weighed 3 pounds 5 ounces (1.50 kg) but she was too vigorous for prematurity. Her mother had been to Darwin where she was diagnosed as having an inoperable mass in her liver. June was breastfed until shortly before her mother’s death and although she was always small she made good progress.
Sister Eileen Jones (nee Tuffin), who had earlier worked at Darwin Hospital, was appointed to Hooker Creek as the first trained nurse in 1957. She arrived overland in a truck loaded with the prewet season food supplies while Darwin Hospital sent in advance, by air, a bottle-fed infant, Josepha, whose mother was in the leprosarium. On arrival, travel worn and weary, Sister Jones was presented with a very sick Josepha who had been in the Aboriginal camp and contracted diarrhoea. Josepha promptly became a part of the Jones household and was joined a few weeks later by the infant June whose mother had died. Two artificially fed babies were a handful but Aboriginal women did help with the feedings during the day. There were people who maintained the infants should have been reared by Aborigines but the risk of bottle-fed babies contracting gastroenteritis was such that it was safer for Sister Jones to rear them herself. In August 1958 when Sister Jones was transferred to Maningrida, Josepha was cared for in Darwin until her mother, a Wave Hill woman, was discharged from hospital. June, who was then fourteen months old was taken to Inverway station by her family; she survived but was always small and thin.

When Eileen Jones left Hooker Creek in August 1958 the health work was once more done by an untrained person. Superintendent Brian Greenfield and his wife took several Aborigines to Wyndham for the country race meeting early in September. They all contracted influenza and were ill with it on their return. The infection quickly spread and caused havoc among the babies. When three deaths were reported by radio on 15 September 1958, the Aerial Medical Service flew Sisters Meryl Nichol and Ellen Kettle in to investigate. Two more babies died before there was time to even assess them. Sister Nichol took three other sick infants to Darwin while Sister Kettle remained to cope with the epidemic. There were ten births at Hooker Creek that year and five infant deaths.

For many years it was difficult for the Welfare Department to advertise for nursing staff as there was neither reasonable accommodation nor working facilities. Married couples with the wife a trained nurse were given priority. Sister Nemastothe, the wife of a mechanic, worked at Hooker Creek. She was followed by Sister Socie Livingstone (nee Camp) who won the respect of the people and did much to build up their confidence in the health service.

It was government policy that each settlement and mission should aim to be largely self-supporting and produce much of their food. Dairying was introduced but, without exception, it was difficult to meet the high standards required by the Health Inspectors. Most settlements had both poultry and pigs but the success of these depended on the enthusiasm and practical ability of the Superintendents. There were all the hazards common to primary production and some that were not foreseen. Hooker Creek produced 18 kilograms of honey one year but the next year birds ate the bees.

**Phillip Creek**

It had long been policy to keep Aborigines out of Tennant Creek and away from undesirable contacts in the town. This was continued after the war and led to the opening of a temporary settlement 30 miles (49 kilometres) north at Phillip Creek. It provided a refuge for the remnants of both Wailbri and Warramunga people in that area. There were some particularly bright Warramunga people, both men and women, but they had some difficult customs, one being the imposition of silence upon the women as a mark of respect for the recently deceased. On top of this the women cut off their hair, tied their heads in scarves and whitewashed their faces with the fine ash from the kitchen stove. Sister Kettle was there in July 1955 to treat trachoma and two-thirds of the women were silent. They could use finger talk but someone else had to pass on the answer to a question or endeavour to explain their symptoms.
This settlement had originally started as a mission run by the Aborigines Inland Mission, but they did not have the staff or finance required for development. The Welfare Department took over with Mr Tom Wake as Superintendent and his wife Mary, a part-trained nurse, providing a health clinic. These people did excellent work under very makeshift conditions. Phillip Creek settlement was situated beside a large billabong but the water supply was too limited to allow development. Eventually a new site was selected 104 miles (167 kilometres) south of Tennant Creek and 13 miles (21 kilometres) east of the Stuart Highway. Dr Dick Webb from Tennant Creek Hospital inspected the site for the Warrabri (Ali Curung) settlement and recommended approval. Good potable underground water had been found.

From 1952 onwards the doctor at Tennant Creek, firstly Dr CB Eccles-Smith and later, in 1954, Dr RC Webb, paid a weekly visit to Phillip Creek and used the opportunity for medical survey work. Dr Webb thoroughly examined all eyes for trachoma and the records were available in 1955 when Sister Kettle treated trachoma. These records were maintained at Tennant Creek Hospital but after Dr Webb transferred to Alice Springs in 1956 the records completely disappeared or were destroyed.

Warrabri was planned as a model settlement to provide technical training for Aborigines. The name Warrabri was derived from Warra (Warramunga) and bri (Wailbrri) to commemorate both Aboriginal tribes. Eight houses for staff surrounded an oval. Construction of the school and hospital were still proceeding at the time the Aborigines were transferred by truck during very cold weather in June 1956. There were no houses ready for the Aborigines; these were built over the next few years. As they had to leave their junk behind they had no resources with which to construct humpies hence they suffered greatly from the cold winds. Over the next few days they gathered spinifex and some local mulga brush and made humble windbreaks. Head colds and chest infections broke out and the Aborigines blamed a ten month old twin girl for all their troubles. The baby was exposed at night and died in Tennant Creek Hospital from pneumonia. Even the mother was jubilant. The white staff had not allowed her to dispose of the baby at birth as was customary.

Mr Fred Drysdale was the first official Superintendent at Warrabri. He was a member of a well known Northern Territory family and later became an elected member of the Legislative Council. He stayed about eighteen months at Warrabri.

Dr John Hargrave conducted a medical survey at Warrabri in November 1956 when there were 232 Aborigines (17), most of whom were Warramunga people from north of Tennant Creek. The hospital then comprised two Nissen huts, but a more adequate building was under way. Dr Hargrave found the Aborigines to be in better condition than other groups he had examined, but even so, he felt that too little was being done to treat the medical conditions that could be treated. Three married trained nurses were each contributing - Mrs Christine Ingram, Mrs Renner and Mrs Patricia Feasey (nee Johnson). Mrs Feasy had worked at Haasts Bluff prior to marrying a school teacher.

Mr T Creed Lovegrove took over as Superintendent at Warrabri in 1958 and was there until late 1961. Great progress was made during his time; the vegetable and fruit garden produced more than enough and the poultry and pig industries did very well. On top of that, Warrabri was the only settlement not criticised by the Health Inspectors and Mr CG Rider, from Alice Springs, considered that the standards maintained at Warrabri could be achieved elsewhere.

In September 1958 Sister Kettle visited Warrabri to assess the health of the children under five years and to establish an Infant Health clinic with standard records. Sisters Chris
Ingram and Jean Lovegrove were providing the health service. There was a problem with twins again; the babies were five weeks old and neglected until one was given to a childless older woman to bottle feed. To overcome the problems of flies and camp dogs, all the food for this baby was prepared at the hospital. There were 71 infants, several of whom had come with their families from nearby cattle stations. By 1959 the population at Warrabri had increased to 401 of whom 192 were children under 14 years. By 1962 there were 517 people including 248 children. Much of the increase was due to migration. Most babies were born in hospital, a practice started in the original small clinic at Phillip Creek. Elsewhere in Central Australia few Aboriginal mothers would go to hospital for delivery.

The Bungalow and Amoonguna

The original telegraph station at Alice Springs had become a home for mixed race children prior to the war and was known as the Bungalow. The children christened by the Anglican church had not been sent to a northern mission in 1941. They were still at the Bungalow until evacuated to Mulgoa in New South Wales with the children from Emerald River mission on Groote Eylandt. The children's return after the war was delayed until 1948 when the Anglican bishop decided on a new home, St Mary's Hostel, south of the Gap at Alice Springs. A deaconess, Sister Eileen Heath, was in charge of the new hostel which catered for mixed race children from the outback whose parents sent them to Alice Springs to attend school.

The Bungalow became an Aboriginal holding centre as people from several different tribes drifted into Alice Springs. People sent to town for medical treatment waited at the Bungalow pending transport to their home areas. Immediately after the war Mr John O'Keefe was in charge and his wife Sister Olive O'Keefe (nee Harvey) provided a health service. About 1950 Sister O'Keefe joined the staff of Alice Springs Hospital and was in charge of the Aboriginal ward for at least ten years. She was later honoured for her services with the award of Member of the Order of the British Empire (MBE).

The Bungalow settlement was situated among attractive rocky hills north of Alice Springs and upstream on the Charles River. (The Charles River was a tributary of the Todd River which flowed through the middle of Alice Springs after heavy rain.) The site was not ideal and there was no room for expansion. A new site had been selected at Amoonguna seven miles (11 kilometres) out of Alice Springs on the southern aspect of the McDonnell Ranges. A good supply of underground water was found at Amoonguna and work commenced in 1957 on the development of this site.

Dr Richard Brock carried out a Mantoux survey followed by BCG vaccination in mid-November 1952. He read the results of 141 Mantoux tests and found 38 per cent positive. There were then two people at the Bungalow on domiciliary treatment for tuberculosis and a Sister visited each day to supervise all medications. Dr Brock recorded mainly Wailbri and Aranda people at that time. He also mentioned that a group of 38 Aboriginal people had agreed to be blood donors and the first had already given blood for Aboriginal patients in Alice Springs Hospital.

In November 1955 Sister Kettle lived in the old telegraph station homestead for a couple of weeks to check the health of the children. There was no one providing an Infant Health advisory service and it was recommended that the Department of Health should extend the Alice Springs clinic. A few months later, in April 1956, when Dr John Hargrave carried out a full medical survey, there were two hundred people at the Bungalow. Mr Les Wilson, previously at Haasts Bluff, was in charge and his wife was doing the medical work including the care of five people with quiescent tuberculosis. A Sister from Alice
Springs Hospital was visiting once each week, but it was Dr Hargrave who commenced immunisations with combined Diphtheria and Tetanus for adults and Triple Antigen for all the children. Mantoux tests were done and BCG given. Dr Hargrave arranged for all the people with positive Mantoux tests to be X-rayed at the hospital. The radiographer did a few chest X-rays each day until all were done. The doctor expressed concern over the poor living conditions but nothing was being spent on improving the Bungalow.

When the new settlement at Amoonguna opened in June 1960, there were 340 people, of whom 126 were children. The population increased by migration and the following year 489 people were recorded(19). Many men came to Amoonguna to be near an outlet for alcohol and a whole range of new social and health problems arose. Wife beating had always been a part of Aboriginal culture and drunken men were just that much more violent. Many men had regular work in Alice Springs but the drinking men made them hand over their earnings, or robbed them in card games. One young man had been taught cooking and in 1966 he ran the settlement kitchen; he did well but the transients and other trouble makers who would not work made life very difficult. It was not easy for Aborigines from several different tribes to meld into one happy group.

Sister E Joan Armstrong, who was appointed in September 1962 to run the health centre at Amoonguna, remained there until her death in a road accident on 10 May 1977. Other Sisters did work with her and a doctor conducted a clinic there once each week.

Occasionally babies from other centres were sent to Amoonguna from Alice Springs Hospital until they were sufficiently strong to be sent home.

Jay Creek (Iwupataka)

Jay Creek had become a settlement for Aborigines when the mixed race children were transferred to the Bungalow. The first patrol officer, Mr Theodore Strehlow, had made his home there, but when he was called up for the army in 1942, a policeman replaced him. As this centre is only 28 miles (45 kilometres) west of Alice Springs, it received regular visits by army doctors during the war. At the same time as the Aborigines with Catholic Church affiliation were sent to Arltunga in 1942, the Lutheran Aborigines were sent to Jay Creek.

After the war the centres with larger populations were given priority over Jay Creek. There was also the continuing problem of an inadequate supply of bore water that threatened the existence of the settlement.

Dr Richard Brock conducted a medical survey in October 1952 when Mr Harry S Kitching was in charge and his wife was providing a simple medical clinic. Dr Brock examined 137 people and found that the greatest problem was trachoma. The army had provided treatment for trachoma in 1945, but with no trained nurse at the settlement there was no guarantee that the treatment was thorough or adequate. Further treatment of trachoma was started and left for Mrs Kitching to continue. In spite of there being four people on treatment for tuberculosis, only 56 per cent had positive Mantoux tests. BCG was given to all those with a negative reaction.

When Dr John Hargrave repeated the survey in October 1956, 70 per cent had positive reactions. There was still one person on treatment for tuberculosis and three who had ceased treatment and were well. Dr Hargrave arranged for fifteen adults to go to Alice Springs for chest X-rays. All the school children had been taken to town for chest X-rays in April that year but it is uncertain who authorised that action as Dr Welton had left by then. Mr Tasman Festing was in charge at Jay Creek and his wife Pat was doing the clinic
work. As Jay Creek was so close to Alice Springs it had no priority for the services of a nursing Sister. The Festings went from there to Borroloola where they spent many years.

Borroloola

The long established police station at Borroloola was closed early in 1949 and the Native Affairs Branch took over the old buildings to provide a ration depot for the Aborigines in the area. An iron shed was added to provide a store for ration supplies. One end of the shed was partitioned to allow space for a small medical clinic. In 1955 this clinic contained one folding iron bed and a large prewar medical box. Leg irons still remained in the two lockups.

Borroloola is on the western aspect of the McArthur River about forty-five miles (72 kilometres) upstream from the mouth of the river. It had been started as a port for cattle stations on the Barkly Tablelands in the last century and the MV Cora still brought in supplies from Thursday Island four times each year. The same ship called at Roper River Mission, Groote Eylandt, and later at Numbulwar at the mouth of the Rose River. Missionaries with the Aborigines Inland Mission provided a school downstream from the police station.

When Dr Richard Brock carried out a medical survey in July 1951, he examined 113 people of whom only 25 were children under 14 years of age. In most other places the children comprised about 40 per cent of the population. The people of Borroloola had a history of long contact with white people and showed a fair understanding of modern medicine, but, even so, Dr Brock commented that they still held to primitive beliefs, some of which were most unscientific and stood in the way of improved health. He did not enlarge on this.

Mantoux tests were done and although 64 per cent had a positive reaction, there were no cases of tuberculosis and no tuberculous adenitis among the children. There was little active yaws as earlier on police officers had given them injections of Acetylsalicyl acid. Trachoma was a considerable problem in all age groups with five people close to total blindness. Mrs H Ellis, the wife of the Welfare Superintendent, agreed to treat trachoma with Sulphacetamide 30 per cent eyedrops twice daily along with ten days oral Sulphamonazine. Five weeks later most eyes were markedly improved with recession of the trachoma follicles. However, they needed further treatment but there was no one to do this until Sister Kettle was flown to Borroloola in May 1955.

Dr Brock diagnosed four people with leprosy and established them on treatment. Dr AH Humphry was in charge of leprosy in 1951 and he believed in domiciliary care. Only those who would not cooperate were sent to Channel Island leprosarium. Shortly after this Dr CE Cook was back in Canberra at headquarters and moved smartly to influence policy at Government level. Dr Cook decreed that all leprosy patients should be strictly isolated. More is recorded in the chapter on leprosy (Chapter 17).

Hookworm had been introduced to Borroloola. These people had contact with their tribal relations at Roper River Mission so the infestation may have been brought in by travelling Aborigines. Anaemia was not a major problem in 1951 but it did become a problem later. Latrines had been constructed in the camp on the eastern bank of the McArthur River and the village of bark huts was usually tidy. A village council had been established and the Aborigines were attending to their own sanitary arrangements. This worked well until their numbers were doubled during the wet season when Aborigines working on the Barkly Tablelands visited Borroloola for their holidays.
Mr Tas Festing was the Welfare Superintendent at Borroloola for many years and during his time all the infants were fed on Heinz baby foods; it was certainly easier than teaching the women how to cook. Mrs Pat Festing provided a medical clinic and she was still providing a first aid clinic when two Department of Health Survey Sisters, Margaret Eldridge and Heather Cardinal, visited in July 1970. At this time several of the infants were anaemic and one had to be sent to Darwin Hospital for transfusion.

There was no full-time nursing Sister and hence no health education at Borroloola until the appointment of Sister Margaret C Morris in December 1970. She was joined by Sister Coral Edds. Later, Sister Margaret Eldridge, who had spent much of her childhood with her missionary parents at Borroloola, provided the health service for several years.

**Bamyili (Barunga)**

There had been large groups of Aborigines camped in the vicinity of Maranboy during the war (Chapter 12). As well as these camps, the Aborigines Inland Mission established a small settlement eleven miles (17.7 kilometres) east of Katherine in 1943. This was abandoned after the war and the people moved to Maranboy. Many of the Aborigines were from Arnhem Land; they had enjoyed the activity during the war and were reluctant to return to their former tribal life. Some of these people added to the postwar congestion at Bagot.

The Maranboy site was not suitable and the camp was shifted to King River. A further move was made to Tandangal in 1948 and then to the Bamyili site on Beswick Creek in 1951(20). Mr Tom Wake was the Superintendent and his wife Mary recall that the Aborigines would not live at Tandangal as it was low and could flood. They killed four or five snakes each day. Tom and Mary Wake did much pioneering work for the Native Affairs Branch and it was many years before this family enjoyed the comfort of a normal home in which to rear their five children. Tom Wake was an excellent gardener and wherever he was asked to work he soon produced good fruit and vegetables for his family and the Aborigines. The Government had purchased Beswick station in 1947 as a training school for Aboriginal stockmen. The new settlement of Bamyili was 35 kilometres from the cattle station.

For many years neither the settlement nor the cattle station enjoyed the services of a nursing Sister. Dr Stephen Watsford visited Bamyili early in 1951 to investigate an epidemic which he diagnosed as influenza. There was no Sister to cope with the sick people. Following this visit Dr Geoffrey T Ey was sent to Katherine with instructions to institute regular visits to Bamyili and also to Beswick cattle station. In October 1951 measles broke out at Bamyili and to prevent complications, the staff were instructed to give a course of sulphameterazine to all those who became ill.

Dr Watsford checked both Bamyili and Beswick cattle station in April 1954 and stressed the need for Dr Kenneth L Wise, then at Katherine, to visit these two centres each week. While there was only one doctor in Katherine, his services could be spread too widely as he was expected to visit Mataranka and Larrimah to the south and Pine Creek to the north. Mining developed at Moline, east of Pine Creek and the mining community also demanded regular attention. On top of that was the Aboriginal community at Manbulloo just 16 kilometres west of Katherine. Manbulloo needed medical surveys as leprosy had become a problem there.

In 1954, Mrs Fuller, a registered nurse and the wife of the station manager at Beswick, advised Dr Watsford that no doctor had visited in the nine months she had been there.
Hookworm and anaemia had become a problem among the children and Dr Watsford wanted regular checks on this situation.

The first full medical survey at Bamyili was carried out by Dr Dennis G Stanbury in May 1956. He was accompanied by his wife, Sister Jill (nee O'Halloran), a registered nurse. It was Dr Stanbury's first survey and he went on from there to Roper River Mission. The population at Bamyili at any one time fluctuated and Dr Stanbury examined one hundred and seventy-one. There had been over four hundred people at the end of the war and over the years ahead there was a tendency for people out of Arnhem Land to visit Bamyili again - about ten tribes were represented and this did not contribute to harmony. Mantoux tests on 166 revealed 44 per cent positive reactions and BCG vaccinations were given to all those with a negative reaction. Hookworm was widespread, but at that stage anaemia was not a major problem due to a good supply of quality beef from the cattle station. Dr Stanbury sent eight people to Katherine Hospital where Dr AH Humphry, then Director of Health, examined them for leprosy(21). Four of these people were admitted to East Arm Hospital.

Bamyili was still without a hospital or a registered nurse but the Superintendent, Mr Alan Pitts, who was doing the medical work himself, was planning to marry one of the Sisters from Darwin Hospital.

Dr John Hargrave undertook a survey of Bamyili during October 1957. Sister Snibson was providing a medical clinic in what had originally been a meathouse of iron and flywire with a concrete floor. Plans were under way for a more suitable clinic. Although good meat was available from Beswick station, the meals for preschool children comprised Farex (baby food) or other cereal for breakfast and jelly and custard for lunch. Many of the small children showed marked anaemia, a considerable change from 18 months earlier. Miss Margaret Corden, the dietitian with the Department of Health, visited to advise on food preparation. Dr Hargrave diagnosed three new cases of leprosy.

Sister Jeanie M Bennett, recently retired as Matron of Canberra Community Hospital, offered her services to work for a time with needy Aborigines and was appointed to Bamyili in June 1958. Sister Kettle visited a few weeks later to establish an infant health clinic with standard records and was made most welcome. At that time there was no orientation for new nursing staff proceeding to work in the outback. More is written on that aspect later. The two women worked together to fully examine the 35 infants, many of whom were seriously anaemic. Sister Bennett was delighted to return to practical midwifery, but the first infant born was of mixed race and without a father who would own him.

When Sister Kettle visited Bamyili again in April 1959, there were many Arnhem Land visitors among the local populace. Three children were found to have marked evidence of leprosy, but when Dr Hargrave visited a few weeks later this family had disappeared. It was almost two years before they were found again, this time at Mudginberri and using different names. The condition of one of the girls had become serious.

Sister Toni Eperjesy (nee Weir) transferred to Bamyili from Maningrida in 1961 and brought stability to the health service for many years. During her time a good quality ten bed hospital was built but seldom used for inpatients as Sister Eperjesy sent all patients needing inpatient care to Katherine Hospital. During her time at Maningrida she had learned a great deal about leprosy and her presence at Bamyili was invaluable as so many people from Arnhem Land visited Bamyili for a few weeks stay and were then gone again. Dr Hargrave examined 316 Aborigines in October 1961 and notified three new cases of leprosy(22). A couple of days later Sister Eperjesy visited the sawmill and discovered a
man with advanced lepromatous leprosy; he had avoided the doctor by offering to care for the sawmill while the others went to the medical clinic.

Snake Bay (Milikapiti)

Another ration depot that developed into a settlement for Aborigines was at Snake Bay on Melville Island. A control post had been established at Garden Point in 1939 to check on the activities of Japanese pearlers. When Garden Point (Pularumpi) became a Catholic Mission for mixed race children in 1940, it was decided to move the Aborigines east to Milikapiti on Snake Bay. Mr John Gribble, a naval reservist, made the move during February 1941 when the Aborigines carried all the government equipment to the new site. Mr Gribble was called up for service with the Navy and served as a coastwatcher; it was he who first saw the enemy aircraft on 19 February 1942 and reported to Navy Headquarters in Darwin. Many of the Aborigines were recruited into the armed services and did valuable patrol work during the war. Mr Gribble left in May 1945 and Mr EJ Murray took over as the first postwar Superintendent. The officers in charge frequently changed as men were transferred from one government settlement to another. At Snake Bay there were about thirteen different Superintendents in twenty years(23); other settlements had a similar pattern. It was heartbreaking for the men concerned as projects started by one were let slip by another. There was no trained nursing Sister at Snake Bay until about 1957 when Mrs Townsend was there with her husband.

No new church missions were opened up in the immediate postwar period. Development of the Catholic mission at Daly River began in 1955 while the government settlement at Maningrida did not start in earnest until May 1957. All of the churches were short of staff, in particular teachers and nurses, and it was these categories that were first subsidised by the Government. There were very few nursing staff in the outback at the time of the measles epidemic in 1948-49.

Measles Epidemic

Sporadic outbreaks of measles had occurred during the war years and army doctors had been flown to cattle stations to examine people and advise on treatment. A devastating outbreak occurred at Little Flower Mission, Arltunga, in December 1942 (Chapter 13) when 9 per cent of the population perished. From all accounts no nursing staff were involved. The epidemic of 1948-49 seems to have been just as virulent and devastating. A white child, who was incubating measles came by train to Alice Springs during November 1947 and a couple of weeks later measles was reported from Oodnadatta and Alice Springs on the same day. From these two centres the infection spread outwards to Aboriginal settlements and cattle stations. The only medical officer in Alice Springs was Dr LW Alderman and by February and March he was being flown by Connellan Airways in all directions. Yuendemu was one of the first centres affected, mentioned earlier.

From Oodnadatta the infection spread through the cattle stations to the Presbyterian Mission at Ernabella in South Australia. Dr Charles Duguid of Adelaide, who had been instrumental in having this mission started, left his private practice and went to Ernabella for several weeks. This relieved Dr Alderman of the worry of one large centre where Aborigines were apparently confronted with measles for the first time. There had been twelve deaths prior to Dr Duguid's arrival, but from there on the mission was organised to provide care day and night. A few Aborigines fled and unfortunately later reports indicated that several of these people had died. Extra medical supplies required by Dr Duguid were flown from Alice Springs.

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Apart from several cattle properties south of Alice Springs, Areyonga Aboriginal settlement was the next place to report cases of measles. The infection may have spread overland as a group of very ill people were found who had been deserted by their families. In spite of the nursing care provided by the pastor's wife, Mrs Koschade, an American trained nurse, three of the first group brought in from the desert died. Sister Irene Tscharke from Adelaide was sent by the mission to help, along with Patrol Officer Fred Gubbins from Alice Springs. Patrol Officers were always a great help in epidemics as they were not committed to routine work and could supervise supplies of food, water and firewood. They could also visit the camps, locate sick people and ensure they had a blanket to protect them from the cold at night. As there was no suitable site nearby for an airstrip, Dr Alderman was unable to visit Areyonga. When they ran short of penicillin and sulphamazine, they were advised to mark a spot for an air drop and to light a small fire on either side. A pilot with Connnellan Airways dropped the parcel of medicines from a couple of hundred feet.  

On 28 May 1948 Hermannsburg reported its first cases of measles. There were more buildings at Hermannsburg and more staff to help with an epidemic. The one nurse Sister Saleen Lindner was prepared. Three deaths were reported from Hermannsburg. The missionaries did their best to prevent Aborigines from travelling and spreading infection, but it was a vain hope. Thirty people were found at Mereenie, most in a serious condition. In an attempt to save their lives they were taken by truck to Haasts Bluff where four died. As many of the Aborigines at Haasts Bluff were recent arrivals from desert areas, they had little comprehension of medical care and no understanding of taking medicine as advised by the nursing Sister. Sister Pech, the wife of a missionary, had been at Haasts Bluff since 21 June 1947 and knew many of the people. The hospital comprised a row of iron huts in which families could dwell while caring for their own people under supervision. As the epidemic affected about two hundred and fifty people, the medical huts were soon quite inadequate. Sister Irene Tscharke was transferred from Areyonga to help(25), while Patrol Officer Gordon Sweeney was sent from Darwin accompanied by Sister Ena Harvey from Bagot(26). More accommodation was needed as heavy rain fell and the winter wind was freezing. The church, a Sydney Williams hut, was used. Gordon Sweeney organised firewood, blankets, water and toilets for people quite unfamiliar with using toilets. Having the people together made it possible for the nursing staff to give penicillin injections every three hours. There were no disposable syringes - all had to be boiled on primus stoves. Sulphamazine tablets had to be swallowed under supervision and the patients made to drink more water to lessen side effects from the medication. Eight people died at Haasts Bluff including the four deaths from Mereenie.

Dr Alderman was flown from station to station taking extra medical supplies and giving advice. On top of this he had a hospital to supervise and other sick people requiring care. It was at this time that citizens of Alice Springs, through their Progress Association, wrote to the Minister for Health and asked for a second doctor or, alternatively, to allow a private doctor to practise in the town. The Minister replied that a second doctor was being recruited in England. Matron Jean Woolmington carried much greater responsibility during the doctor's absence, but she had too few staff to allow any of the Sisters to help with the epidemic. However, Sisters on their day off did accompany Dr Alderman and gave him assistance.

By mid-June 1948 the epidemic was abating. Dr Alderman recorded 118 deaths and estimated that at least another forty deaths had occurred elsewhere. The total deaths in Central Australia was in the vicinity of one hundred and sixty(27). The epidemic had spread as far north as Wauchope on the Stuart Highway and for a few months Aborigines were kept from travelling north. The Warrabri settlement near Wauchope had not been established at that stage.
For a few months the measles epidemic appeared to be confined to Central Australia and all restrictions on travel were removed. Then, late in October 1948, six cases were reported in Darwin Hospital. These patients developed measles while in the hospital, but there is no mention of who may have introduced it.

Oenpelli Mission reported an outbreak of measles in January 1949. Dr Bertram Welton who was in Darwin was flown out to confirm the diagnosis. An infant of six weeks had already died. The Mission report to headquarters in Sydney recorded 22 inpatients in February 1949 and the death of a boy of four years. During March two young men were sent to Darwin Hospital with chest complications following measles and one died. Three deaths were recorded. The first 140 immunisations against whooping cough were given on 4 January 1950 and repeated in March. One infant of 11 months died from whooping cough when his parents took him away to the bush.

At the beginning of April 1949 an Aboriginal child, Brian, from Port Keats Mission (Wadeye), returned home by boat from Darwin Hospital. He was incubating measles. On 21 April Sister Marie Louise, a registered nurse, reported 13 cases of measles, one of whom, an infant, had already died. Dr Gunson flew to Port Keats on 11 May when there were 43 patients. By 25 May there were 75 patients four of whom had died. The one nursing Sister could not cope and three other nuns were flown in, one being Sister M Augusta from Channel Island leprosy hospital. The following week the number of patients had increased to 112 with five deaths. After this the epidemic began to abate but it was months before it had fully run its course.

Measles continued to spread throughout the northern half of the Northern Territory. In most instances there was a history of someone having returned from Darwin Hospital by either air or boat. Elcho Island was the first of the coastal missions affected and Mrs Ella Shepherdson did most of the work there until Sister Betty Knowles was sent from Milingimbi. Miss Joan Proctor, a housemother on Croker Island, was loaned to Milingimbi to supervise the medical work and was there when measles broke out in that centre. Sister Lyle Noble from Darwin Hospital offered her services to the Methodist Mission and she and Sister Cathie Langdon flew to Milingimbi on the same aircraft on 28 October 1948. Sister Langdon had been appointed as the trained nurse for Elcho Island, but measles was then raging at Yirrkala where Aminiasi, a Fijian missionary, and his wife were caring for the people. There was no regular air service but McRobertson Miller Airways was conducting a charter service and the two nurses were flown in an Avro Anson named RMA Ord piloted by Rusty Nowland. Mr Harold Shepherdson flew Sister Langdon to Yirrkala the following day in his Tiger Moth aircraft. Thirty years later Sister Langdon recalls that there were no deaths from measles at Yirrkala, but the Aerial Medical Service logbook records a visit by that service on 25 October when there were many people ill and five had died. Possibly none died after the arrival of Sister Langdon. It was difficult to provide a medical service to Yirrkala as the Fijian missionary could not drive a truck. However, they had an old army vehicle that, for a time, was left parked at Gove airstrip and a doctor or Jack Slade or both could drive themselves the seven miles (11 kilometres) to the mission. As no one was prepared to give injections, Yirrkala had no supply of penicillin. Penicillin required a refrigerator and there were none. Six weeks later Sister Cathie Langdon transferred to her posting at Elcho Island where she worked for the next ten years.

Both Croker Island and Goulburn Island experienced measles but the populations were smaller and therefore easier to manage. The greatest tragedy occurred in the vicinity of the Liverpool River (later Maningrida) where the total deaths could not be adequately recorded and counted. A young Patrol Officer, Syd Kyle-Little, had arrived in Darwin on
1 June 1946 and been detailed to go to Liverpool River to reassess the population and their needs. He read Gordon Sweeney’s reports from 1939 and Donald Thomson’s reports from 1935-37. During several long surveys he covered much of the same country and counted 1354 people(31), some of whom had visited Darwin and Katherine during the war. Syd Kyle-Little built a bark hut for himself and established a small trading post on the site that later became Maningrida settlement. As reported by Donald Thomson ten years earlier, there were many people in a pitiful condition with advanced leprosy. Others had granuloma venereum which he treated with injections of Antiomaline. Many of the Burara people from the Blyth River area had frequented Milingimbi and one man complained of chest pains. During a severe spasm of coughing this man spewed forth copious quantities of blood and died(32); the probable diagnosis was pulmonary tuberculosis. During a visit to Darwin, Syd Kyle-Little discussed with Jack Slade the possibility of an airstrip and also acquired a much more adequate medical kit from Darwin Hospital.

The Department of Health was so short of doctors that Sister Jan Cowie had been providing the routine medical visits. No doctor was sent to investigate the leprosy and other conditions seen by the Patrol Officer. The Methodist missionaries, Reverend Alfred Ellison on Goulburn Island and Reverend Arthur Ellemor on Milingimbi, gave what assistance they could; their launch Larrpan called in and brought supplies and mail. On top of that the government boat Amity brought bulk supplies from Darwin.

During October 1949 a woman arrived by canoe from Goulburn Island and within days she became acutely ill and died. Shortly afterwards a girl of six years died, then two more children and another woman. By this time the Aborigines had begun to panic and were fleeing to the bush. Measles had been introduced. As he had no radio transceiver, Syd Kyle-Little went by boat to Milingimbi on 14 October and reported four deaths and at least one hundred people ill. The following day Jack Slade landed the Dragon on a mud flat downstream from the trading store bringing in medical supplies and another young Patrol Officer, Jack Doolan. Harold Shepherdson from Elcho Island flew Syd Kyle-Little from Milingimbi to Liverpool River. The following day, the 16th, Jack Slade landed on the mud flat again with 1000 pounds (454 kilograms) of food for the sick and dying(33). Although several new doctors had recently joined the Department of Health, no doctor was sent out. It is difficult to know how much authority was delegated to Dr Gunson in Darwin as most decisions seem to have been made by Dr Metcalfe in Canberra.

Whooping cough followed measles at Liverpool River where the mortality was never fully investigated. In a letter dated 2 November 1949, Mr Reg K McCaffrey, Acting Director of the Native Affairs Branch, ordered Syd Kyle-Little to return to Darwin. He was then sent to Snake Bay and left there. In the meantime the epidemics of measles and whooping cough continued and Reverend Arthur Ellemor went by boat from Milingimbi to help. Shortly afterwards Jack Doolan was also withdrawn and the trade store closed. At that time the Methodist Missions did not have the staff or the money to develop another mission. All of the male mission staff with the Methodist Overseas Missions in New Guinea perished during the war so they had a shortfall to make up there as well as in the Northern Territory. Many of the advanced cases of leprosy may have died during the measles and whooping cough epidemics. In spite of the cases of leprosy reported from Liverpool River, it was another eight years before the area was opened up again in May 1957 and the first doctor surveyed the health of the people.

Whooping cough also invaded the Northern Territory from the south, but it spread more quickly than the measles. The small staff at Alice Springs could not cope with the work in the outback and on 5 October 1949 Jack Slade flew Dr John H Playne and Sister Nichol to Hatches Creek mining field south-east of Tennant Creek. Over the next few days they
visited many of the cattle properties in that area in an attempt to immunise against whooping cough in advance of the epidemic.

Measles was reported at Snake Bay on 19 August and a few weeks later, on 24 September 1949, Sister Marita Scullion at Bathurst Island Mission reported 57 cases. It had spread overland. Dr Gordon Birks was flown to the mission by the Aerial Medical Service and recalls that most of the patients were children. Never before had he heard so many continually coughing. This was just the beginning and a couple of days later there were another 15 patients. Dr Playne visited on the aircraft that took Sister Benedicta Carroll from Channel Island leprosy hospital to help Sister Marita. By 11 October the Sisters were treating 180 but from then on the number of new patients decreased until 3 January 1950 when a further 60 were reported.

Whooping cough had become a threat and as sufficient supplies of pertussis vaccine became available, the Port Keats children were given their first immunisations on 2 February 1950 and those at Garden Point the following day. It was already too late for Bathurst Island where, on 10 January, Sister Marita reported 150 with whooping cough. By 3 February there were over two hundred whooping and three babies had died. No deaths were mentioned from measles, but whooping cough on top of measles did result in deaths but the total is not known.

The police officer at Daly River reported whooping cough but, with the Aborigines scattered in groups over a distance of 30 or more kilometres with no one to care for them, the mortality in that area is unknown.

Measles started at Roper River Mission during the first week of November 1949 and by 5 January Sister Emily E Dupen reported that 230 of the population of 250 had been affected. She was given a supply of whooping cough vaccine which seemed to avert a further epidemic there.

A large airy hospital was completed at Angurugu in 1949; Sister Hilda Villiers had previously been struggling in a bark hut. There was a ward each for men and women and a separate section for midwifery. A wide verandah on one side provided space for the treatment of outpatients. No sooner was this hospital ready than an outbreak of measles filled it to overflowing. Whooping cough invaded before the measles had run its course and these were followed by gastroenteritis. Dr AH Humphry visited by air on 16 December 1949 and reported the first seven deaths. He recommended that the mission find another trained nurse and Sister Jean Parr and Mr Syd Rose from Sydney reached Darwin on 26 December and were flown to Groote Eylandt by the Aerial Medical Service the next day. A few weeks later, when both measles and whooping cough were sweeping through Umbakumba, Sister Villiers went from Angurugu to help Mr and Mrs Gray.

There were no facilities at Umbakumba and the situation became desperate. On 13 February 1950 Sister Meryl Nichol was flown to Umbakumba in a Catalina flying boat and brought five very sick infants and their mothers to Darwin Hospital. This eased the pressure a little but they needed more nursing staff and these were not provided.

At Angurugu the three epidemics claimed a total of 38 lives most of whom were young people or babies. Two of the infants had been born prematurely when their mothers were in the throes of whooping cough. The population recorded on 12 December 1949 was 317, of whom 118 were children. Several deaths had already occurred. In April 1951 Mr Gordon Sweeney recorded 184 people at Umbakumba, making a total of just over five hundred on Groote Eylandt at the time of the epidemics. Eleven deaths at
Umbakumba added to those at Angurugu made a total of 49, approximately 9.7 per cent of the the population.

As the people on Groote Eylandt could not readily leave the island, the dead were all counted. A similar disaster undoubtedly occurred at the Liverpool River where the dead were not all counted and where so many of the population were already in poor health from leprosy. Officially, about two hundred people died from measles. A revised total of deaths in the Northern Territory from both measles and whooping cough is in the vicinity of three hundred or higher. They were devastating epidemics. The Department of Health provided medical supplies and advice but did not provide the much needed nursing staff. Dr Metcalfe expressed his concern over the number of deaths but his thoughts on responsibility for the provision of a health service did not change.

In his 1948-49 Annual Report, the Administrator, Mr AR Driver, reported over seven hundred people treated for measles in Central Australia where there were 28 deaths from all causes. At the same time Dr Alderman recorded 160 deaths from measles alone.

Measles remained in the community with sporadic outbreaks at centres not affected during the 1947-50 epidemic. Dr Geoffrey Ey from Katherine Hospital reported an infection at Tandangal (near Bamyili) with symptoms analogous to measles. It had been introduced by a man who became ill on his return from Darwin. On 17 October 1951 there were over forty people sick and a further two hundred considered to be at risk(39). All sick people were given sulphamerazine tablets to offset chest complications. Dr Ey recommended that the settlement be provided with a roadworthy vehicle but, apart from that, the care of the sick was left to the Superintendent and his wife.

Occasional outbreaks of measles did continue, but due to the existing immunity in the community there were no further major epidemics until 1965 when the infection swept through most of the children born in the interim. At that time the Department of Health did assist with extra nursing staff and the outcome was very different.

Measles broke out again at Port Keats (Wadeye) on 13 October 1965 following the return of a child from Darwin Hospital. Other centres were affected in the same way namely Elcho Island, Maningrida, Yirrkala and Oenpell. The one centre spared was Milingimbi where Sister Jessie Smith met every incoming aircraft and inspected every child for measles; she quarantined a newly arrived white family until measles had run its course among them. At Yirrkala a child returned from hospital and, although he looked as if he was developing measles, he was not isolated; two weeks later there was an explosion of 200 patients in one day and more followed later. In the large centres schools were closed and became hospitals in which the teachers helped with sponging the febrile patients and encouraging them to have an adequate fluid intake. The Department of Health sent extra nursing staff to help care for the infants.

There were some complications and Dr Fred W Clements from the School of Public Health and Tropical Medicine visited Oenpelli, Maningrida and Elcho Island to assess the situation and to advise on further treatment. Diarrhoea among the infants was the biggest problem. No lives were lost.

**Measles Vaccine**

Shortly after the outbreak of measles, some supplies of live attenuated measles vaccine became available and Dr WA Langsford, the Director of Health, seized the opportunity to obtain a limited quantity. It had to be stored at 5 degrees centigrade and was flown to the larger settlements and missions in the south and given to children born since the last
epidemic. Vaccinations were given to 968 children at Hooker Creek (Lajamanu), Milingimbi, Numbulwar, Daly River, Yuendumu, Papunya and Mainoru between 8 December 1965 and 28 February 1966(38). It was almost too late for Papunya where a white child introduced measles two days before the vaccinations. Nineteen children given vaccinations at Papunya did develop, measles. As supplies did not allow everyone to be vaccinated measles did continue but in manageable numbers. Although some children were very ill, there were no deaths.

The last case of measles among the Aborigines was at Alcoota in Central Australia on 11 October 1966. All told 2321 cases of measles had been reported(39). Once measles vaccine became readily available it became policy to immunise all children and as devastating epidemics are now preventable they should not occur again.

Endnotes

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Sisters Home (left) and Health Centre built at Bamyili (Barunga) in 1958. A larger clinic was built later (Dept of Health)

Sister Jean Bennett, retired Matron of Canberra Hospital at Bamyili in 1958. She was later at Papunya (Dept of Health)
The Health Centre at Warrabri (Ali Curung) in 1958. This same design was built on many government settlements (Dept of Health)

L-R: Sister Ivy Robb and Mrs Myrtle Ellison caring for sick Aborigines on Goulburn Island during the measles epidemic in 1949 (courtesy: I Robb)

Sister Betty Knowles extracting a tooth in the temporary iron clinic at Millingimbi in 1949. The first clinic and church were both destroyed by enemy bombing (Methodist Missions collection)
CHAPTER NINETEEN

EPIDEMIC AND ENDEMIC DISEASES

Poliomyelitis

After the devastating measles epidemic of 1948-49, poliomyelitis was the next most tragic epidemic to strike in the Northern Territory. It had long been present with sporadic cases among all sections of the community. During the Australia-wide epidemic in 1937-38, Dr PJ Reilly at Alice Springs recorded two mild cases of poliomyelitis at Hermannsburg leading to muscle wasting and weakness. During 1938 a white child from Alice Springs had died from respiratory paralysis and a white girl at Tennant Creek developed poliomyelitis and was eventually sent to Adelaide. Then in February that year an Aboriginal woman died in Alice Springs and also a four year old child at Hermannsburg. Dr Reilly was able to perform post-mortems on the deceased so his diagnosis was confirmed. Dr CE Cook wrote of these cases and suggested the infection may have been spread by the distribution of second-hand clothing to Aborigines(i). Elsewhere in Australia it was considered to be an airborne infection and most children wore a knob of camphor sewn into a small cotton bag hung around their necks. Everyone was warned to avoid crowds such as in cinemas.

Poliomyelitis was not epidemic during the war. However, a doctor at Adelaide River was diagnosed as having polioencephalitis and was transferred south on 18 October 1943. During the measles epidemic in 1948 a Chinese infant in Alice Springs developed poliomyelitis and was flown to Northfield Hospital in Adelaide (see Chapter 16). There was also a white woman suspect in Alice Springs in January 1948 and Dr Bruce Cumpston flew from Darwin to see her as he had gained wide experience with poliomyelitis on Mauritius some years earlier. The latter patient does not seem to have been confirmed as poliomyelitis.

An epidemic broke out first in Darwin where, on 24 December 1951, there were four cases. Two of these, a white woman of twenty-eight years and a white man of twenty-four years, both died suddenly. They were classified as bulbar. The other two, a white mother and her infant, both recovered. Another white infant was sent to Northfield Hospital in Adelaide for physiotherapy. The epidemic then spread to the Alice Springs area where the cases occurred in widely scattered places without any known contact with other patients. With one exception they were all white patients.

On 24 April 1952 the first victim, a boy of seven years, was admitted; he had lost the use of both arms and legs. The second was an infant with a mild infection and she eventually made a good recovery. On the morning of 6 May a young woman was admitted and in the afternoon a young man who had collapsed while playing football. The latter was immensely apprehensive, a factor that may have contributed to his sudden death. Respirators were needed urgently but for reasons of economy the first arrived from Adelaide by train; others were flown in by the RAAF. The respirators, then widely known as Iron Lungs, were being made in Adelaide by Mr Don Both. As described by the pilot Harry Moss, who undertook to keep the machines operational:
they were large airtight boxes shaped like a coffin in which the patient lay with the head out through a sponge rubber seal around the neck. A set of kangaroo hide bellows, driven by an electric motor, controlled the pressure in the boxes to simulate the rhythmic action of the chest. This helped the patients to breathe(2).

Harry Moss maintained this equipment and taught everyone on the hospital staff how to operate them manually during power failures. He slept at the hospital and was on the spot should a power failure occur at night since there was no time to spare once patients stopped breathing. Occasionally someone would panic a little and pump too enthusiastically but they soon learned the correct rhythm.

Dr Geoffreay Ey, who had been working at Katherine Hospital for nine months, was asked to postpone his departure from the Northern Territory to help Dr Bert Welton at Alice Springs. There were about seventeen trained nurses on the staff plus Matron Woolmington who rostered herself for the special clinics such as the Infant Health and antenatal clinics. Three new staff, Sisters Patricia Foley, Ann Chandler and Margaret Telfer, arrived early in April just before the outbreak of poliomyelitis. The Aboriginal Ward (then called Native Ward) was separate; Sisters Olive O'Keefe and Mavis Paech were the mainstays there but it required five Sisters to provide two on duty for the morning and evening shifts and one Sister at night. Others on the staff at the time included Nan Calder (Mrs Parker), Marjorie Phillips, Nola Nash, Florence Hooker, Dawn Great, Joan Hordacre, B Goodson and D Goodson, Pat Hanley and Sisters Parish, Baker, Heathwood and Lorimer. This list may not be entirely correct as memories have faded but there were far too few for a major epidemic. No extra nursing staff were sent to help 'special' the very ill patients.

Five respirators filled the two small wards, so that there was a critical lack of space as well as a shortage of staff. Dr Welton discharged most of the local white patients to be cared for in their own homes and to lessen the risk of infection within the hospital. Staff numbers did not permit Sisters to be rostered exclusively to the care of poliomyelitis victims. One Sister remembers being called to the midwifery ward and when she returned one patient was dead. That patient had been terrified of being left alone. So much was expected of so few and the same respirators were still in use for six or seven months until the last dangerously ill patient was taken to Adelaide.

Six patients were admitted during May. The most tragic of these was a young man, Mr Terence O'Brien, from Tempe Downs, south-west of Alice Springs. He was an only son and was running the cattle property for his elderly parents. His infection was bulbar (affecting the stem of the brain and causing respiratory paralysis). He had lost the use of his arms and legs and, as Harry Moss recalls, they experienced great difficulty in getting this big man into the small aircraft and out again in Alice Springs. On these occasions staff did what had to be done without thought for the risk to themselves. All the coffin-shaped respirators were too small for Terence O'Brien and extra hands were called in to modify a respirator to accommodate this patient. Although seriously ill, Terence O'Brien was most considerate of all those who were caring for him; he showed no fear and never once complained. In spite of all the care, he died suddenly four days later. All the deaths were reported as sudden. Everyone suffered some degree of shock over this death but there were others still to be cared for.

By now the epidemic was widespread, one case being a drover, Mr Norman Prendergast, from Brunette Downs on the Barkly Tablelands. He was ill for six days prior to being flown to Tennant Creek on 12 June 1952. His symptoms advanced slowly until both his arms and legs were weak and he could barely speak above a whisper. He was transferred
to Alice Springs by air and placed in a respirator where he appeared to improve. He died suddenly the following evening. Dr Welton considered this to be a true bulbar case of poliomyelitis(3).

Mrs Patricia Waudby was brought in from her husband’s droving camp north-west of Alice Springs on 15 May. She too was very ill and in a respirator. Five days later she had surgery for a paralytic ileus and it was then estimated that she was two and a half months pregnant. By October, with the pregnancy well advanced, Dr Welton took action to transfer Mrs Waudby to Adelaide. At first Dr Metcalfe in Canberra and Dr CS Barbour, the Commonwealth Director of Health in Adelaide wanted the patient to travel by train but Dr Welton insisted that flying was the only safe method. In mid-October, after several days of negotiation, a TAA DC3 freighter was chartered and arrived from Adelaide at midnight. Dr Welton and Harry Moss spent two hours securing a respirator in the aircraft so it would not be tossed around since that particular air route was notoriously turbulent in hot weather. Although Mrs Waudby’s breathing had improved a little, she still needed the respirator and as there was no power available in the aircraft, Harry Moss, Mr Bill Waudby and a nursing Sister accompanied Dr Welton in the aircraft to operate the respirator manually as required. The pilot agreed to keep the aeroplane at 3000 feet (914 metres) or lower. They left Alice Springs about 4 am and were in Adelaide by 10 am. Flying at that hour avoided much of the heat and turbulence. Shortly after take off the patient’s natural breathing improved and she was able to cope for much of the time without the respirator(4). In Adelaide Mrs Waudby was safely delivered by caesarian section and that infant is now a grown man.

The patients in respirators made heavy nursing. Every time a respirator was opened for toilet purposes and to massage backs to prevent bed sores, at least two Sisters were present, and three Sisters when Dr Welton was not available. One staff member watched the patient’s breathing while the other two turned and washed him; the operation had to be quick to lessen respiratory distress.

In the midst of the epidemic among white people someone postulated that Aborigines did not develop poliomyelitis; they appeared to have a natural or acquired resistance. Some doctors have said it was Dr Cecil Cook who told them that this was so. Dr Cook was then Chairman of the Poliomyelitis Committee of the National Health and Medical Research Council and he was keen to promote a medical research officer to substantiate the hypothesis.

In the meantime, in the midst of the 1952 epidemic, a preschool Aboriginal child, Miriam (Muriel), at Yuendumu developed symptoms typical of poliomyelitis. Miriam’s mother brought her to the Saturday morning clinic at Yuendumu where Sister Ellen Kettle had been working for the past four months. At that time the patient had a mild pyrexia and appeared to be developing a cold. She was not seen again until Monday when Mrs Pat Fleming sent her from preschool with a note saying she could not walk; she had lost the use of her left leg. Later that day she was flown to Alice Springs hospital and apparently nursed in the crowded Aboriginal ward. There was much controversy over this child. Dr JAR Miles from the Institute of Medical and Veterinary Science in Adelaide had taken up the challenge to research the hypothesis that Aborigines had a natural or acquired immunity to poliomyelitis. Dr Miles stated Miriam’s condition was not poliomyelitis and sought the assistance of the Welfare Branch to find out what the Aborigines thought or had to say. Patrol Officer Les Penhall was sent to investigate and he found that an older sibling, then at Mt Doreen station, had a similar lesion, namely a wasted left leg. The Aborigines, when pressed, put it down to a fall.

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Dr Miles was given permission to undertake research that included specimens of blood to determine the incidence of antibodies to poliomyelitis virus. Originally, Yuendumu had top priority but he did not actually visit that settlement since specimens of blood had been taken already by another researcher, Sir J Burton Cleland, in August 1951. During September-October 1952 Dr Miles collected specimens of blood at Port Keats, Elcho Island, Milingimbi, Goulburn Island, Delissaville, Bagot, Beswick-Bamyili, Arltunga, Murray Downs, Elkedra, Haasts Bluff and Hermannsburg. Of 437 specimens, over 90 per cent of persons over five years of age 'had neutralising antibodies to the Lansing virus'. Dr Miles interpreted this to mean 'that virtually all Aborigines have developed antibodies to the Lansing virus by the age of five years'(5). He considered that only children under five years of age were at risk. He also stated that he saw no residual evidence of poliomyelitis among the Aborigines, yet a few years later there were many with wasted muscles which they said just happened. These findings influenced policy when it came to immunising Aborigines against poliomyelitis.

The Commonwealth Serum Laboratories near Melbourne undertook to develop SALK vaccine. The virus had been found to grow on the kidney tissue of rhesus monkeys and these animals were flown in from Malaysia in special charter flights that had to land in Darwin for quarantine clearance and to refuel. Medical scientists in America were also endeavouring to develop Sabin vaccine (attenuated virus vaccine) but as it was a live vaccine there was some concern over its safety.

SALK vaccine was, of necessity, in short supply and it was rationed to the States on a population basis. The first consignment of 680 doses arrived in the Northern Territory in July 1956. The course consisted of three injections, the first two one month apart with a booster dose seven to twelve months later. Dr Cook's advisory committee decreed that it was to be given by injection by doctors only, a most impractical ruling that had to be modified at a later date. Limited supplies arrived monthly and all white and mixed race children were steadily immunised. Children on cattle properties were immunised by a doctor on routine visits with the Aerial Medical Service. As the medical aircraft were no longer permitted to land on unregistered airstrips, a considerable number of children missed out. By April 1958 supplies of outdated SALK were being returned as the shortage of doctors did not permit the number of children being covered to be increased. Dr RC Webb wrote to Dr Cook for permission for Sisters to give the injections - the reply has not been found but commonsense prevailed so that valuable vaccine was not wasted.

Poliomyelitis remained in the community with no one really certain of the status of carriers. In October 1955 a young man with the RAAF was admitted to Darwin Hospital and died; he seemed to be an isolated case but another epidemic flared up during 1959-60; the first three victims were children from Port Keats Mission. Children and young adults were brought in from Bathurst Island, Maningrida, Ernabella, Haasts Bluff, Numbulwar, Daly River, Mistake Creek, Banka-Banka, Tennant Creek, Papunya, Areyonga and some from Darwin. A couple of these were white children who were said to have received immunisations in other States. Great care was taken in the maintenance of records so that any faulty vaccine could be readily traced. This epidemic debunked the theory that Aborigines had an immunity to poliomyelitis. White children had been immunised and the Aborigines had not. Dr Cook visited and suggested that the two children, Mona from Bagot and Monica from Daly River, may have suffered measles encephalitis. Mona had a wasted right leg and Monica had weakness in an arm and a leg. No one died during this epidemic but several were sent later to hospital in Adelaide for specialist physiotherapy and to obtain calipers. The most famous of these young travellers were Wingathana, a girl from Numbulwar, George Yenmeni from Port Keats and Major from Mistake Creek(6). These three had lost the use of both legs but with the support of calipers they were able to walk again.
Long after the epidemic people were discovered with muscle wasting of limbs but they had not been sufficiently ill for anyone to have reported them or sought medical advice. Some of the patients with muscular wasting were referred to doctors with the Aerial Medical Service in case the lesion was due to leprosy. In February 1962 a three year old mixed race child, Dennis, was discovered at Mataranka with a wasted right arm and hand diagnosed as post-polio myelitis. He was sent to Darwin Hospital for physiotherapy but he did not respond to treatment and was eventually placed with the Catholic Mission at Garden Point. The following year he was examined by the schools medical officer, Dr Helen Phillipps, when he was found to be liberally blotched with the pale patches of leprosy. The muscle wasting in his arm and hand had been caused by a grossly enlarged ulnar nerve. This child had not been seen previously by the specialist in leprosy. He did well once he received the right treatment. (Modern EMGs and nerve conduction studies, introduced at East Arm Hospital in 1970, were not available but would have sorted out the confusion.)

Dr AE Duxbury came from the Walter and Eliza Hall in Melbourne. He examined faeces for polio virus as well as examining specimens of blood. Polio virus Type I was isolated from the faeces of most of the nine patients in Darwin Hospital, and it became progressively more clear that poliomyelitis was being spread by many people who had the virus in their intestines. The manufacturers of SABIN vaccine claimed their product killed the virus in the gut as well as immunising people. The first supplies of SABIN were flown into Australia from London in October 1962 but it was not widely used in the Northern Territory until February 1967. Supplies were limited and the campaign had to be organised well in advance.

In the meantime the way was cleared for nursing staff in the outback to immunise all Aborigines under about twenty years of age with SALK vaccine. Extra supplies of SALK were purchased from Canada. By this time all of the church missions and government settlements had refrigerators in their medical clinics so the vaccines could be kept in good condition. Great care was taken to transport supplies in thermos flasks and the responsibility for most of this organisation was delegated to the Sisters then working with the Aerial Medical Service.

By 1966 it had become policy for the whole of Australia to receive SABIN vaccine in the belief that it would destroy the virus in the gut and eradicate the disease from the community. The planning was a major exercise to achieve the maximum results without any deterioration of the vaccine. The vaccine was refrigerated at zero degrees Celsius and kept at that temperature until ready for use. Once it warmed up and the virus was activated it could not be frozen again as the virus would then be destroyed. The campaign based on Darwin was planned by Dr Helen Phillipps in conjunction with Captain Jack Slade of the Aerial Medical Service. Sister Heather Graham assisted Dr Phillipps along with a team of Sisters who had been instructed on the procedure. Much depended on the welfare and mission staff on settlements to ensure the utmost cooperation and that all those who received the SABIN were adequately recorded. This vaccine was taken by mouth on a small block of sugar and was readily acceptable to everyone. Plastic spoons were used and then placed in a garbage bag for destruction in an incinerator.

At Alice Springs Dr Anne Urban (nee Evans) was in charge of the operation. Each person received three doses. The Sisters and doctors in the Aerial Medical Service then followed up all those who had missed out; the coverage was most thorough.
Encephalitis

Encephalitis, or Australian X Disease, had been recorded in the Darling River watershed and the Murray River valley during an extensive outbreak in 1917-18. As recorded by JB Cleland and AW Campbell, 134 persons were diagnosed. Half of the victims were under five years of age and 70 per cent of them died. Extensive research followed and a wide range of animals were investigated as possible carriers but all tests were negative (7). The disease reappeared again in 1922, 1925 and 1926 but in a milder form (8).

No mention has been found of cases in the Northern Territory, but during much of that era Dr Leighton Jones was the only doctor in the Northern Territory. Unless the police informed the doctor of unusual deaths they could have passed unnoticed.

Isolated cases of encephalitis were recorded by the army hospitals during the war. A corporal died in 119 AGH at Bagot on 26 September 1941. There was no indication of where he was serving when he became ill. On 9 September 1943 an Australian airman died of encephalitis in the army hospital at Katherine. Three months later on 31 December an Aboriginal woman flown from Wyndham to the army hospital at Adelaide River died from encephalitis. There may have been other cases. A few people also died of meningitis but there was nothing to suggest an epidemic of either disease.

During 1951 an epidemic of encephalitis occurred in the Murray River valley and researchers from the Institute of Medical and Veterinary Science in Adelaide received a grant through the National Health and Medical Research Council to investigate the outbreak. The research included both birds and animals and when antibodies were found in domestic fowls, researchers began to suspect migratory birds with mosquitoes as the vectors (9).

Blood sera collected from Aborigines at Yuendumu in 1951 was shown to contain antibodies to the virus (10). The blood samples collected by Dr JAR Miles in 1952 during the poliomyelitis epidemic were tested further for antibodies to encephalitis. Of the 266 specimens, 66 gave positive results, the highest incidence being from Port Keats, Beswick, Bagot, Murray Downs and Elkedra station.

The Northern Territory was not spared. A four year old Aboriginal boy from Borroloola was brought to Darwin by the Aerial Medical Service on 17 September 1951. This child survived but he was affected mentally. The next was a three year old girl from Daly River brought in on 12 August 1952; she died six months later without regaining consciousness. On 20 August, just eight days later, an 11 month old girl was flown in from Port Keats; she survived until 6 February 1956. A boy from Port Keats followed on 11 April 1953 and he lived until 24 October 1955. In the meantime a four year old girl was flown in from Roper River Mission on 19 January 1953 and lived five months. There was just one new case admitted during 1954, a five month old boy from Milingimbi who survived but became an invalid. This child was sent home and his parents provided loving care. He eventually managed to swallow soft foods but he died during another epidemic. Borroloola was affected again with two more cases, a boy on 19 April 1955 and a baby girl on the 23rd. The boy died four days after admission but the girl survived two years. There were two other children in 1955 and 1956 from Mainoru and Wave Hill respectively but they may have had meningitis; both were left with residual brain damage. Ward Three in Darwin Hospital became a nursing home for these children. They were kept alive by gavage (tube feeding) and the devoted care of the nursing staff.

Dr JAR Miles and Mr DM Surrey Dane came from Adelaide to further their earlier research between October to December 1954. Specimens of blood were collected from all
ethnic groups and also from birds, poultry and animals. Twenty one species of birds were checked and every species of bird '... was found to be carrying antibodies to Murray Valley encephalitis but water birds were more commonly immune than land birds...' (11).

Immunity indicated that the birds had been in contact with the virus and had developed antibodies to the disease. When waterholes in the Northern Territory dried up, the water birds, and possibly some others, migrated south. Mosquitoes were believed to be the intermediary between birds and man and large numbers of these were caught near the waterholes at each centre, then stored in vacuum flasks and flown to Adelaide as early as possible as no refrigeration was adequate in the sweltering heat of early summer. The mosquitoes incriminated were *Culex annulirostris* in the outback and *Culex quinquefasciatus* which may be involved in urban areas (12).

During 1956 Dr Peter Warner from the Institute of Medical and Veterinary Science in Adelaide asked Dr Humphry for at least six newly laid eggs from several different outback centres. He needed to know the approximate age of the fowls; the younger, the more recent any infection would be. Dr Warner had discussed this step with Dr SG Anderson of the Walter and Eliza Hall Institute in Melbourne and this was timely. Eggs were collected from church missions and sent to Adelaide (13). One egg sent from Goulburn Island proved positive from encephalitis.

Just as the plans for the poultry were being finalised, the National Health and Medical Research Council advised the Institute of Medical and Veterinary Science in Adelaide that funding had ceased. Dr SG Anderson, working with Sir McFarlane Burnet at the Walter and Eliza Hall Institute of Medical Research in Melbourne, offered to take over and continue the research. Dr Anderson had also been involved in research during the Murray Valley epidemic. The budget for the research was £250 per year.

It was arranged for the pullets to be flown to Darwin in two batches. The first 96 pullets arrived on 17 June 1958 and were distributed by the Aerial Medical Service to six stations, namely Bathurst Island, Port Keats, Goulburn Island, Milingimbi, Roper River Mission and the Humpty Doo rice project. A further consignment on 24 June was distributed to Beswick (Bamyili-Barunga), Borroloola, Murray Downs and Elkedra station.

The hens began laying in September and early October 1958 and all the first eggs collected during November gave a negative result. Dogs devoured the hens at Port Keats; it was inevitable this would happen somewhere but all other groups of hens remained safe. To overcome the difficulty of flying eggs to Melbourne, it was arranged for Dr John Crotty in the pathology laboratory at Darwin Hospital to extract the yolks. All the yolks could then be safely sent in one vacuum flask. In the June-July 1959 batch of yolks, one from Roper River Mission was found to have a high level of antibody (1:64). This indicated the spread of Group B Virus, most probably Murray Valley encephalitis (14).

There were no further epidemics of encephalitis until a major outbreak again in the Murray River valley in 1974. At that time there were four confirmed cases in the Northern Territory; two cases were from an Aboriginal camp near the sewage ponds outside Alice Springs where there were migratory birds.

**Tuberculosis**

As recorded in earlier chapters tuberculosis was introduced to the Northern Territory at an early stage. In the north many Chinese migrants were imprisoned for supplying opium to Aborigines. While incarcerated under crowded conditions, tuberculosis was transmitted to Aboriginal prisoners. A few white men went to Central Australia in the vain hope that the
climate would help heal tuberculosis. Once the railway was extended to Alice Springs in 1929, the number going to Alice Springs greatly increased. Most remained until they died. The first doctor was appointed to Alice Springs in 1930 and a small government hospital was opened in 1939 but there was no special facility for the treatment of tuberculosis. Little was done before the Second World War interrupted the scene in 1942.

A few cases of tuberculosis had been identified at Hermannsburg in the early 1930s following the invasion by 140 people from Alice Springs in 1929. Both groups belonged to the Aranda tribe so they intermingled. Dr Edward Ford examined 571 people on Bathurst and Melville Islands in 1939 and suspected five of having tuberculosis, however bacteriological examination of their sputum revealed no acid-fast organisms.

No comprehensive report was compiled on the cases of tuberculosis treated in the army hospitals during the war, but Major Raymond T Binns did record the Aboriginal patients diagnosed and treated during one year in the hospital at Katherine. In the period September 1943 to October 1944, twenty-one Aborigines were diagnosed by X-ray and sputum tests as suffering from tuberculosis. Six of these patients died. With physician specialists at the four major hospitals, Darwin, Adelaide River, Katherine and Alice Springs, it can be presumed that similar care was provided at all hospitals during the war. When the army hospitals packed up and moved, each hospital took all its records. The Commanding Officer of 101 AGH Katherine complained that the previous hospital, 121 AGH, had taken all the records. At the end of the war the retiring army hospitals repeated the exercise but there was a brief mention that tuberculosis patients from Katherine had been transferred to Tennant Creek. The latter hospital had a Sydney Williams hut in the hospital grounds in which all Aborigines were treated. It is hard to imagine that Aborigines sent from Katherine remained happy for long as they were out of their own country and among strangers whom they feared. At the end of the war there should have been some continuity of records at Tennant Creek and Alice Springs as two army doctors, Peter Leslie and Claude Lum respectively, took their discharge from army service to continue in these hospitals.

In 1948 the Commonwealth Department of Health in Canberra set up a division of Tuberculosis with Dr Harry W Wunderly (later Sir Harry Wunderly) in charge. He visited each of the six States to assess the situation and the availability or otherwise of sanatoria and experienced staff. It is significant that the Northern Territory was excluded as it and Canberra were the special problems of the Commonwealth Department of Health. The 1948 report led to the firm establishment of the Division of Tuberculosis and the passing of the Tuberculosis Act 1948 in November that year. Each State was to set up its own directorate with Federal funding to 'wage war on tuberculosis... as part of the unified campaign'(15). The Northern Territory was not a State and did not receive this financial assistance.

Dr Harry Wunderly visited the Northern Territory for a few days during June 1950 and advised that the Minister for Health (Sir Earle Page) was planning increased financial support for the dependants of people requiring hospitalisation. The finance did become available but no one could receive the benefit without the prior approval of the Canberra office. The medical history and chest X-rays for each individual had to be sent to Dr Wunderly in Canberra for initial approval for a pension and then annually for review. Those patients being treated at home on missions or government settlements had to be flown to Darwin annually for a new chest X-ray. It was a burdensome process but no extra staff were made available to maintain the records in the Northern Territory.

On 22 June 1951 the Tuberculosis Ordinance was passed by the Northern Territory Legislative Council and came into force on the 30th. This Ordinance formally made
tuberculosis a notifiable disease and patients could be forced to receive treatment. Failure to submit for treatment could lead to a £100 fine or six months in gaol, neither of which would have helped to eradicate tuberculosis. It was highly undesirable to have anyone in the gaol with tuberculosis. The knowledge that the Director of Health had power may have bluffed some white men but it meant nothing to the Aborigines. A few years later chest X-rays were made compulsory and there is no doubt many reported for X-ray rather than be fined. No clerical position was granted for someone to establish a register of patients. Ten years later in 1961 Dr Ronald Wells, then Medical Superintendent of Darwin Hospital, directed Mrs Poss Bunce to divert from other work and start a register. Prior to that there were names on long lists that were revised at intervals. Each hospital maintained its own list.

The national policy for case finding was to be based on Mantoux skin tests and chest X-rays and the use of BCG vaccine to build up immunity among those at risk. The famous German bacteriologist Robert Koch, who first isolated the tubercle bacillus, also developed a subcutaneous skin test with tuberculin. This test was widely used in German New Guinea in 1913 a year before that country was taken over by Australia. In New Guinea there was a much higher ratio of positive tests among men who had been away as indentured labourers than among other village people(16). In 1908 a French physician, Charles Mantoux, developed an intradermal test and with modifications over the years this test has remained the one of choice. During the 1920s and 1930s some doctors used the test on the close relatives of new patients but it was not widely used in public health work. In 1947 the honorary medical staff of the Royal Melbourne Hospital recommended that nursing staff with negative Mantoux tests should be afforded the protection of BCG vaccination. At the same time the Commonwealth Serum Laboratory was considering making the vaccine but in the meantime the Royal Melbourne Hospital purchased vaccine from Canada(17). Other Victorian hospitals joined the campaign to protect their staff and the results were so pleasing it gave a great boost for the production of vaccine within Australia.

Tuberculin skin testing, best known as Mantoux testing, was started in the Northern Territory by Dr Richard Brock at Port Keats Mission in June 1951. Old Tuberculin (1-1000) was introduced under the skin of the inner aspect of the left forearm with the bevel of the hypodermic needle uppermost. The reaction to this test was examined and measured 48 to 72 hours later. In a community not immunised with BCG vaccine it provided a valuable indication of who had been in contact with tuberculosis or who in fact had active tuberculosis. All those with a negative reaction were to be given BCG but this vaccine was not available until May 1952. The first people to receive BCG vaccinations were at Milingimbi, Goulburn Island and then Oenpelli before Dr Brock was sent to Central Australia in June 1952. Further Mantoux surveys were carried out at Bathurst Island, Garden Point, Umbakumba and Borroloola before BCG became available.

In June 1952 Dr Brock, with his wife Sister Betty Brock, started medical surveys of all the Aborigines on settlements, church missions and cattle stations out from Alice Springs. Betty Brock prepared medical records for each individual and recorded findings as her husband dictated these. This clerical help was invaluable. Mantoux tests and BCG vaccinations were by this time a routine procedure and there were no further comments on lack of supplies. Dr Bert Welton at Alice Springs Hospital had earlier noted tuberculosis among the Aborigines and had already taken action at those centres with ready access by road or air. However, 1952 was the year of the poliomyelitis epidemic and everyone on the staff of the hospital was heavily committed coping with that.

The first settlement surveyed was Yuendumu where Sister Ellen Kettle had been working in a small iron hospital since February 1952. Sister Betty (Elizabeth Ann) Ashworth
arrived in the midst of the survey to be the second trained nurse. This was timely as all medical records compiled by Betty Brock had to be duplicated to provide an identical set of records for Yuendumu. Of the 260 people who returned for their Mantoux tests to be read, 89 (34.2 per cent) had a positive reaction and 165 received BCG vaccination. There was only one case of tuberculosis and this woman was already on treatment, having earlier been in Alice Springs Hospital(18). Two others had to go to Alice Springs for chest X-rays. While in the Yuendumu area Dr Brock visited Mt Doreen station, the Granites gold mine and all of the cattle properties on the western side of the Stuart Highway.

Hermannsburg was the next large centre visited. The small stone hospital was under the supervision of Sisters Grace Jarrick and Saleen Lindner. Dr Welton had taught Sister Lindner how to do Mantoux tests and to read them. Approximately two hundred Aborigines had been tested during 1951 when there were no supplies of BCG available. Following that survey many people had been taken to Alice Springs by truck for chest X-rays. Out of a population of 320, thirteen were already on treatment for tuberculosis. Of 343 Mantoux tests read in August 1952, 70.8 per cent gave a positive reaction. The remainder were given BCG vaccinations(19).

From Hermannsburg Dr Brock travelled to Areyonga, the most recent settlement in the area. Sister Juanita H Dommenz was working in a three room hut made of bush timber and iron. Of the 129 Aborigines given Mantoux tests, 46 per cent had a positive reaction but no one was found with active tuberculosis(20). The situation among the Pintubi people at Haasts Bluff was very different although they too were recently desert nomads. Sister Lindner had also given Mantoux skin tests at Haasts Bluff during 1951 and Dr Bert Welton had ordered Streptomycin, PAS (Para-amino Salicylic Acid) and INAH (Isonicotinic Acid Hydrazide) for 12 people. A further four people were being kept under close watch. In spite of this only 42 per cent of the 273 who returned to have the skin tests read had positive reactions. Dr Brock felt that the small percentage of positive reactions indicated that the infection was of recent introduction(21). The original carriers of tuberculosis may have perished during the measles and whooping cough epidemics three years earlier.

During a visit to Alice Springs in May 1952, Dr Hilary Roche, an authority on tuberculosis, visited Ernabella Mission at the invitation of Dr Charles Duguid. Ernabella is south of the border with South Australia but it was practical to provide a medical service from Alice Springs as had occurred during the measles epidemic. Dr Richard Brock conducted a Mantoux survey there in October 1952 and found 38 per cent had positive reactions. Dr Duguid considered the infection had come from Areyonga but that was not likely.

In November 1952 Santa Teresa Mission which was still at Arltunga north-east of Alice Springs gave cause for concern. The people at this mission had long contact with Alice Springs and Dr Welton already had seven on medication, two of whom were in Alice Springs Hospital. Dr Brock found 55 per cent to have positive reactions to the Mantoux tests overall, with the highest incidence being in the 16-20 years age group where 88 per cent had a positive reaction(22). Sister Imelda (Joan Benbow) was providing the medical care and the sick people were receiving good food in spite of the barren conditions at Arltunga. Dr Brock sent an infant to hospital in Alice Springs where it died from miliary tuberculosis. Dr Brock had earlier visited the new mission site at Phillip Creek where a building program had commenced in preparation for the planned transfer of the mission.

In support of a submission for a special ward for the treatment of tuberculosis, Dr Bert Welton provided statistics for 24 February 1951 to 17 October 1953 during which time there were twenty-five deaths from tuberculosis, some of them infants. Sixty people were
on treatment in Alice Springs Hospital and Dr Welton considered there would be more if they were X-rayed (23). At this time Dr Stephen Watsford, the Director of Health, was pushing hard for finance for a new Aboriginal ward at Alice Springs so that tuberculosis sufferers could be adequately isolated from other patients. There was no finance available and no extra staff for field work as no one could prove to the satisfaction of the Public Service Board that tuberculosis was spreading.

Dr Watsford compiled a paper on the results of Mantoux tests carried out by Dr R Brock, Dr WA Langsford and Dr Bert Welton over a period of 42 months between 1951 and 1954 (24). Of 5259 Aborigines tested 2528 had a positive reaction. However, the older settlements and missions had many more positive reactors than did the more isolated centres such as Yirrkala. At Yirrkala, where there were seldom more than half the people in the area were at the mission at any one time, only 17 per cent were positive reactors.

Dr AH Humphry followed up Dr Brock’s work in an attempt to do Mantoux tests on people missed by Dr Brock. Many people given Mantoux tests did not return to have them read so no surveys were ever complete. Dr Humphry also did Mantoux tests on the Darwin school children prior to the appointment of a Schools Medical Officer late in 1954. Among the white children (Chinese excluded) 8.2 per cent had positive reactions compared with 34 per cent of the mixed race children most of whom were living in the old army camps at Winnellie, Stuart Park and Parap. The Darwin children with strongly positive reactions were brought to Darwin Hospital for X-rays and further investigations.

Over the next few years Mantoux surveys were repeated by doctors and were followed by BCG vaccination of those with negative reaction. Nursing staff were not involved in this work in the northern half of the Territory prior to 1959. In February 1957 Dr Dennis G Stanbury drew attention to the number of people at Umbakumba who had received three BCG vaccinations and others who had received two. It had not been possible to follow up with more Mantoux tests to see how many had positive reactions after vaccination or how long the immunity lasted. People became fed up with too many injections. Over the years ahead there was much controversy over the apparent failure of BCG to build up resistance. BCG can be destroyed by sunlight so care was taken to always give the vaccinations indoors. The recipients, however, were invariably out in bright sunlight within seconds of being vaccinated. By the 1960s nursing staff were doing much of this work but the problems had been noted before then. There were no staff for special research and no one specifically in charge of tuberculosis until 1963.

The first Survey Medical Officer to take a special interest in tuberculosis was Dr J Tarlton Rayment and one of his first tasks was to check the health of the people at Daly River. More is written about this later. In April 1954 the Catholic Church was asked to consider opening a mission at Daly River, fifty years after closing their earlier mission. In 1955 a site had been selected a couple of kilometres downstream from the police station and two men had started buildings for the mission. Dr Rayment went to Daly River in a 4WD Land Rover over a rugged road. Late rain restricted his movements but even so, with the help of Constable John Lear, he managed to examine 160 people. He did not do Mantoux tests as there was no way he could have found all the people again to read the tests but he did see the need for a mobile clinic for chest X-rays.

Sir Harry Wunderly was interested in Dr Rayment’s proposals but Dr Metcalfe was concerned about the cost and wanted more statistics to justify any expenditure. By February 1955, and with the support of Sir Harry Wunderly, Dr Rayment ventured by boat to Channel Island where he took fifty-three X-ray films. He described his equipment as a SF 2 Watson Victor X-ray with a net weight of 80 pounds (36 kilos). To this was added a generator and other necessary items (25). The venture was successful and Dr Rayment
wrote that the X-ray equipment could be carried in a Drover aircraft in two flights and include staff. By then Dr AH Humphry was Director of Health and he tended to be cautious, possibly out of respect for Dr Metcalfe.

Port Keats was the first mission surveyed by air and four cases of tuberculosis were notified. Once again there was much comment about cost, but every active case found and treated could prevent many other cases later so there is no doubt that it was worth the expense.

In May 1955 a mobile X-ray unit used by the South Australian Tuberculosis Control Team was ready to move into Central Australia. Once again Dr Humphry did not consider it necessary to spend so much money; it is hard to determine whether this was his own opinion or whether he was quoting Dr Metcalfe. The survey was cancelled but Sir Harry Wunderly was investigating the equipment an RAAF DC3 could carry. Having studied the Mantoux results and the number of patients from Bathurst Island, Melville Island and Milingimbi already diagnosed with tuberculosis, Sir Harry Wunderly wanted these Aborigines to be X-rayed.

Dr Tarlton Rayment and his X-ray equipment were transported to Milingimbi by an RAAF DC3 on 8 June 1955. His equipment weighed 2000 pounds (907 kilos). Over the next sixteen days he examined 446 people, X-rayed 176 chests and gave BCG to 141(26). On the first day he sent six sick people to Darwin in the DC3 as there was nowhere adequate to care for them at Milingimbi. He needed all the help Sister Jessie Smith could provide without having to care for so many inpatients. The X-rays were developed at Milingimbi then sent to Sir Harry Wunderly in Canberra to be read. It is not certain how many patients were diagnosed from that survey but Milingimbi subsequently had a considerable number of patients on domiciliary treatment over several years.

From Milingimbi Dr Rayment was flown by the RAAF on 4 July 1955 to Oenpelli where he spent three weeks. Mantoux tests were carried out and 67 people were X-rayed. No tuberculosis was found. The RAAF then transferred him to Snake Bay (Milikapiti) where he worked from 28 July to 11 August. At all times Dr Rayment did full medical surveys of the entire population in conjunction with the survey for tuberculosis. He developed his own X-rays and also examined sputa where this was warranted. Rumour had reached him that people in Canberra were planning to purchase a 35 millimetre mirror reflector but he considered the size and weight of the power unit too large to take into isolated places. Dr Rayment reported that 'the SF 2 is doing a good job and the little engine is still coping'(27). He was not finding enough cases of tuberculosis to warrant more expense.

Difficulties arose with the water supply at Snake Bay. Water seeped from the cliffs and formed a pool on the beach just out of reach of the tide. It seemed to be good water but it rendered the X-ray developer ineffective and many films were ruined. On top of this the salt air damaged the equipment and it had to be serviced by a mechanic.

After a month in Darwin repairing equipment and reorganising, Dr Rayment was flown by the RAAF to Roper River Mission (Ngukurr) on 10 September 1955. Sister E Mirfin was in charge of the hospital so the doctor had assistance. All those with positive Mantoux tests were X-rayed but the doctor did not mention any cases of tuberculosis.

Early in October 1955 the mission staff at Roper River Mission transferred Dr Rayment by boat to Umbakumba. There was no other way he could have visited that centre and taken the X-ray equipment. From there he was transferred to Angurugu, once more by boat. There was no evidence of tuberculosis on Groote Eylandt. The wet season was building up but the sea was smooth and early in November the mission boat transferred the doctor.
and all his equipment to the new mission of Numbulwar near the mouth of the Rose River. Once again no tuberculosis was found and the RAAF transferred Dr Rayment back to Darwin before Christmas.

With a shortage of doctors in Darwin the hospital was accorded priority and Dr Rayment was unable to resume survey work until June 1956. On 6 June he was taken to Yirrkala by the RAAF. He enjoyed his time at Yirrkala where Rev Gordon Symons and his wife made him most welcome. Furthermore, sister Audrey Fielding, who was working under a bough shelter with walls of arcmesh, knew the people and was most enthusiastic. The first small medical clinic was under construction but it was far too small. The settled population at Yirrkala was small but it was a base for the bush people who came and went. News of the doctor’s visit spread and of 444 people known to be in the area, 303 were examined. Of 173 given BCG in 1952 only 36 still had a positive reaction to the Mantoux test. Dr Rayment X-rayed 84 and gave BCG to 197(28).

From Yirrkala Dr Rayment was transferred to Elcho Island where some six hundred people were said to be in touch with the mission. Of these, 412 were examined. Sister Cathie Langdon was most helpful but the whole task was too big and the hospital facility was inadequate. Mantoux tests revealed that of 182 given BCG in 1952 only 53 still had a positive reaction four years later. Of 412 Mantoux tests in the 1956 survey 148 were positive; the remainder received BCG. Dr Rayment was most disappointed with the X-rays. He did not have an adequate building in which to work; there were too many spectators, too much giggling and consequently too many ruined films.

From Elcho Island Dr Rayment was transferred in the Methodist Mission boat Aroetta to Goulburn Island (Warruwi). On the way he called at Milingimbi and checked the tuberculous patients there and was most impressed with the work being done by Sister Jessie Smith. He spent from 3-20 July on Goulburn Island before going on to the mission for mixed race children on Croker Island. No cases were found there of active tuberculosis.

The last X-ray survey by Dr Rayment was at Delissaville (Belyuen) from 16 to 23 October 1956. Of 169 Aborigines reputed to be at Delissaville only 156 were present at the time of the survey and of these only 60 were examined; the rest disappeared into the bush. This group of people needed to be checked as they had the longest contact with Europeans and others. There was much movement between Delissaville and Bagot. Although there was no nursing Sister at Delissaville, there were several people on domiciliary treatment for tuberculosis. Mr Jack Hawley and his wife Rene were there, having been transferred from Hooker Creek settlement. The frequent movement of Welfare Branch staff had a destabilising effect as there was no time to build up confidence. An infant with a strong reaction to the Mantoux test was sent to Darwin Hospital and the few X-rays revealed others who required further investigation(29). He had applied to work in tuberculosis control in Papua New Guinea but died suddenly in Sydney on his way to that country.

Dr John Hargrave, with over a year’s experience in medical survey work behind him in Central Australia, undertook an extensive survey of Bathurst Island Mission. He spent two months from March to May 1957 inclusive and fully examined 713 people. Mantoux tests were done on 554; those people known to have tuberculosis were omitted from the Mantoux tests. Of the remainder, 65 per cent had positive reactions. He listed 34 whom he considered could have tuberculosis and of these, 13 had acid-fast bacilli in their sputum. On his return to Darwin, he arranged for all suspects to be flown to Darwin by the Aerial Medical Service for chest X-rays. All told 43 people were flown in and, as far as could be managed, they were returned by air the same day - this ensured their cooperation. Sister Marita Scullion was the only trained nurse at Bathurst Island Mission.
where she was doing a colossal job but the amount of work to be done was beyond the scope of one person. There were several well trained and skilful Aboriginal nursing assistants but as the population was over eight hundred people the doctor recommended at least two more Sisters.

At this stage some people wanted Dr Hargrave to make a specialty of tuberculosis but he had already set his mind on another task, the eradication of leprosy and the alleviation of the suffering leprosy incurred. Although he went on to specialise in leprosy, Dr Hargrave at all times was concerned for the whole health situation.

With the departure of Dr Rayment all X-rays in the outback ceased. During a visit in early December 1957 Dr Hilary Roche, then Director of the Tuberculosis Division in Canberra, visited Darwin and expressed concern over the cessation of the mobile X-rays. He also recommended, as a matter of priority, that a register of tuberculosis patients be established. Unfortunately, no one could convince the Public Service Board of the need for a doctor in charge of tuberculosis control or for a clerk to maintain the records.

In April 1956 Dr Dick Webb, who had been at Tennant Creek Hospital and then at Alice Springs, was appointed to a new position, Medical Officer of Health, at headquarters in Darwin. This was a time-honoured public health classification understood by the Public Service Board. With the exception of leprosy control, Dr Webb was in charge of the coordination of all aspects of Aboriginal health along with his official public health role. His own special interest was trachoma and more is written on that elsewhere. During his short time at Alice Springs he had seen the scope of the tuberculosis problem there and was keen to have a mobile X-ray unit. However, the equipment used by the late Dr Rayment had shortfalls and no one seemed keen to take responsibility for using it.

Dr Michael Ryan, who came from Britain in June 1957, had gained extensive experience in tuberculosis control in a large industrial city in England. Although he had the knowledge, he was not keen to specialise in that area of medicine. However, his knowledge was invaluable and it was certainly used along with his aerial medical work. Patients being treated at the various missions had to be reviewed as well as suspect cases being investigated. In Central Australia Dr Graham M Ireland was Medical Superintendent and Dr Ian Harry Wallington joined him in July 1957. Dr Wallington did a Mantoux survey at Hermannsburg and sent his findings direct to Dr Hilary Roche in Canberra. He was warned not to bypass the correct channels of communication again but his action did lead to demands from Canberra for statistics and more statistics. Dr Humphry did his best to provide these but drew attention once again to the lack of staff for this work. During the 1956-57 financial year 4425 Mantoux tests had been done and 1770 had been given BCG at 32 separate missions, settlements or cattle stations. These figures could not be broken down further to show how many had received earlier BCG vaccinations. In the field situation the Mantoux tests and BCG vaccinations had all been done by the three Survey Medical Officers.

At the four hospitals all staff were protected by Mantoux tests, BCG and chest X-rays. On top of that every adult patient admitted was given a chest X-ray. Prisoners were X-rayed along with any other groups who were readily available. Of 7050 X-rays, 39 were found to have active tuberculosis. On top of that the X-rays revealed 1526 others with non-tuberculous abnormalities. One third of those X-rayed were of European descent and at that time Darwin Hospital had 15 beds for Europeans and 21 for Aborigines with tuberculosis (30). Alice Springs had six beds for Aborigines with tuberculosis at a time when they had about sixty on treatment at home. Nine Aborigines died from tuberculosis during the fiscal year 1956-57 but there was no comment on whether the deaths occurred in hospital or at home.
The Department of Health was repeatedly asked to provide statistics without having staff for a statistics section. Nothing could be accurate while staff had to be diverted from their normal work to compile statistics. Without a register of patients and their close contacts, all work fell short of what was necessary. There were no beds specifically set aside for tuberculosis at either Katherine or Tennant Creek Hospitals. As recorded in October 1957, Darwin Hospital admitted 32 for the year into 36 beds, while Alice Springs admitted 43 into 6 beds. Patients had to sleep on the floor at Alice Springs in the prewar cottage (the Wurlie) built for the treatment of tuberculosis. They needed adequate food, rest and daily medication, none of which could be guaranteed at home.

By December 1957 Dr Hilary Roche in Canberra was exploring the possibility of having the Anti-Tuberculosis Association of NSW carry out a mass survey in the Northern Territory. Nothing could be done in a hurry as the Government had to approve the operation and finance the costs. The survey team from New South Wales wanted the entire population Mantoux-tested immediately prior to the survey. They said they would then X-ray everyone over fourteen years of age along with any children with a strong Mantoux reaction.

Dr Dick Webb was made the Northern Territory coordinator to help plan the program for the mobile X-ray unit and to direct staff into Mantoux surveys. Dr George Tippett was then the survey doctor at Alice Springs and he was given the whole of that area to cover with the exception of the Barkly Tablelands. The Heaf multiple puncture skin test temporarily replaced the Mantoux test as it was faster and less frightening for children. Dr Edgar Emmerson, who was then with the Aerial Medical Service, did the tests on some of the missions along with Dr Rene L Manning who tested the people of Maningrida settlement for the first time. Sister Ellen Kettle, still the only Survey Sister, was given the use of an old 4WD Land Rover and delegated the Victoria River cattle station area. Welfare officers helped find people for Heaf tests and then later for X-rays; it was a hectic time for all. No one ever had adequate transport and the Land Rover was taken from the Survey Sister to let Dr Manning survey the Barkly Tablelands and Borroloola.

The mobile X-ray team came through South Australia and started X-raying at Ernabella Mission on 28 July 1959. The unit was completely self-contained inasmuch as they developed the X-rays and the first diagnosis was immediately made by Dr Leighton Anderson who accompanied the team. Sister Pat Boland examined sputum for acid-fast bacilli from all those suspected of having tuberculosis. The Department of Health was notified almost daily so prompt action could follow where necessary. A more detailed report was provided later as many other conditions were found besides tuberculosis.

The beef roads that opened up the country were still in the planning process, nonetheless the X-ray team, with excellent vehicles and equipment, experienced no major holdups. The team as a whole seem to have taken no days off and moved through the country amazingly fast. Most local people considered the program to be too ambitious but instead of falling behind the schedule they managed to fit in more than originally planned. While a part of the team spent almost four weeks in the Darwin area, another section was flown to all the church missions and government settlements by the RAAF. All staff on the missions and settlements set other work aside and gave priority to the survey as thousands of illiterate Aboriginal people had to be correctly and adequately identified before they were X-rayed.

Maningrida settlement which had been established a little over two years presented the biggest difficulty with identification. Dr John Hargrave and Phillip Roberts, the medical assistant, who was already at Maningrida, had made individual medical records for 350
people in August 1957 and others had come from the bush in the meantime. Some people may have had previous records at either Goulburn Island or Milingimbi missions but would not necessarily be using the same name at Maningrida. There were very few who could write their own name and none who could write the names of their friends and family. Pronunciation of names was always a problem. Sister Kettle was flown there two days prior to the survey to ensure everyone knew about it and that no one was afraid. Dr Hargrave came with the X-ray team in the RAAF Dakota on 17 November 1959 and by that time the whole exercise had become an exciting event which no one wanted to miss. The three Department of Health staff identified everyone and noted the X-ray numbers on individual medical records. Many new people came from the bush and these included several with leprosy. The radiographers stated they could X-ray the people faster but the Health Department staff could not identify them more quickly. However, there were frustrations not previously experienced by the X-ray team in trying to make people keep still and take a deep breath and hold it. The few Aborigines with a working knowledge of English were called to help but even they could not speak to everyone and from time to time they disappeared without saying they were going. Many X-rays had to be repeated due to movement.

In spite of care in identifying people, there were a few who required further investigation but who could not be found again. Some of the confusion occurred at Bagot settlement in Darwin where there were always many visitors. Aborigines gave the white-fellow name they used in town but their home country was not always recorded. Sister Meryl Nichol, with the Aerial Medical Service, spent months writing letters trying to find people. On a few occasions the wrong person responded and was given a free trip to Darwin and back; a new X-ray revealed they were not the person being sought.

The survey team X-rayed 18,840 adults of whom 8,092 were Aborigines. Eight Europeans and 21 Aborigines were diagnosed as having active pulmonary tuberculosis. On top of this 386 other chest abnormalities were revealed(31). The year after this first mass X-ray survey saw 45 more notifications of pulmonary tuberculosis and 13 non-pulmonary infections. These were diagnosed following further investigation of suspect cases revealed by the mass survey. Of the 45 cases, 36 were from the northern half of the Northern Territory and 9 from the Alice Springs area. People with suspicious X-rays were brought to Darwin or Alice Springs for large X-rays and cultures for acid-fast bacilli when these were not revealed by sputum examinations. It can be safely said that the mass X-ray revealed not less than 74 new cases of pulmonary tuberculosis from a total of 18,840 persons who were X-rayed. In 1959 the Northern Territory population was 41,322 of whom 17,233 were Aborigines.

The new tuberculosis patients required more beds. At Alice Springs Hospital a new cement brick ward (General Ward) was under construction but it was not available until January 1961. In the meantime more patients had to be treated at home in their wurlies with their own families. When the new ward was opened all the white patients were moved there and the original hospital was occupied by Aboriginal patients. This left the very inadequate Aboriginal Ward for the tuberculosis patients. It is uncertain where the few white patients were cared for, but they did have problems with a prostitute who was most reluctant to give up her business. There was no point in charging her for disobeying the law as the local gaol did not want her as an inmate. This woman slept all day but as soon as it was dark she disappeared. It is not clear how the problem was resolved.

Darwin Hospital had a different problem of a much more chronic nature. Many of the white men with tuberculosis were alcoholics - this had long been so; but unless they rested and were well fed there was little hope of them being cured. They were nursed in one end of Ward 1, the Mens Medical Ward, and as soon as other patients settled for an
afternoon nap the tuberculosis patients would slip out for a drink at the pub. The taxi drivers were most obliging when they should have helped the hospital by refusing to pick up the men. Concerned citizens either phoned the hospital or wrote letters to the newspaper. It was not until 1963 that Drs Geoffrey Wilson and Peter White suggested that the men be allowed their beer in the hospital and in that way remove them from the local pubs. A section of the ward was made a home away from home and the situation did improve.

Aboriginal patients had their pastimes too. There was no point in forcing people to lie fretting in bed; instead they would sit by the hour on blankets under trees playing cards and gambling with whatever was on hand. Apart from that they would fish from the rocky beach near the hospital. In Alice Springs the patients could only sit and gamble. There was no television or other diversions.

Chest physicians with a specialty in tuberculosis visited annually but they were not always the same men. Dr Hilary Roche usually came from Canberra but in 1961 it was Dr Richard M Porter from Perth. The specialists reviewed patients from their records and the changes in their chest X-rays and advised accordingly. With the increased number of tuberculosis patients there was much difficulty in identifying them and finding their medical histories in the alphabetical filing system. Sister Katie Ryan and Joy Fenwick who were caring for the Aboriginal patients both lent a hand in the review. Dr Ronald C Wells, an English physician, had taken over as Medical Superintendent in May 1961 and he observed the chaos that existed in the hospital records and the lack of a Register. Dr Wells reorganised his clerical staff and put Mrs Poss Bunce in charge of establishing a Register, a role she filled from then on. A few weeks later he undertook to change the hospital's filing system from an alphabetical order to numerical; there was much criticism behind his back but once the job was done everyone realised it was a vast improvement. Alice Springs Hospital developed a separate tuberculosis register with Mrs Jean Bail as the clerical officer.

Dr John M Crotty, who had been the pathologist for several years, compiled a study of the causes of death in all age groups. In 1960 he showed that a fifth of the deaths among Aborigines over twenty years of age was due to tuberculosis. Another two fifths died from chest infections such as influenza, pneumonia and bronchitis (32).

During 1963 a mobile X-ray unit in Western Australia surveyed the north of that State and was invited to the Northern Territory where they surveyed the people of Darwin and many centres along the bitumen highway. They did just enough work to make it uneconomical to bring in a survey unit from elsewhere to cover the missions and settlements. Just prior to this survey Dr Douglas H Blake, an English chest physician, was appointed as the first doctor in charge of tuberculosis in the Northern Territory. Dr Blake seemed to differ on policy from the Director of Health on the care of tuberculosis and he stayed less than a year. He was replaced in that position by Dr E Geoffrey Wilson who had been working at the hospital in Alice Springs since February 1964. Dr Wilson had earlier gained experience in tuberculosis at Colchester Chest Clinic in England.

The Anti-Tuberculosis Association of New South Wales conducted a further Mass Chest Radiography Survey of Central Australia commencing at Finke, a railway station township, on 8 June 1964. This survey, again led by Dr Leighton Anderson, covered more places in Central Australia than in their previous survey. Two X-ray units were in operation. They were described as a Schonader 70 mm camera X-ray unit as a fixture in a self-propelled International vehicle for road transport and an Odelca 70 mm camera X-ray unit installed in a large caravan, towed by an International prime mover. Each unit had its own power generator and films could be processed and examined on location. The first
unit left the train at Finke while the second, with Dr Anderson and Sister Pat Boland, proceeded to Alice Springs. Dr Anderson made his base in Alice Springs so there was not the field pathology as done in the 1959 survey. Dr Edgar Emmerson, with the Aerial Medical Service, undertook to bring people to Alice Springs for this aspect as the two X-ray teams were short of time due to heavy commitments in New South Wales.

All told 8171 people were X-rayed out of a total of 10,600 considered to be eligible. The main shortfall was among the white communities in Alice Springs and Tennant Creek in spite of the service being free. A total of 342 people had abnormalities including 16 with tumours. Many Aborigines had chronic inflammatory chest conditions that were not tuberculous but still needed care; 126 were found to have evidence of tuberculosis of whom 25 warranted immediate investigation at either Alice Springs or Tennant Creek Hospitals(33).

Late in 1964 the Department of Health purchased its own mobile X-ray equipment, a Barrazetti-Odelca camera unit operated by two twelve volt car batteries. The Barrazetti-Odelca unit weighed 1800 pounds (817 kilos). Ancillary equipment, baggage and stores brought the total weight to about one ton (1016 kilos). The 70 mm Barrazetti-Odelca unit required a DC3 aircraft to lift it so it was mainly used for surveys by road; even then it was confined to those centres where there were formed roads (beef roads). A large film unit comprising a Fexitron Pulse Generator Unit powered by a 2 KVA Generator and accompanied by a darkroom tent unit weighed less than 600 pounds (262 kilos)(34). The crew undertaking surveys comprised the doctor, radiographer, technician, clerk and sometimes a Survey Sister to help identify the Aborigines. Sister Jo (Ethel Agnes) Jones was the first Sister appointed full-time to the X-ray Survey Unit in July 1965. She conducted Mantoux surveys in advance of the X-ray unit.

The second X-ray unit, for large X-rays, could be flown in an Aerial Medical Service Dove. When Dr Wilson was not with the team, the large X-rays were developed in the field unit and flown to Darwin for reading. The Northern Territory mobile units were never as free from breakdowns as the units from New South Wales, nonetheless they covered the areas where they were most needed and continued to find new cases of pulmonary tuberculosis.

With the establishment in 1964 of a tuberculosis control unit distinct from the hospital X-ray department, more office space was needed. Matron MOM Downer from the hospital lived in the original matron's flat attached to an elevated Nurses' Home. The space under the matron's flat was enclosed to form an office and an airconditioning unit was installed to protect the films. The airconditioner was directly below Matron Downer's bedroom where she endured the noise and vibration without the advantage of the cool air. Some years later, after Matron Downer had retired, the chest clinic was transferred to the end of Ward 3 and in January 1972 a first-class chest clinic was established on the ground floor of the MLC Building in Smith Street. This later site was most convenient to the community who availed themselves of an annual free chest X-ray.

The two mobile X-ray units continued to find new patients among all sections of the community. In 1964-65 fiscal year there were 79 new cases notified, 47 in the northern region and 32 in Central Australia. The following year there were 49 of whom 34 were Aborigines. Medication continued with a combination of PAS, INAH and Streptomycin and in many the disease was arrested or healed. Follow-up of both patients and close relatives continued. As more patients were treated at home, the Aerial Medical Service carried increasing numbers of people for their annual X-ray and review. The number of trained nurses working on missions, settlements and cattle properties had steadily increased and this made it possible to treat more at home.
Early in 1967 the Commonwealth Director of Tuberculosis in Canberra, Dr Gwyn Howells, arranged for a mobile X-ray unit from South Australia to survey the southern region of the Northern Territory. This team carried out the last extensive survey in that area. Twenty-one people required further investigation, four of whom were diagnosed as pulmonary tuberculosis. On top of that some people were found who had relapsed due to not taking their medication; these included Pitjanjatjara people from the western desert who were reluctant to spend long months in hospital. Attempts to enforce compliance with a law the Aboriginal people did not understand were made in vain. The Reverend Jim H Downing, who had been working as a social worker and community development officer with the United Church since July 1965, volunteered to speak with the relevant Aboriginal groups. He accompanied the Aerial Medical Service during routine medical visits. Once the Aborigines understood why treatment was necessary they readily brought the tuberculous people for their medication, and for hospitalisation as necessary. The concept of teaching and explaining was not new but not all Health Department staff had the necessary patience or expertise.

Until the appointment of Dr Errol J Strang in charge of tuberculosis control late in 1969, a specialist in tuberculosis had visited each year from Canberra. Dr James Tremayne came in 1965 and from then on Dr Gwyn Howells. Dr Strang, who came from Sydney, had spent several years in Malaysia and then Hong Kong where he gained extensive experience in the diagnosis and treatment of tuberculosis. During 1969-70 there was an official change in policy due to the need for financial cuts. Although the number of new cases found each year remained at over forty, the mobile X-ray surveys were reduced, along with Mantoux testing. The use of BCG was expanded for all newborn Aboriginal infants. A second immunisation was given at two years of age with a booster immunisation at eleven years(35). Early in 1969 Sister Sheila Summerton became the Survey Sister with the tuberculosis control unit, a position she filled until her retirement in 1985.

Chest X-ray surveys did continue but on a more restricted scale until one caravan unit was destroyed in the cyclone on Christmas Day 1974(36). A second unit was safe at Alice Springs. Although the number of cases of tuberculosis remained higher than the national average, this aspect of health work was progressively reduced. For the first 20 years after the Second World War, tuberculosis threatened the existence of Aboriginal communities, a threat that has since been stopped. However, until the disease has been completely eradicated a certain degree of risk remains.

Granuloma Inguinale (Donovanosis)

Granuloma inguinale, previously known as Granuloma venereum, and later renamed Donovanosis, was very likely introduced into the Northern Territory during the first stages of railway construction in the 1890s. As mentioned earlier there were Cingalese labourers who came from a part of Sri Lanka where a similar condition had been recorded (37). In the first census of mixed race children there were some of CingaleseAboriginal origin (38). The pearling fleets, comprising men of many nations, may also have been responsible for its introduction. Dr Frederick Goldsmith first described the condition in 1899. He found that it did not respond to the same treatment as syphilis; it was a new disease. It spread widely and was a most distressing condition causing serious erosion of the genitalia.

Postwar there was medication with which to cure granuloma inguinale. Dr Bill Alderman and Dr Stephen Watsford made a study of the patients admitted to Darwin Hospital from 1946 to the end of 1952. There had been a total of 59 cases, 17 men and 42 women, all of
whom were Aborigines(39). A few cases had been reported from Alice Springs but in the northern half of the Territory there were no cases reported further south than Daly River. Up to 1950 Anhiomaline was the only effective drug. Occasionally Sulphamerazine or sulphadiazine were used to clear up the secondary infection in the ulcers. Early in 1950 streptomycin was used for the first time and the results were quite dramatic.

In 1954 at Hooker Creek, Sister Kettle was told of a young Wailbri (Warlpiri) man who had been working as a stockman on Wave Hill. He could no longer sit in a saddle but he was too ashamed to let a woman examine him. He was flown by Connellan Airways to Alice Springs Hospital where Dr Welton diagnosed and treated him. Dr JP Kerins reported two cases from Port Keats in 1957 and occasional cases have continued to be diagnosed.

**Malaria**

From 1873 onwards malaria was a continuing problem. It appears frequently throughout this record. Dr CE Cook maintained that he eradicated malaria in the 1930s but this was not so.

During the war malaria was well controlled by the Army. Both the RAAF and USAF (United States Air Force) found the regulations restrictive and occasionally protested but to no avail. Men could not be transferred from a malarious area into the Northern Territory. The several species of Anopheles mosquitoes were prevalent in most areas north of 17 degrees latitude south (between Daly Waters and Newcastle Waters). The army hospitals had cared for all people - refugees and servicemen - with malaria and kept them in mosquito proof units until they could be flown south or be otherwise evacuated. Such vigilance paid off. However, a reservoir of infection did remain among the Aborigines in spite of all attempts to eradicate it.

A few locally transmitted cases of malaria were recorded by the army hospitals in 1943. Six servicemen contracted malaria at Adelaide River between 20 March and 3 April 1943; the source of infection was not determined. Five Aborigines working at Manbulloo developed malaria between 3 and 20 March(40), while the 42nd Camp Hospital at Mataranka admitted two Aborigines with malaria on 26 April 1943(41). The latter two patients were sent to the army hospital at Katherine. There had apparently been an unusually heavy wet season and army doctors noted the occurrence of malaria at the end of the wet season when Anopheles mosquitoes were numerous. Further four cases among Aborigines were reported from Katherine in 1944 and one from Koolpinyah near Darwin(42). Dr Edward Ford (later Sir Edward Ford) recorded an outbreak of benign tertian malaria at Roper River Mission in 1945 while the army was still in control(43).

Malaria was quiet for the first few years postwar. This was due more to good fortune than good management as the health service had very few doctors. In 1949 Dr Robert Black undertook an extensive survey through the Kimberleys and the Northern Territory and although Anopheles mosquitoes were widespread, he found no malaria. However malaria was still smouldering, possibly among bush Aborigines and all it required was a heavy wet season when mosquitoes bred prolifically and then it flared up again.

There was an outbreak of three cases of vivax malaria at Yirrkala in 1952 and Dr Cecil Cook was of the opinion it had been introduced to that area by airmen during the second half of the war. It was an unsubstantiated opinion but it may have been correct. Gove airstrip, several kilometres from Yirrkala, was operational by late 1943 but no major outbreaks came to the attention of the army control teams. The disease was sporadic and the next eight patients were reported at Nutwood Downs in 1944, nine years after the last
major outbreak at Roper River. Every effort was made to treat the Aborigines but when side effects of the medication made them feel worse than an attack of malaria, they had a tendency to disappear without completing a course of treatment.

The wet season of 1954-1955 was ushered in by 13 inches (330 mm) of rain in Darwin and heavy falls elsewhere. All told Darwin experienced over 86 inches (2184 mm) of rain with a similar pattern of 71 inches (1803 mm) and 80 inches (2032 mm) respectively for the next two years. As Director of Health in 1954, Dr AH Humphry took every possible precaution and all people entering Darwin or elsewhere in the Northern Territory from malarious countries were obliged to take an eradication course of Chloroquine and Primaquine. A film of oil was spread over pools of still waters and the fogging machine was carried by the Aerial Medical Service to the centres most at risk. In spite of all precautions, malaria flared up again at Roper River Mission and spread throughout the Roper River area, stopping short of Katherine. It broke out at Yirrkala and Mainoru where all the white staff were ill. There were more cases at Manbulloo and on small farms in the area. A timber mill had been established at Maranboy where forty years earlier many men had died from malaria. The white men at the sawmill were sceptical when told their recurring fever was malaria; however, they were convinced of the need for treatment. There were 31 cases of malaria in the Northern Territory in 1955, 35 in 1956, and 53 in 1957(44).

There was mention of fever among the bush Aborigines at Caledon Bay, 90 miles (145 kilometres) south of Yirrkala. In mid-June 1957 Sister Audrey Fielding from Yirrkala Mission flew to Caledon Bay with Rev Harold Shepherdson from Elcho Island. She made blood slides from all of the 98 people camped there and these were promptly flown to Darwin. A few days later Dr AH Humphry advised by radio that two of the slides were positive for malaria. He asked if Sister Fielding could spend seventeen days at Caledon Bay to give an eradication dose of medication to everyone. He offered to send a relief Sister from Darwin Hospital.

The medical aircraft that brought the relief Sister on 26 June 1957 also brought a tent, radio transceiver and a good quality stretcher to ensure Sister Fielding's comfort and security. The transceiver was excellent and she could hear many other stations as well as Darwin. On the 27th Rev Shepherdson flew her to Caledon Bay and stayed overnight to ensure everything he had asked of the Aborigines had been done. A small three room bark hut had been erected, one room for sleeping, one for storing food and the third for use as a dispensary. There was a three-sided bark toilet with a detachable roof; when occupied the roof was used as a door.

Medication was given to everyone at daylight before they disappeared for the day's hunting. It was repeated on their return at night. In between, Sister Fielding steadily conducted medical examinations. She found no new cases of leprosy but she considered everyone had trachoma.

When writing to her family on 4 July she mentioned cooking porridge for breakfast, seagull eggs for lunch and braised kangaroo for the evening meal. Other meals were of fish or crab. Bush foods were fine but she dined with relish when on 16 July Rev Shepherdson arrived with fresh bread and other familiar home-cooked foods from the women missionaries on Elcho Island.

Sister Fielding's work at Caledon Bay was highly commended by Dr Humphry at a time when police would have hesitated to go into the area alone and unarmed. There was no further problem with malaria at Caledon Bay.
Along with controlling malaria and attempting to eradicate it at the local level strict vigilance was necessary to ensure it was not reintroduced by travellers. In the mid-1950s four Darwin businessmen put to sea in a yacht to enjoy some fishing. Several days after their return all four were admitted to Darwin Hospital acutely ill with malaria. They had to confess they had been to Dili on Timor and had brought back Portuguese wine and other luxuries unsuspected by both the Customs and Immigration Departments. Others who went to Timor for an inexpensive holiday camped out of doors without using mosquito nets. Even today there can be no relaxation in vigilance in keeping Australia free of malaria.

When malaria occurred on missions and cattle stations, the white people on the spot were issued with medication to treat everyone. It was a tall order as all people had more than enough to do without lining up all the Aborigines twice each day to ensure their tablets were swallowed. When the wet seasons were a little drier there was less malaria but it was still endemic, with Roper River area as the main centre of infection. The last indigenous cases of malaria came from Roper River Mission (Ngukurr) in 1962.

Professor Robert Black from the School of Public Health and Tropical Medicine in Sydney visited Darwin in 1962 to discuss the collection of blood slides and the possibility of a comprehensive eradication campaign in all areas where malaria was still occurring. Survey Sister Ngaire Stichbury carried out the two weeks eradication treatment with Chloroquine and Primequine at Roper Valley, Roper River Mission and then at Numbulwar late in September 1962. Sister Kettle treated all the people at Mainoru and Mountain Valley Stations. This coverage was successful and there has been no further local transmission of malaria. However, imported malaria continues and it is only vigilance and community cooperation that prevents further outbreaks.

Trachoma

Trachoma has been mentioned earlier in Chapter 9. There was little treatment prior to the war years.

The first attempt to do something about trachoma was in 1936 (Chapter 9). Two Melbourne ophthalmologists Drs Edward and Agnes Gault, who had been treating white children from the Northern Territory, wrote to the appropriate Minister in Canberra and offered to go to the Northern Territory to assist and teach doctors and nursing staff. Dr CE Cook wrote that he did not believe the condition described as trachoma in outback Queensland and New South Wales existed in the Northern Territory. He successfully blocked the ophthalmologists and it was not until the war that the true situation was revealed.

In 1944 Major Michael Schneider, an ophthalmologist from Adelaide, carried out the first survey for trachoma among the Aborigines in the Northern Territory(45). As he was based at Katherine he visited the Victoria River district and the Roper River area. A few months later, Chaplain Frank Flynn, also an ophthalmologist, started examining eyes in Central Australia. During December 1944 Fr Flynn examined 448 Aborigines at Hermannsburg, Areyonga, Haasts Bluff and Jay Creek settlements. Only 51 were clinically free of the disease which meant 89 per cent had varying degrees of infection:

In the older people the condition often presented as an advanced form of cicatrisation of the lids with resulting deformities, as well as extensive opacification of the cornea, with consequent impairment of vision. Thirty-one Aborigines (7 per cent) were blind in one or both eyes as a result of trachoma(46).
During research in 1937 Professor J Burton Cleland and Dr E Couper Black had noted the extent of damage to eyes and had speculated that much of it was due to trauma during fights, scratching eyes on twigs when walking through mulga, and from carrying fire sticks(47). Fr Frank Flynn considered most of the damage was due to trachoma.

Fr Flynn considered the earlier classical method of painting the follicles with a stick of solid copper sulphate was impractical for the scope of the task in hand. He recommended instead the oral administration of Sulphanilamide: one gram three times per day for twenty-one days with two short breaks in between. This regime was changed to twice per day to allow people to go hunting as the food supplies did not permit all to be fully fed for the period of treatment. There were many painful lesions such as entropion and trichiasis that would have benefited from surgery, but due to his other commitments Fr Flynn was not free to do this work.

On 31 March 1945 Fr Frank Flynn examined the eyes of 77 people resident at Arltunga Mission and arranged for them to be treated(48). Prior to that, on 5 February Major Claud Lum, in charge of 109 AGH, Alice Springs, ordered 200,000 tablets of 0.5 g of Sulphanilamide. These were provided and missionaries and welfare staff supervised the swallowing of the tablets. Mr Rex Batterbee treated 202 people at Areyonga but could not guarantee that all received a full course.

Mr Vic G Carrington, Acting Director of Native Affairs, wrote to the Government Secretary on 2 February 1945 setting out for him who was to give the treatment at each place. He recommended that in planning for the postwar health services there should be at least four doctors for work among the Aborigines plus an ophthalmologist. This was referred to Dr Cumpston shortly before his retirement and he promptly commented that one travelling doctor would be enough(49). The first Survey Medical Officer was appointed in January 1951, six years later.

Trachoma disappeared from the correspondence and no further action was taken until 1949 when the World Health Organization wrote to Dr AJ Metcalfe, the Director General of Health in Canberra, requesting information on the situation in Australia. He replied that trachoma had existed in outback Queensland and New South Wales but was dying out. In the Northern Territory it was confined to Aborigines. The postwar World Health Organization had massive plans for the eradication of disease and requested more details. In Darwin Dr EB Gunson sought the advice of Fr Frank Flynn and was given copies of the 1944-45 surveys which included a report on trachoma on Channel Island in June 1945. The earlier recommendation for doctors to work among the Aborigines was rediscovered. Fr Flynn was invited to travel with the Aerial Medical Service to examine Aborigines and during April 1949 he visited Goulburn Island, Milingimbi, Elcho Island and Oenpelli. On 17 August 1950 he was flown to Port Keats and back. During April 1950 he spent a few days at Garden Point (Pularumpi) and may have visited Snake Bay at that time. Fr Flynn's name does not appear in the Aerial Medical Service logbook again until 25 August 1952 when he flew with Dr Stephen Watsford to Auvergne, Kildurk, Newry, Rosewood, Waterloo, Inverway, Hooker Creek, Wave Hill and Victoria River Downs, taking three days for the journey. During January 1953 he spent twelve days at Bathurst Island Mission and was flown to Garden Point and Snake Bay during that time.

Professor Ida Mann, an ophthalmologist from Perth, made two visits to Darwin for consultations on trachoma. She had prepared a fairly detailed classification of the disease but a much simpler classification was introduced by the WHO for their worldwide campaign. As all fact finding on trachoma was forwarded to the WHO, their classification was used. On 17 August 1956 Professor Mann and Fr Frank Flynn were flown to Roper
River Mission (Ngukurr) and then to Angurugu on Groote Eylandt where they stayed overnight. On 20 August Dr AH Humphry accompanied the specialists to Daly River Mission for one day. On 11 September Fr Frank Flynn was flown to Bathurst Island accompanied by Drs Dick Webb and John Hargrave and on the following day they visited Milingimbi. No trachoma was seen at Bathurst Island while at Milingimbi it was widespread but without serious complications. Arrangements were made with Sister Jessie Smith for mass treatment of the local population.

Fr Frank Flynn documented his survey findings in a report published in August 1957. He had been back to Central Australia and had included Yuendumu and Warrabri in his study. These two places had earlier been surveyed by Drs Richard Brock in 1952 and Dr Dick Webb in 1955, the latter group at Phillip Creek. Of 4876 Aborigines examined, 3051 (62.6 per cent) had trachoma. There was considerable variation in the severity of the infection between the coastal areas and the arid inland areas. Not only was there less trachoma on the coast but there was much less severe damage and blindness. There was no trachoma at all among 250 people examined on Bathurst Island in 1953 and only eight mild cases at Snake Bay (Milikapiti) on Melville Island at the same time.

Between March and May 1957 Dr Hargrave examined 713 people on Bathurst Island and reported six with trachoma, two men and four children. A man of 66 years had marked scarring of his eyelids while the other five had early follicles. As for the people of Snake Bay; there was no trachoma in 1953 but by 1956, after the compulsory transfer of two Aborigines from the mainland, seven cases of trachoma were found. Once introduced, trachoma did spread. Very few people used towels so this was not the mode of transmission. The one common factor everywhere was flies.

Treatment of trachoma, first carried out in 1945, commenced again in 1951 as Dr Richard Brock, the first Survey Medical Officer, examined people and prescribed treatment. Dr WA Langsford also arranged for mass treatment where there was a trained nurse to do the work. On 10 May 1954 Sister Kettle commenced the mass treatment of trachoma at Hooker Creek settlement (Lajamanu). It was done in conjunction with all other aspects of health work. Initial instructions from Dr Stephen Watsford was for the treatment of all persons already diagnosed by a doctor and to keep all suspects until the next visit by a doctor. This proved impractical and so the era of nursing staff diagnosing and treating trachoma began. All infected people needed to be treated at one time to overcome the risk of reinfection. Over the next few years as nursing staff were appointed to Welfare Settlements and Missions these Sisters were taught to recognise and treat trachoma.

In 1954 the treatment used was two tablets of sulphadiazine twice each day and local application of Aureomycin ointment on the inner surface of the lower eyelids. This work could not be delegated as tablets were thrown away or were lodged between the cheek and gum to be thrown out when not observed. The course was for six weeks and it was most difficult to convince people of the need for a full course. As well, a few people had allergic reactions to sulphadiazine.

Dr Dick Webb conducted surveys for trachoma while based at Tennant Creek Hospital during 1954-55. Sister Kettle carried out a mass treatment of the population at Phillip Creek during July 1955 before visiting missions in the Alice Springs area. All the cattle stations inland from the Gulf of Carpentaria and the Barkly Tablelands were covered during 1956 but those south of the Barkly Highway were missed due to lack of staff to do the work. By 1955 Sulphadiazine was available in 'dulcets' or sweet flavoured lolly form for small children and a new problem arose in keeping them safely out of reach.
During the Lake Mackay expedition in July 1957 Dr John Hargrave examined the eyes of 41 nomadic Pintubi people most of whom had trachoma. No one in the group was blind. All surveys for trachoma were recorded on a standardised form for the World Health Organization. The only areas without trachoma were Bathurst and Melville Islands but even these did not remain free of the infection.

Professor Ida Mann and Dr Donald M McLean from the Commonwealth Serum Laboratory visited Darwin on 1 July 1957 to consult with the pathologist Dr John Crotty on a joint research project. These three visited Groote Eylandt, Oenpelli and Goulburn Island where they took swabs and smeared them on blood agar plates. All care was taken in transporting the cultures; they grew other organisms but not the trachoma virus. The researchers acknowledged the supportive interest of Dr CE Cook in Canberra without realising that he interpreted the lack of success as proof that the disease was not trachoma. Shortly after this, researchers in Gambia successfully grew the virus in six day old embryonated egg yolk sacs(52). Dr Donald McLean visited Darwin again on 18 December 1959 in an attempt to obtain the virus from the eyelids of Darwin school children. In March-April 1955 Dr Alan Duxbury from the Commonwealth Serum Laboratories was in Darwin to investigate an outbreak of influenza at Batchelor and he and Dr Crotty made a further attempt to culture the trachoma virus(54).

Dr Charles M McLean from Glasgow was appointed as an ophthalmologist in July 1958. He had earlier gained wide experience with trachoma in Ghana and in the Middle East. Dr McLean wasted little time; he was a keen and energetic worker and was flown to Roper River Mission (Ngukurr) on 4 September 1958 and Port Keats on 2 October. He then went to Alice Springs where Captain Harry Moss flew him to Yuendumu, Haasts Bluff, Santa Teresa and Hermannsburg. Other centres were also visited but there was a backlog of other work awaiting his attention in the main town areas. Accompanied by Dr Helen Phillipps he visited the schools in Darwin and found trachoma among the children.

It might be said that Dr Charles McLean was not politically astute. He found much early trachoma among the residents of Darwin and mounted a campaign to eradicate the infection from all sections of the community. On 8 April 1959 a campaign to detect trachoma and to treat it was conducted in the Darwin Town Hall. Several doctors assisted including Dr WA Langsford. A Sister assisted each doctor to do the recording and to issue the prescribed treatment. Dr Helen Phillipps was the coordinator for much of the follow-up work. Some people were concerned and took their children interstate for a second opinion. Some other ophthalmologists were not of the same opinion and began saying so to the central administration in Canberra. Trachoma entered the political arena and Dr WFH Crick wrote that there should be no further campaigns among the white population. Clinics were postponed and Dr McLean met with ophthalmologists in each of the capital cities, where he was well received. Professor Ida Mann supported his work. However, like tuberculosis control, there was no special budget for the eradication of trachoma. The finance came from the general Health budget.

Dr CE Cook attended a conference in Perth on 31 August 1959 at which Dr Charles McLean presented a paper. He then put forward recommendations for further research to be carried out in Central Australia, but Dr McLean wanted his research to be done in the north where there was less secondary infection and less mass treatments had been done. From there on, progressively more restrictions were imposed from Canberra until, in March 1960, Dr McLean left for a new appointment in Canada.

Trachoma became a delicate topic and when Dr RC Webb departed in March 1961 to take up an appointment at Australia House, London, with him went the last enthusiastic
authority on the subject. Dr Ian Byrne took over as Director of Health with Dr WA Langsford as his deputy. However trachoma did not disappear and on 15 February 1962 an ophthalmologist in Adelaide drew attention to the advanced trachoma found in the eyes of a white child from Elliott, north of Tennant Creek (55). Dr Ian Byrne expressed concern that this child might infect the Aborigines when in fact he had contracted the infection from his Aboriginal playmates.

Very little was done about trachoma again until the arrival of Dr WHC Hughes in February 1962. In spite of the growing pressure of ophthalmic work at the four major hospitals, Dr Hughes did find time to travel in the outback with the Aerial Medical Service and taught both doctors and nursing staff how to recognise and treat trachoma. There were no big campaigns during his two years in the Northern Territory but the Survey Sisters, under the guidance of Dr Hughes, continued treatments on the cattle stations.

Dr Langsford became Acting Director of Health late in 1963 and was appointed as Director the following year. He did not mince words where trachoma was concerned and informed his staff that there was no trachoma; the infection they had been treating was follicular conjunctivitis. He could not clarify the difference but all treatment was stopped.

Work on trachoma continued elsewhere. At the Institute of Medical and Veterinary Science in Adelaide, Dr WH Howarth and Mr PG Surman continued in their attempts to culture the virus of trachoma. An Adelaide graduate, Dr Geoffrey C Morlet, had completed his studies in ophthalmology and was inspired to thoroughly investigate whether there was such a disease as follicular conjunctivitis or whether it was a stage of trachoma. He had seven months in which to do research in the Northern Territory prior to going to London for further study.

In writing to Dr Langsford in March 1965 Dr Morlet stated that:

It is important that this survey be conducted on a sound scientific basis with full laboratory control and adequate records, so that the diagnosis of the disease is a fact and not an opinion (56).

In the pre-computer era he proposed to use a punch card system to analyse his records and requested the assistance of a trained nurse. No physical help was forthcoming. Dr Langsford agreed he should go to Papunya so his work could dovetail in with the research into child health being planned by Professor George Maxwell.

Dr Morlet visited Papunya on 24 May 1965 and found that there was nowhere for him to live or work. He withdrew to obtain a caravan in which to live and on his return he was given a section of the hospital verandah that, in his words, was filthy. As no domestic help was forthcoming from an apathetic Superintendent, he cleaned and scrubbed his clinic himself. The only people who really helped with this survey were the school teachers who made the children available during working hours. The whole process of examinations was slowed down without someone to keep the equipment clean and to take notes. A married white woman volunteered to assist him. This was the era when some Welfare staff had decided they were tired of being imposed upon by people from other government departments. However, prior to the arrival of Professor George Maxwell in July 1965 there had been a shake-up and the Professor received every courtesy and help. As well as his own staff, Professor Maxwell arrived accompanied by Dr Noel Vawser, Sister Kettle and Sister Ngaire Stichbury while Dr Morlet was still without assistance and consequently had to restrict his work. When asked how his survey was progressing Dr Morlet said, 'There is 100 per cent trachoma'. He jokingly stated he would have to get out of the Northern Territory as trachoma was not what he was supposed to find.
Dr Morlet prepared a report that was submitted to the Tropical Medicine and Health Committee of the National Health and Medical Research Council in May 1967. He had intended to survey the entire population at Papunya but due to lack of assistance he reduced it to 54 children. Each child required two hours to allow for the location of a previous history, photography and explaining what was going to be done. There is no reason why Dr Langsford could not have made a Survey Sister available. In summing up Dr Morlet added that:

I should like to record...that after nearly 20 years of incomplete surveys, inadequate records and inconsistent treatment, trachoma is as much a problem today as it ever was(57).

Whilst in Alice Springs Dr Morlet examined the eyes of many others and noted that:

every Aboriginal or part-Aboriginal person examined in the Alice Springs district showed evidence of trachoma past or present, and in the Europeans examined, a fairly high incidence of the disease existed, particularly in children(58).

What the Northern Territory needed were men like Dr Geoffrey Morlet to make the eradication of trachoma his life’s work but no one has been so motivated.

After three years studying ophthalmology in Melbourne, Dr Ken Moo was appointed as a specialist in 1964. He was based at Darwin Hospital and provided regular clinics at the other three main hospitals. However, he did not carry out survey work among the Aborigines and was not specifically involved in work with trachoma.

Up until the time of Dr Langsford’s transfer to Canberra on 6 November 1972 little more was done about trachoma. Later research has confirmed that follicular conjunctivitis is indeed trachoma (1987). In November 1972, after Dr Langsford’s departure, Professor Fred Hollows visited Yuendumu and Wattie Creek (Daguragui) and publicly proclaimed that all children had trachoma.

In the 1980s Chlamydia, the causative organism of trachoma, became the subject of extensive research by the Menzies School of Health Research, which had been set up in Darwin.

**Typhoid**

Typhoid, like cholera and smallpox, was a much feared disease. The only treatment was good nursing care and a diet that came close to starvation. Any roughage in the food could cause the Peyer’s patches (small ulcers with a slough) to perforate, leading to haemorrhage or peritonitis or both. The mortality was high. The first cases of typhoid in Darwin were two passengers on a ship from Western Australia in 1887; one of these died. There was apparently an outbreak among the miners at Burundie in 1888 when five cases were admitted to the hospital. A Chinese prisoner in the gaol in 1889 was recorded as having died of typhoid while another prisoner was said to have died from dysentery.

The most extensive outbreak of typhoid was at Winnecke goldfields north of Alice Springs in 1903. Dr Shanahan, the Medical Officer of Health for the north of South Australia, travelled to Alice Springs by buggy. He was accompanied by a pharmacist who nursed the victims in tents in Alice Springs, while local white women prepared the prescribed foods. Dr Shanahan gave firm orders on hygienic practices for Winnecke,
Artunga and the newly developing town of Alice Springs. Although Aborigines lived in close proximity to the miners, there is no record of them contracting the infection.

From research carried out by Dr RRA Brock in 1957, there was a death from typhoid in 1911 followed by an outbreak of five cases at the Batchelor farms in 1912. A further three patients were treated in Darwin Hospital in 1913(59).

There were no major outbreaks again until March 1955 when a child from the suburb of Parap was admitted to Darwin Hospital and diagnosed by the pathologist Dr Tom Nowell. Between March and August 1955 four cases were admitted to hospital and two in a carrier state were identified, isolated and treated. One carrier had recently arrived from Broome in Western Australia. All of the patients were from the mixed race community residing in about nine acres of Sydney Williams huts at Parap. The lavatories in the area were of the pit incinerator type (flaming fury) but were in a poor state of repair and it was suspected that flies carried the infection from these. Health Inspectors LM Tivendale and GW McComish supervised the hygiene of the area under the overall direction of Dr AH Humphry. Dr Richard Brock, relieving during a staff shortage in Darwin Hospital, was the clinician. Three patients responded well to oral chloramphenicol, two required tetracycline and the sixth eventually responded to oxytetracycline(60).

Two cases of typhoid occurred at Oenpelli Mission during August 1960 and the Senior Health Inspector, Jim E Dewey, visited several times to supervise the disposal of human waste and to ensure the water supplies were not being contaminated. Mr Dewey recommended fly screening of the area in which Sister June Armstrong was supervising the meals for infants. No carrier of typhoid was identified at that time.

On Friday, 2 March 1962, typhoid was confirmed in a male patient flown to Darwin Hospital from Oenpelli. Two days later a further two men were flown to hospital suffering from the same symptoms. Over the weekend Dr WA Langsford, then Deputy Director of Health, planned action and on Monday 5 March he flew to Oenpelli accompanied by Dr Max Richards, Sister Ellen Kettle and the Health Inspector, Mr RF Humphreys. Dr Langsford inspected the Aboriginal camp and found that the people were obtaining drinking water from shallow holes near their camps; it was the wet season so the holes filled with water and saved them having to walk to a tap with a bucket. In spite of having lavatories the ground was contaminated by human waste. Dr Richards collected blood samples in an attempt to isolate a carrier. Sister Kettle remained at Oenpelli to keep a close watch on the situation and to help nurse any more patients at the local level. One very sick child flown to Darwin proved to be a case of typhoid. On the evening of the 5th Sisters Armstrong and Kettle visited every home in the village and brought to the hospital a further eight sick people.

Immunisation of the whole population started the next day at a temporary clinic under a large poinciana tree. The number of patients increased daily as people reported with severe headaches and high temperatures. There was no way of sending further specimens of faeces or blood to Darwin so treatment was administered on a clinical diagnosis. Tents were obtained from the Welfare Branch and flown to Oenpelli. These were erected within the fenced hospital grounds and the fence became the isolation boundary. A small tent was erected outside the fence to provide a normal medical clinic as there were many people on treatment for leprosy. Further, some people presented with mild symptoms and required isolation from the general community until a diagnosis could be made. Chloramphenicol was the medication given during this epidemic.

The work was heavy, the hours long and the heat and humidity in March were exhausting. The nursing staff would not have coped without two experienced Aboriginal staff, Isaiah
Burunali and Priscilla Girrabul, who camped near the hospital at night to supervise the patients. Late one night Priscilla woke the nursing staff when hunters arrived with a harvest of goose eggs in all stages of hatching. As anything inside an eggshell would be soft, permission was given for one egg each, the situation to be reviewed in the morning. Thirty-two patients were treated at Oenpelli and four in Darwin Hospital. After a month Sister Ngaire Stichbury relieved Sister Kettle who then returned to Darwin. No carrier was isolated from over one hundred blood samples and on 22 May, after an inspection by a doctor, Oenpelli was released from quarantine(61).

A few months after the epidemic a man was admitted to the hospital at Oenpelli with such mild symptoms that the diagnosis was missed until he developed peritonitis. He died in Darwin Hospital. He had been immunised. Dr Kevin Anderson visited from the Institute of Medical and Veterinary Science in Adelaide and blood samples were collected from the whole population. A man was identified as harbouring the organism in his gall bladder and underwent surgery in Darwin Hospital.

Five cases of typhoid fever were treated in Darwin Hospital during the fiscal year of 1964-65. These people were from the Catholic missions of Daly River, Port Keats and Bathurst Island and had one factor in common; they had all been in Darwin. Few of the Catholic mission Aborigines would stay at Bagot where there was no safe accommodation for unattached women; they lived instead at mission headquarters in Geranium Street, Stuart Park. Dr Kevin Anderson visited Darwin again during the first week of February 1965. From 602 blood specimens collected at Bagot, Oenpelli and Bathurst Island, along with many specimens of faeces and urine, twelve carriers were identified(62). On 17 March a white man from Daly River was diagnosed as having typhoid and specimens of blood were also collected from that area and sent to Dr Anderson in Adelaide.

The most widespread epidemic of typhoid recorded in the Northern Territory occurred at Galiwinku on Elcho Island late in 1967 and spread to Yirrkala in March 1968. On 28 September 1967 a young woman reported to the hospital at Galiwinku with a high temperature. She had just returned by air from Bagot after having been in Darwin Hospital with a urinary infection. She admitted that she had been unwell for two days prior to returning home. She had been buying food from a white hawkers instead of eating in the dining hall at Bagot. The following day another woman reported with a high fever and both women were admitted to the local hospital where Sister Leila Jones from Perth was in charge. The first woman was readmitted to Darwin Hospital on 10 October 1967 and was treated for pneumonia; she died.

Patients continued to report to the Galiwinku hospital, all with high temperatures, headaches and various other aches and pains. There were 20 during October, 61 in November, 27 in December and 63 in January 1968. The condition was reported by radio and supplies of Chloramphenicol and Ampicillin were sent from Darwin. Two weeks courses of one or the other were given and the Sisters noted a better response to Chloramphenicol. Sister Kettle was overseas during 1967 and returned to Darwin on 1 January 1968 when the strange epidemic was causing real concern in Darwin.

The Sisters at the mission sent a small consignment of blood samples to Darwin on a commercial flight on 22 January and on 24 January a visiting doctor collected a further ten samples. It took time for the results to be known but four of the samples revealed very high titres for *Salmonella typhi*. On 7 February three patients were flown to Darwin for further investigation and Salmonella typhi was isolated from their faeces(63).

The Director of Health placed Elcho Island under quarantine and cancelled the mission's thriving fishing industry. Dr Langsford seldom visited any of the Aboriginal missions or
settlements, but on this occasion the mission staff felt they warranted a visit and an explanation after so many months of unexplained sickness. However, Dr Kevin Anderson’s assistance was requested again and between 7 and 15 March 1968 a total of 890 samples of blood were collected. From these, 58 suspect carriers were detected. At the same time, from urine and faeces specimens 8 more were found to be carriers and this group was flown to Darwin Hospital.

Dr Kevin Anderson met with the staff in Darwin late in April when it was decided that the only way the infection could be dealt with was by mass treatment. All sections of the Aboriginal community were, by that time, involved. Sister Kettle and a Health Inspector were sent to Elcho Island to prepare the way. At a mass meeting the Aborigines agreed to cooperate but there was a degree of resistance from white staff who felt they had been treated shabbily and demanded that Dr Langsford, the Director, visit them in person and explain the situation. He did pay a brief visit and was assured of cooperation.

Between 1 and 7 May 1968 mass immunisation was started and between 21 May and 3 June the entire population, Europeans included, were given an eradication course of chloramphenicol. Infants were given Ampicillin. At this time Sister Leila Jones had the help of Sister Jocelyn Shepherd and one other. The Department of Health provided four nursing staff, Sisters Jillian Moore (in charge), Anne Trinder, Margaret Eldridge and Lois Thompson, who had been sent a little earlier to immunise people on the mainland. A Health Inspector accompanied the nursing staff to supervise the lavatories and to convince the people to stop using water from their favourite soak on the beach as it was contaminated. The treatment, though drastic, was successful and regular immunisation against typhoid was continued for many years.

Yirrkala did not escape the spread of infection. The Aborigines at Elcho Island had been forbidden to go to either Milingimbi or Yirrkala but it was impossible to supervise this order. On 1 March 1968 a young woman visitor was found to be very ill and was flown to Darwin Hospital where she died. The autopsy report read 'septicaemia and gastroenteritis'(64). A few days later the report was received in the Aerial Medical Service section and someone phoned the relieving pathologist and asked if Peyer's patches had been excluded; he admitted he had not looked for them but on further consideration thought that typhoid was a possibility.

On 12 April five Elcho Island men arrived by canoe at Yirrkala. They camped with a group of 120 people and it was a couple of weeks before they were discovered and returned to Elcho Island by air. The first patient reported to the clinic at Yirrkala on 18 April and the second patient the next day. Over the next six weeks there was a total of 61 with fever; seven were later identified as carriers. Yirrkala was placed under quarantine and this alarmed the mining personnel working from a camp near Gove airstrip. These men had been visiting Yirrkala for medical attention.

Both the Aborigines and the mission staff at Yirrkala were given an eradication course of treatment similar to that given on Elcho Island. This treatment was carried out between 5-18 June 1968. At that time Sister Dorothy Broadbent was in charge with Sister Robyn Madeley helping her. Sister Judith Layton was loaned from Milingimbi while the Department of Health sent Sisters Margaret Cook and Christine Travers. Dr David Rollo Cooke, a 1966 graduate who arrived in Darwin late in January 1968, was given overall medical responsibility for the treatment of the patients but was not stationed at either Elcho Island or Yirrkala.

By the time the last quarantine was lifted on 12 August 1968 there had been 285 cases at Elcho Island and 63 at Yirrkala. Of these, 28 from Elcho Island and 10 from Yirrkala
were identified as faecal carriers and were treated in Darwin hospital until clear. The two early deaths had most likely been due to typhoid.

During the latter half of 1969 typhoid reappeared at Bagot. Two women were admitted to Darwin Hospital, one of whom died. A mass survey of blood specimens revealed two carriers of the disease. Under the direction of Dr WC Ramsay who was relieving as Director at the time, all people who had been at Bagot and returned to their homes at missions and settlements were included in the survey and a further two people were found in a carrier state.(65)

Disease control cannot be delegated to communities. A high standard of health is dependent on a high standard of hygiene. Self-inflicted illness, and overindulgence in both food and alcohol present problems that can be handled within communities but not so with the epidemic diseases.

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Post-poliomyelitis patient from Yuendumu in 1963. Mild cases were not always reported by Aborigines (photo: J Ellis)

Dr Geoffrey Wilson (centre) was appointed in charge of tuberculosis control 1964. On survey at Milkingimbi in 1965 with Jim Goodwin (left) and a radiographer (unknown). The white haired man in Jawa, the senior man at Milkingimbi (Dept of Health)
Dr Hilary Roche (right), Director of Tuberculosis, Canberra on an official visit to Port Keats Mission in July 1951. Others L-R: Fr Richard Docherty, founder of the mission, pilot Harry Moss, Mrs Roche and Fr J Flynn (photo: R Brock)
CHAPTER TWENTY

MISSIONS AND SETTLEMENTS: THE TOP END

Tobacco Ration for Aborigines

The health of the Aboriginal people was much influenced by government policy and the failure of the Director General of Health to take overall responsibility or to issue guidelines on safe health practices. When the contentious issue of a tobacco ration for Aborigines was raised Dr Metcalfe was silent.

Mr Frank Moy was Director of Native Affairs from late 1946 until the appointment of Mr Harry Giese in July 1954. It was a difficult task at any time and without the support of the Administrator it was an even more thankless one. The one area in which the Administrator, Mr AR Driver, gave support was the issue of plug tobacco to Aborigines as part of their rations. It had long been government policy to issue tobacco and also to use it as part payment for services. Problems arose with the missionaries. The Catholics raised no objections, the Methodists did not like it but did not dispute the issue, while the staff of the Church Missionary Society at Oenpelli, Angurugu and Roper River took a firm stand and refused to issue it. Mr AR Driver gave a directive to the missions to issue plug tobacco or have their licences to conduct the missions revoked. A compromise was reached in Canberra in discussion with Mr CR Lambert who agreed that tobacco be made available for sale in canteens instead of being included in rations. Children were not to have tobacco. Six mission families resigned, five from Oenpelli and one from Angurugu, rather than modify what they considered morally wrong. Oenpelli was stripped of staff and it took some time to replace them.

By the mid-1950s two young men from Elcho Island, who had been in Darwin and acquired a liking for cigarette smoking, both died in Darwin Hospital from lung cancer. By the late 1950s plug tobacco was being sold in canteens on government settlements where it was gradually displaced by cigarettes. The issue of plug tobacco had largely ceased but tobacco, in the form of cigarettes, had become a part of Aboriginal life. Time and more advanced medical knowledge later revealed the role of cigarettes in lung cancer and coronary artery disease but by then it was too late; most of the population were heavy smokers.

Subsidies for Nurses on Missions

Government subsidies for trained nurses and qualified school teachers working on church missions had been introduced by Mr Chinnery just before the war. These subsidies lapsed during the war but were reactivated about 1949 possibly in response to the urgent need during the measles epidemics. These were the only positions subsidised at that time; others were given financial assistance later. The missions were encouraged to push ahead with recruiting staff but it was still mission responsibility to provide a medical clinic and equipment. Postwar clinics covered a broad spectrum. Angurugu built a large airy wooden building from locally milled timber. The Methodists at Yirrkala, Elcho Island, Milimgimbi and Goulburn Island built one room clinics with a bed for examining patients. Milimgimbi's prewar clinic had been destroyed by enemy bombs. A few years later these first clinics were replaced by more spacious buildings but none were designed by medical
people and all fell short of even basic needs. The Catholic missions at Port Keats and Bathurst Island used ex-army Sydney Williams huts which had space but were immensely hot.

Paul Hasluck’s Policies

The Labor Government was replaced by a Liberal Government in December 1949 and Mr Paul Hasluck became the Minister responsible for a new Department of Territories. This Department also included Papua New Guinea and although Mr Hasluck endeavoured to introduce similar policies for the development of the indigenous people in both territories he did not have the health services in the Northern Territory in his portfolio. It was Mr Hasluck who asked the Administrator, Mr FJS Wise, to convene a conference with the missionaries.

The first Missions Administration Conference was held in Darwin from 7 to 11 December 1953. There had been a smaller conference in 1948 to discuss government subsidies but the 1953 meeting was much larger, with key representatives from all the mission organisations. Participants included Mr Reg S Leydin, Acting Administrator; Mr Reg K McCaffery, Acting Director of Native Affairs; Mr Lyle R Newby from the Commonwealth Office of Education, then in charge of Aboriginal schooling; Mr EC Evans and Mr R Marsh, acting as secretaries; Bishop JP O’Loughlin and Fr John Cosgrove representing the Catholics; Revs Arthur F Ellemor and AH Ellison, the Methodists; Rev FW Albrecht and RB Reuther, the Lutherans; Mr Colin Gilchrist and Rev JB Montgomerie, the Church Missionary Society; Rev Tom J Fleming, the Baptists and Miss Amelia Shankleton from the Aborigines Inland Mission.

Much of the discussion centred around the government’s policy for assimilation of the Aborigines and the Wards Employment Act. A new Government Act was being introduced to establish a Welfare Branch to replace the previous Native Affairs Branch of the Northern Territory Administration. Aborigines were to be called wards in line with all other persons being protected by the government. Although the term wards was used officially, it was never popular. The Rev Arthur Ellemor expressed concern that the new Act did not provide for land rights for the Aborigines - he considered the reserves were a legal fiction(2).

Dr Stephen Watsford presented a paper on ‘Health Problems in Relation to FullBloods in the Northern Territory’ which mentioned the threat of both tuberculosis and leprosy along with the dangers of congregating people together without adequate hygiene. Dr Cecil Cook followed with a paper on hygiene and stressed the need to provide training for Aborigines who would supervise and implement hygiene services in their own communities. Dr Watsford added that a fourth Health Inspector was due soon and that this would allow one Health Inspector to be made available for a training program (see Chapter 21). Following these discussions the conference recorded that, ‘it is recognised that some of the barriers against the enjoyment of all the privileges of citizenship today are not legal, but social barriers’(3).

Certain personal habits made any thought of full integration of hospital patients untenable at that time, but facilities such as X-ray and operating theatres were always shared by all. People in the desert areas had never had water in which to wash but given perfumed soap they used it with much vigour. However, they liked other aromas also and the author recalls the people at Hooker Creek (Lajamanu) in 1954 greasing their bodies with rancid canned butter that had been thrown out. The practice of completely extracting all buttermilk from canned butter evolved in the mid-1950s; prior to that much canned butter became putrid. On another occasion at Yuendumu a large bottle of Methyl salicylate
liniment was dropped and broken but none of it was wasted; it was scraped off the floor, glass and all, and rubbed into the skin of everyone in sight. For Aborigines to be assimilated - to use the term of the day - change was regarded as obligatory but it did not happen quickly.

The conference discussed such matters as the ratio of school teachers to students. At that time at Milingimbi Miss Beulah Lowe was teaching two hundred, one class in the morning and another class in the afternoon. She set out to learn the local Gubabuingu language and went on to become a distinguished linguist. There were few teachers anywhere in 1953; the government planned to change that but first they needed school rooms and houses for staff. On the medical side Dr Watsford was asked to recommend a ratio of trained nurses to population and suggested one per three hundred. This had to be revised later as one Sister working alone was never able to have a day off and the many broken nights took a toll on her stamina. Most participants returned from the conference with their goals reviewed and a greater appreciation that they were not working in isolation.

Following his appointment as Director of Health late in 1950, Dr Stephen Watsford travelled widely by air with the Aerial Medical Service to gauge the health of the Aborigines and to assess the need for services. In a short time Dr Watsford and Mr Reg McCaffery, Acting Director of Native Affairs, were in agreement that the health services to Aborigines and others in the outback should be under the control of the Department of Health. In his first Annual Report (1949-1953) Mr Frank Wise recorded that the Department of Health had agreed to staff and administer all hospitals for Aborigines(4). Bagot Hospital had already been taken over and others would be transferred as soon as was practical. Delissaville hospital, a Sydney Williams hut with a couple of beds, was taken over before Christmas 1953 but that was the last before Dr Metcalfe intervened.

Sister Ellen Kettle, who had spent eighteen months at Yuendumu, asked for a coastal posting and was transferred to Delissaville (Belyuen) in August 1953. Dr Watsford had applied to the Public Service Board for a position for a Survey Sister to do mobile work and this had been refused; there was no precedent anywhere in Australia. Sister Kettle contracted hepatitis at Delissaville and found, on her return to Darwin after eighteen weeks convalescence, she had become Department of Health staff. Delissaville was left without a trained nurse and Sister Kettle unofficially started work in April 1954 as the first Survey Sister. Three years later, when the value of the new work had been amply demonstrated, a position was created; the Delissaville position was then passed back to the Welfare Branch.

Register of Wards (Aborigines)

One of the first steps taken by Mr Giese as the new Director of Welfare was to record all Aborigines and compile a Register of Wards. This was the beginning of excellent records of people who, until then, had not been recorded by the Registrar of Births and Deaths.

In the early 1950s many problems arose due to lack of staff accommodation and working facilities. School teachers were appointed to several settlements before there were schools or houses and, because they were paid a higher salary than everyone else, they demanded the limited resources. As they were not responsible to the Superintendents of settlements, they did much as they pleased. It may be said that school teachers themselves precipitated the takeover of education by the Welfare Branch. A new classification of Superintendent was introduced; younger men with a higher level of education in a higher salary range were appointed. Many experienced earlier Superintendents became managers, a move that brought with it much hurt among those who had worked so hard. At the same time Mr Giese took action to ensure the hospitals stayed under his control. Dr Watsford went
to Sydney in 1955 to do a Diploma in Public Health and on his return at the end of the year he was made the surgeon/Medical Superintendent at Alice Springs. This action by Dr Metcalfe removed the one strong personality with the vision to develop a health service to the Aborigines. Dr Humphry, who replaced him as Director of Health, was a gentle personality who did not pursue the contentious issue of which government department should provide the nursing staff.

A couple of years after his appointment as Director of Welfare, Mr HC Giese prepared a submission to the Public Service Board requesting an establishment of doctors and a nursing administrator in addition to extra nursing staff. He had good reason to consider the existing service inadequate as the Medical Survey doctors were repeatedly withdrawn from field work to staff the four district hospitals. The Department of Health claimed it was already providing the service and an alternative service was not desirable. Nonetheless two health services did develop. By 1968 there were seventy nursing Sisters in the outback all working under non-medical supervision. Some of these were on church missions but it was the Welfare Branch that provided subsidies for the salaries of nursing staff and grants with which to build hospitals. There was no nursing administration in the outback until 1973.

Sister Kettle, as a Survey Sister, visited the Welfare settlements of Hooker Creek, Borroloola, Phillip Creek and the Bungalow at Alice Springs along with the cattle stations in the Victoria River area in 1955. In 1956 she visited all the cattle stations on the Barkly Tablelands and in the vicinity of the Gulf of Carpentaria. A major problem everywhere was malnourished infants some of whom had obvious vitamin deficiencies. Small children were seen with cracks at the corners of their mouths (riboflavin deficiency) and early signs of scurvy. A three year old child at Brunette Downs had marked swelling over her right femur that the Aborigines said just happened - the child had not fallen or received other injury but she screamed when handled. At Mt Isa Hospital she was diagnosed as suffering from ascorbic acid deficiency and responded well to extra Vitamin C.

During her time on the Barkly Tablelands Sister Kettle taught the white women how to use Pentavite, a liquid vitamin preparation. It could be added to milk or other foods for artificially fed infants and others in need. Oranges as a source of Vitamin C were seldom available and the cost of airfreight was prohibitive. Many cattle stations had orange trees but the fruit was destroyed by sucking moths.

The nutritional status of Aborigines was always a bone of contention. There had been considerable discussion before the war. Dr Cook had written much about shortfalls on missions but the food served to the inmates of the homes for mixed race children under his care left much to be desired. It was Dr Cook who first recommended the controlled feeding of Aborigines; this had been one of his goals in establishing the settlement at Bagot. He envisaged communal feeding as a means of control of people at the same time as being a step towards civilisation. Mr Harry Giese espoused the concept of mass feeding people and more is written about that later.

**Arnhem Land Scientific Expedition**

In 1948 the American-Australian Scientific Expedition to Arnhem Land carried out an extensive study of Aborigines on Groote Eylandt, Yirrkala and Oenpelli(5). Dr Brian Billington was leader of the nutritional research accompanied by Miss Margaret McArthur from the Institute of Anatomy, Canberra. A dentist with the Department of Health, Mr JEH Moody, joined the expedition in Darwin. Their published report provided interesting background material. However, by the time it was published and available, it
had been replaced as a working document by the dietary findings of Miss Winifred Wilson and the many excellent reports by the Department of Health Survey Medical Officers. The dental report remained relevant and is mentioned again in the dental section of this history.

**Nutritional Survey: Rations for Aborigines**

During August-October 1951 a survey of the foods being provided to Aborigines was made by Miss Winifred Wilson, a nutritionist from the Australian Institute of Anatomy in Canberra. This nutrition section was later transferred to the Commonwealth Department of Health in Canberra. Miss Wilson visited a cross-section of Welfare settlements, church missions of each denomination and cattle stations both large and small. At that time most missions were receiving the Government’s child endowment. There was considerable variation in the availability of food. For the most part people on cattle stations ate a great deal of beef along with bread or damper. There was a shortage of beef on most settlements and missions but the coastal missions did catch and use fish. In conclusion Miss Wilson considered most diets to be adequate in calories but deficient in Vitamin C, calcium and Vitamin A content(6). In spite of the apparent deficiency in Vitamin A, no clinical signs of a deficiency have been observed in Aborigines.

The main aim of the dietary survey was to provide a safe guide for food rations that would ensure adequate amounts of essential elements. Miss Denise Radford was appointed in December 1953 as the first dietitian with the Department of Health. She was followed in July 1955 by Miss Mary Eagle. Both of these women visited Welfare settlements and compiled menus as a guide for settlement Superintendents who were endeavouring to provide balanced and interesting foods. Many of their recommendations for rabbit, mutton and poultry dishes were quite unrealistic and so were the elaborate desserts that had never been a part of Aboriginal culture. Miss Margaret Corden replaced these women in 1956 and she endeavoured to provide a simple but sound guide to rations as well as recommendations for cooking meat and vegetables in bulk.

The church missions had always grown fruit and vegetables but Northern Australia did not always lend itself to agricultural pursuits and there was no one to provide guidance. Some men with the Welfare Branch were sound gardeners and many excellent gardens were established. It was policy for settlements and missions to be largely self-supporting in local food production. Possibly the greatest drawback to progress was the practice of transferring Superintendents from one settlement to another at frequent intervals; the sound work started by one man would be neglected by the next. Very few indigenous people, being nomadic from earlier necessity, ever achieved the degree of interest or enthusiasm necessary to learn and carry on where the white men left off; as soon as there was no supportive supervision everything slipped back.

Margaret Corden soon discovered there were foods Aborigines disliked and among these were dried peas (blue boiler peas) and dehydrated potatoes. In the 1950s it was almost impossible to provide fresh potatoes as these came by ship from Western Australia and were often in a putrid condition on arrival in Darwin. Coastal missionaries seldom enjoyed the luxury of fresh potatoes so did their best to grow sweet potatoes. In Canberra Dr Cook was most displeased with the more simple dietary guide; the dried peas had always ensured a supply of Vitamin C and he refused to believe these were despised and thrown away. Years later he said the Aborigines should have been taught to soak and sprout the peas before cooking but he certainly never mentioned that in any of his writings. In the 1957 Ration Scale issued for the guidance of managers of missions, government institutions and cattle stations, Dr Cook had aimed to
inculcate in the native a diversified range of dietary wants and tastes to habituate him to the selection of a variety of diets, each, in itself, adequate and balanced(7).

Dr Cook was not consistent. Margaret Corden listed baking powder among the recommended rations; Dr Cook said it had no nutritive value to which Miss Corden replied that it made damper more palatable. The point was taken by Mr Giese and included in the rations.

Some of the early Welfare superintendents had recommended the establishment of kitchens and dining rooms. This became Welfare policy and had support in principle from Dr Cook in Canberra. Margaret Corden warned Mr Giese that it would not work and would be destructive to Aboriginal family life, but at that time he did not agree. Massive kitchens and dining rooms were built but many circumstances made them less than desirable. It was difficult to recruit cooks who wanted to work in the outback and those who did wanted to work within normal public service hours or be paid overtime. Cutlery disappeared from dining rooms at an amazing rate; school children forbidden to eat their stew with their fingers would end up tipping it into the pig bins. The amount of waste was incredible. Due to the large numbers being served, the dining rooms were cleared between sittings and anyone not finished just threw the remaining food in the bin. In all fairness some dining rooms were better managed than others but cooks came and went and individual policies were introduced by each new cook.

Pressure was brought to bear on the church missions to fall into line with Welfare policies on communal feeding programs but they firmly resisted. A few workers on missions were given prepared meals and most school children received a cooked midday meal. The feeding of babies was a separate undertaking that followed a little later.

Most communal feeding programs continued until 1973 when the new Labor Government wrought dramatic changes in Welfare policy. From there on most non-workers on settlements received unemployment benefits or other government allowances and large stores were steadily replaced by supermarkets. The people had acquired spending power and they bought what they liked rather than what was good and nourishing. New and serious health problems have since arisen such as obesity, high blood pressure and diabetes. White people are seen to contradict each other; shop keepers stock what is popular, be it sweet biscuits, lollies, soft drinks, while community health nursing staff tell Aboriginal people these things are not good for them. It is a complex problem and the end results are usually less than desirable for healthy living. Added to this is the changed life style. Previously Aborigines hunted for food and the exercise kept them slim and fit; now they collect their pension cheque and visit the store and life has lost much of its purpose. In Central Australia, guns, vehicles and overpopulation have denuded the country so that a nomadic existence is no longer possible.

Suitable Foods for Infants

The care and feeding of babies was largely a separate undertaking. In 1952, at Yuendumu, Sister Kettle noted many undernourished infants and introduced a feeding program at the hospital. This was limited to the needy and remained manageable. At that time there was no documented information on Aboriginal infants but it was soon observed that the only soft foods available in desert areas were witchetty grubs and then only a limited supply. At this time Professor AP Elkin, in Sydney, was teaching prospective missionaries and welfare officers that all Aboriginal mothers could adequately breast feed their babies. There was no sound basis for this opinion. With the regular weighing of infants it was soon obvious that some were not thriving due to an inadequate supply of
breast milk. Underfed babies could be readily identified by their fretfulness and the
distress of their mothers who kept putting them to the breast to pacify them. Certain
women had been classified as bad mothers when the problem was inadequate lactation.

Birth dates are essential in all infant health work. The illiterate mothers at Yuendumu and
elsewhere had little concept of years let alone birth dates but the missionaries had been
recording births and this was invaluable. Settlement Superintendents registered all births
but they did not all retain a record at the local level. When Dr Richard Brock and his wife
Betty (a trained nurse) undertook the first medical survey at Yuendumu in June 1952, they
started individual medical records for everyone. Ages were estimated for all those whose
birth dates were unknown. With children, dentition was the best guide to age.

No one has ever reported seeing Aboriginal mothers premasticate food for their babies. A
suggestion put to the mothers at Yuendumu that their babies might need more food
brought an emphatic denial that babies could not eat food before they had teeth. Dentition
ranged between six to twelve months so that criterion was unsound. When the mothers of
needy babies were shown soft foods that did not require chewing, some reluctantly agreed
to try them. The first foods tried were spat out and this was seen as proof the babies did
not need it. To get rid of the unwanted food, the mothers ate it and liked it and a new
problem was introduced. In 1952 most women from the desert areas were genuinely
hungry and it became essential to cook extra food so that the Aboriginal staff could have
some of what they were cooking along with the mothers of the babies being fed. This
overcame resentment and led to cooperation in establishing undernourished infants on
extra foods.

Sister Hannah’s Infant Weight Graph

In August 1953 Sister Rhoda Hannah replaced Sister Kettle at Yuendumu. Sister Betty
Ashworth was already there, having arrived in June 1952. Although both Sisters had
obtained Infant Health Certificates, it was Sister Hannah who took a special interest in the
growth pattern of Aboriginal babies. There were no weight graphs available for recording
infant weights so she endeavoured to make her own based on the recorded weights of
Yuendumu infants. Early in 1955 she sent copies of three years records to Dr Robert W
Woodbury, PhD, at the Children’s Bureau, United States Department of Labour, who
processed her material. From this, Sister Hannah prepared an infant weight graph for use
at Yuendumu. Copies were sent to the Department of Health to ensure that what she was
doing did not cut across policies for standardised record keeping. The weight curve for
Yuendumu revealed a low birth weight, followed by rapid growth in the first four months
of life, then a tapering off in weight gain until, by twelve months of age, the babies were
about four pounds (2 kilograms) below their white counterparts.

Aboriginal Infant Health Clinics

Sister Hannah's graph proved a catalyst for the Department of Health which had not
considered infant health clinics for Aborigines until then. Little was done until Dr Dick
Webb was transferred to Darwin at the end of 1956 and took a special interest in child
health. A graph to record the weights of Aboriginal infants was prepared during 1957 and
was ready for use early in 1958. The graph and growth curve selected was that developed
by Dr Fred W Clements in 1933 and based on the weights of Sydney children. Critics
have said that Aboriginal babies were compared with well-fed white infants but this was
not so. The graph for white infants was compiled during the depression years when many
children did not have enough to eat. The revised graph introduced in 1970 was another
matter altogether.
Yirrkala

Early in 1958 Sister Kettle was asked to introduce infant health clinics, with standard records, on all church missions and Welfare settlements. Mr Giese protested that this was not necessary on his settlements as all the Sisters were well qualified and already conducting infant health clinics. Dr Webb knew that was wishful thinking as many Welfare Sisters had only one certificate and were employed in conjunction with their husbands. The situation on the missions was quite different; the Sisters were usually single women who had gained the necessary qualifications before being accepted for mission work. The infant health work began at Yirrkala mission on 11 April 1958 where Sister Audrey Fielding already had lists of baby weights covering several years. Graphs were commenced for all infants under two years of age. As the missions had well-kept birth registers a copy was made of all births over the previous five years back to 1953. From this material a register of births was established in the Department of Health. Deaths of infants were recorded against the birth record which enabled a quick assessment of the mortality occurring in any one place. Following the establishment of the Register of Wards, the Welfare Branch also recorded births and deaths, but this information was not available to the department of Health.

Elcho Island

From Yirrkala Sister Kettle was flown to Elcho Island (Galiwinku) by Rev Harold Shepherdson in his small aircraft. Rev Shepherdson, best known as Sheppy, had walked over much of central and eastern Arnhem Land hinterland to talk with the Aborigines and to select sites for airstrips. Picks, shovels and axes were issued to groups of people to clear and maintain airstrips so that Sheppy could visit to teach them the Christian faith and to trade in kind. No one handled money as it was not practical, but the people traded crocodile skins and artefacts in exchange for goods they requested from the mission store. All transactions were labelled and recorded and the goods were delivered on the next visit in three weeks. Twenty years later much was said and written about an outstations movement, people returning to their homeland, when in fact they had not left it. Apart from those who were sick and required medical care, Sheppy did not encourage people to go to the mission. Instead he went to them. In fact he established outstations from the 1940s onwards. Sheppy recorded names and all births and deaths so that when the Register of Wards was compiled in 1956 he already had a record of most of the people. One of the nursing staff from Elcho Island would frequently accompany Sheppy on his flights; primary and secondary yaws in young children was often seen so penicillin was always carried. In February 1960 when Sister Kettle visited Arnhem Bay camp with Sheppy she treated a two year old child who had primary yaws sores scattered over his face and lower abdomen and a large cauliflower-type ulcer in the midline just below his ribs (see photo)(8). These children could only receive one large injection of oily penicillin with a possible second injection three weeks later. On the surface the results were good.

In April 1958 there were two Sisters at Elcho Island, Cathie Langdon (Mrs G Sweeney) and Ruth Harrigan (Mrs R Beazley). Rev Shepherdson was milling timber, mostly cypress pine, and from this he built a small two-ward hospital. Little thought had been given to sanitation and it was a difficult building to keep clean. With inadequate buildings there was a real risk of the hospital becoming a focus of infection, particularly during epidemics of gastroenteritis. The Department of Health had few health inspectors; they came a couple of years later when attempts were then made to improve waste disposal and drainage and to eradicate fly breeding. When money became available through the Welfare Branch for hospitals, Elcho Island was seen as having a hospital. In 1964 a more
adequate hospital was built on the cliff's overlooking the sea and included a spacious home for the nursing staff. Finance came from the Box Hill Methodist Church in Victoria which also sent a working party to do the building. A much more elaborate hospital was built in 1979 by government financed contractors.

At the time of Sister Kettle's first visit in 1958, Sister Langdon had already established infant clinics and had weights recorded in books. Sister Kettle saw and examined 89 infants out of 129 on the birth register. Many were on the mainland with their parents - there was much movement back and forth from the mainland. These infants were markedly bigger and stronger than those at Yirrkala and also those at Milingimbi (which was visited next). Whereas the average growth curves for the babies at Yirrkala and Milingimbi started to fall below that for their white Australian counterparts (1933 graph) at four months of age, the babies at Elcho Island maintained good growth until seven months. The reason for this difference was not immediately apparent unless it stemmed from the better nutrition of the mothers(9). Rev Shepherdson always grew extensive crops of fruit and vegetables, fishing was excellent and only wholemeal flour was used for bread, damper and porridge.

Elcho Island experienced a rapid increase in the number of births. During 1958 in a population of approximately 600 people there were 31 births, a rate of 51 per 1000. By 1978 the birth rate was nearer to 60 per 1000. To keep the birth rate in perspective there were few old people. During a Mantoux survey of 316 people in 1957 only 16, or 5 per cent were recorded as over 50 years.

**Milingimbi**

Rev Harold Shepherdson flew Sister Kettle from Elcho Island to Milingimbi on Friday 26 April 1958. Rev Edgar Wells was the Superintendent and Sister Jessie Adele Smith was the only trained nurse at the hospital. Sister Smith was always a superb cook and the visitor was treated to a dish of crab and mushrooms, both locally produced. The range of food available to staff on the coastal missions was limited. There was very little fresh beef and never any mutton. Fish was plentiful but apart from that, Camp Pie and other canned meats were a part of the daily diet.

Milingimbi mission had extensive gardens and was growing peanuts for the people and sorghum for the pigs and poultry. A considerable dairy herd was being milked each morning and the milk issued to children of all ages. One man was of the opinion that the children were stronger and could walk further since they had been receiving milk. Owing to the cost of equipment and facilities the mission was not able to meet the high standards demanded by the Health Inspectors and the dairy was eventually closed. About 1960, many of the cattle were transferred to Murwangi, south of Ramingining, to breed up a herd for beef production.

The RAAF had occupied Milingimbi during the war and the mission had been bombed. An unplained galvanised iron hut with iron shutters for windows served as a clinic until May 1954 when a square building comprising three rooms was opened. Sister Olive Peake was appointed late in 1945 and on 25 January 1946 she recorded a medical visit by Major Smithers from 107 AGH then stationed at Berrimah near Darwin(10).

Scabies had been introduced to Milingimbi during the war and by 1947 it was widespread. Many children had multiple sores due to scratching the scabies. An attempt was made to treat the condition with fly spray and by boiling all clothing and blankets. The standard treatment for scabies was then sulphur in vaseline or some other greasy base. This ointment had the advantage of healing infected sores, but it went out of vogue and was
replaced by Benzyl Benzoate which was easier to apply. The latter stung the children's sores and caused much distress.

Sister Olive Peake commenced the training of two illiterate Aboriginal women as nursing assistants. On 10 June 1946 she conducted an examination and reported favourably on their progress. When she left Milingimbi to be married, a formal record of training ceased until commenced again by Sister Jessie Smith in 1954.

Sister Betty Knowles replaced Sister Peake at Milingimbi on 1 December 1946. She recorded dealing with the casualties from many fights one of whom was a woman with both forearms broken. The woman was flown to Darwin. The Gubabuingu people, who claimed Milingimbi as their land, did not appreciate other tribal groups visiting the mission. A few Burara people, some suffering from leprosy, did come in but they did not stay long for fear of traditional enemies. Sister Knowles treated many children with Acetylarsan for yaws. In January 1951 Dr AH Humphry ordered penicillin for a case of yaws that was not responding, but apart from that Acetylarsan seems to have been the standard treatment until 1953.

On Wednesday 25 September 1949 Sister Knowles recorded that a 'child has measles, rash out on second day'. It was the beginning of the epidemic at Milingimbi (see Chapter 18) and extended over about six weeks. Patients were nursed on the ground under the huge tamarind trees. All told, one hundred and sixty three were affected plus one staff child. One death was recorded from measles, but during December that year the children started coughing and on the 27th this was diagnosed as whooping cough. Over one hundred children were affected and six deaths followed. On 31 January a child reported to the clinic with a swollen face and within days it was obvious that mumps had broken out. This was followed in July 1950 by chicken pox when Mrs Ann Wells, the wife of the Superintendent and a registered nurse, was doing the medical work(11).

Diarrhoea among infants had been mentioned a few times during the 1940s but in March 1952 it was widespread and serious. Few infants were sent to Darwin Hospital but even when they were, the causative organisms were seldom isolated and identified. The water supply at Milingimbi was from the Macassan wells that were surrounded and completely shaded by tamarind trees. As the population increased the water was seldom adequate and the wells were contaminated by the run-off from the village areas. The island of Milingimbi is low and without hills and king tides can cause some areas to be inundated by the sea. During prolonged droughts the water in the wells often became saline and useless. None of the church missions had boring equipment and relied on the Government to meet this need. In the meantime all the staff houses had rainwater tanks that were cleaned each year before the wet season. This water was used for the preparation of infant milk feedings.

When Dr Richard Brock visited Milingimbi for the initial medical survey in May 1952, Sister Ann Wells was still conducting the medical clinic. Rev Edgar Wells estimated 500 people on the island and the adjacent mainland. Some stayed permanently while others came and went again. Dr Brock examined 302 people, 131 of whom were under 14 years of age. Miss Beulah Lowe, the first school teacher, arrived in December 1950 and had 87 children in regular attendance at school. Miss Lowe had the use of one of the older staff houses for a school until a new building was erected further inland. In December 1951 Mr EC Evans from the Welfare Branch mentioned that Miss Lowe had learned the Gubabuingu language and was teaching in the local dialect as well as English. A few years later, when there were more teachers, Miss Lowe became the first full-time linguist in the Northern Territory. It was Methodist Mission policy for all staff to learn the dialect
and Beulah Lowe prepared the staff lessons but her main work was Bible translation. An understanding of the dialect transformed communication.

Dr Brock diagnosed four new cases of leprosy at Milingimbi. The Aborigines brought these patients to the doctor after he had taken time to explain the disease to the men who comprised the town council. A patient with tuberculosis was started on treatment until he could go to Darwin for a chest X-ray. Dr Brock carried a microscope with him and did his own pathology on the job. One child was treated for secondary yaws and two for anaemia. Hookworm examination revealed that 44 per cent of the population were infested. He did not mention scabies so the earlier crude treatment with a fly spray must have been effective.

Houses, or rather small huts, had been built for the Aborigines. The walls were of armchess (ex RAAF) attached to cypress pine frames and covered with sisoa craft. The material was not very durable and highlighted problems in housing design. Both mosquitoes and sandflies were rampant. The missionaries had tried flywiring for protection but within months the night moisture blowing in from the sea had rusted and ruined the flywiring. Staff slept under mosquito nets and used fire buckets of cypress pine sawdust in the evenings. The Aborigines retired into their new huts and closed both the door and the one push-out window. The doctor had diagnosed one man with pulmonary tuberculosis and the risk was great. New mud brick huts followed and most of these had a verandah for outdoor sleeping. Army disposal mosquito nets were introduced and became very popular, both on the mission and in the Arnhem Land bush.

A retired Englishman, Dr Joseph L Smith spent a year at Milingimbi from December 1952 to 31 December 1953, then went to Yirrkala mission for a further year. He treated the sick but did not branch out into public health or preventive medicine. Sister Jessie Smith who was appointed to Milingimbi came from Victoria by train and bus to Darwin. She left Darwin in the mission launch Larrpan on Christmas Day 1953 along with Rev Gordon Symons and his family who were travelling to Yirrkala. There was no established aerial mail service at that time; McRobertson Miller Airways started a fortnightly service to the Arnhem Land missions in March 1954.

Sister Smith commenced work on 1 January 1954 and promptly recruited an Aboriginal assistant to train in nursing procedures. Bonga was illiterate but keen and before long she had progressed from cleaning duties into simple patient care such as dressings and bandaging. She continued as a nurse until 1966 when her health failed due to a heart condition and at that time her daughter Bilin replaced her. Sister Smith trained many Aboriginal women, some of whom remained with her for up to twenty or more years.

A new hospital of three rooms was occupied in May 1954. It was a square building of cypress pine timber and fibrocecm walls. Six beds could be fitted in. A small lean-to kitchen with a wood fire stove was semidetached. The following year, with the arrival of more mission staff, Jess Smith and Beulah Lowe lived in the hospital. By 1958 the elevated house adjoining the hospital block had become the home of single women missionaries and the hospital was restored to its intended role. In the meantime patients were cared for in a makeshift lean-to.

The Milingimbi log books record several children having received penicillin injections for secondary yaws. These patients came from central Arnhem Land and once cured they returned to the bush. On 9 September 1955 a twelve year old lad arrived from Cape Stewart, an area known to have a high prevalence of leprosy. He was abjectly miserable with secondary yaws and already had advanced signs of leprosy for which he was later diagnosed. Burara people from Cape Stewart and the Blyth River area frequently visited
Milingimbi but the indigenous people of Milingimbi did not encourage them to stay. Two years later, when Maningrida was started, the Burara people made that their home.

Sister Smith has recorded a tragedy that was never understood by the staff in spite of Beulah Lowe's knowledge of the language. On 1 August 1955 wailing, of the type that signifies death, arose in the camp. They were told that a woman known to be pregnant was dead. Sister Smith was startled as she had seen the woman in the morning and she appeared normal. At the time of death the woman was alive and fit, but evil magic had been worked against her so she would die. To the Aborigines she was dead from that day. A week later the woman came into labour and delivered a stillborn infant but apart from that she appeared well. Ten days later the dead infant was buried and the mother became difficult and uncooperative. About 4 pm the same day she was brought to the hospital very ill and with copious mucous pouring from her mouth. Her temperature rose and her pulse became rapid and in spite of a rectal drip to replace her fluid loss she died five hours later. After the funeral three days later, the woman's son asked Beulah Lowe to write a letter to relations on Elcho Island in which he stated his mother died three weeks ago; Beulah Lowe said 'you mean three days ago', but he insisted it was three weeks, the day on which they had wailed for her(12). About a week after this death, women came to the dispensary saying another woman had given birth to a spirit and they had stones to show as evidence. Sister Smith had the second woman brought to the clinic where examination revealed a blood loss suggestive of a miscarriage; she recovered without complications.

Also in August 1955 a young man had a reaction to the Avlosulphone tablets given for leprosy and was seriously ill for a few weeks (exfoliative dermatitis). The skin peeled from his face and body. Dr Humphry visited after this to examine other people suspected of developing leprosy. He was anxious to continue to treat people at home because once they were admitted to the leprosy hospital he could not discharge them again without permission from Canberra. Sister Smith had experienced great difficulty in keeping dressings on the feet of leprosy patients and it was she who had canvas boots which were both washable and practical.

Nursing staff in the bush coped with many patients, who, in later years, would have been evacuated to a district hospital. As mentioned elsewhere there was no direct contact by radio with a doctor until early 1958. All medical messages were sent as telegrams which were (unavoidably) inadequate as the doctor could not ask questions. In October 1955 a young man was stung just above the ankle by a stingray. A message was sent to the doctor, but Sister Smith assisted by Beulah Lowe had to cope in a clinic without adequate facilities. He was given Pethedine for the pain and Novacaine was injected around the site to allow Sister Smith to cut out a 6.35 centimetre serrated spike. The patient was ill for several days. In November that year a man was returned home from the leprosy hospital where he had been for many years. At home he was wanted for a murder the community had neither forgotten nor forgiven and within hours of his arrival he suffered four deep head wounds which Sister Smith had to suture - all suturing was done with No. 40 white sewing cotton that was boiled before use.

Early in January a small girl was brought to the clinic haemorrhaging from one ear. Her medical record showed a mastoid condition that had not been operated on as the child had a rheumatic heart condition. Medical advice was received by telegram but a few hours later the child was dead. One fourteen year old girl, Buyumin, diagnosed as having tuberculous abdominal glands, was left at Milingimbi. She had marked ascites and oedematous feet and legs and it was considered a waste of time to take her to Darwin. Sister Smith provided good nursing care in the humble lean-to near the hospital. A few weeks later a tuberculous male patient returned from Darwin with PAS and INAH tablets and Sister Smith promptly asked for the same medication for Buyumin. The response to
this medication was dramatic and in a few weeks Buyumin was working as a nursing assistant, a role she filled for years before joining the Education Department. Other tuberculous patients returned from Darwin and by 1958 there were ten people receiving daily PAS and INAH tablets. On 15 August that year the tuberculosis specialist Dr Hilary Roche visited to review the patients and to advise the nursing staff.

Sister Kettle visited Milingimbi for a few days from 23 April 1958. Sister Eva Jones had just joined the staff at Milingimbi and this released Sister Smith to concentrate more on the child health problems. There were already excellent records of infant weights which were transferred to the individual weight graphs. Dr RC Webb had earlier asked Sister Smith to weigh and measure all school children and she maintained a record for several years. However these measurements were never utilised as Dr Webb had been transferred to London.

There were twins at Milingimbi. An Aboriginal woman Eva had given birth to one set in Darwin Hospital and Sister Smith was helping her with extra food. Another set of twins was brought in from the mainland bush at about two years of age the one mother having successfully reared both infants. This was possible as there was not the same fear or resentment toward twins in Arnhem Land as existed further inland.

The infants at Milingimbi tended to be smaller than their counterparts on Elcho Island. There were also several babies whose growth was slow in spite of the extra food and supervised feeding provided by Sister Smith. Over twenty years later when some of these infants were in turn mothers, Sister Smith found that the next generation of babies had the same problems. The first record of extra food for undernourished infants at Milingimbi was in 1948 and in 1958 Sister Smith was preparing three meals each day for the babies who never seemed to gain weight. These same babies usually looked unhappy and cried readily.

**Cassava Poisoning**

The Fijian missionaries with the Methodist Missions introduced cassava as a crop. Dr Cecil Cook was against it as he said it would lead to protein deficiency in the diet. However, the dietitian Margaret Cordon considered that as the people were eating much fish a little cassava would add needed calories. There was never an excess of cassava and most adults quickly learned how to prepare it and at what stage to eat it. They were already used to naturally occurring yams that required special preparation. Unfortunately, children occasionally stole cassava and a number of cases of cassava poisoning occurred. Yirrkala and Milingimbi were the places most affected. On 23 July 1949 at Milingimbi a group of children ate cassava untreated and one boy was ill for 24 hours. In spite of frequent warnings further poisonings did occur over the years and on 10 May 1958 a small girl was seriously affected. On arrival at the clinic her heart beat was 30 per minute; breathing was shallow and her skin cold and clammy. An hour later she started convulsing and her pupils were dilated. By 2 am next morning she appeared to be improving but her face was expressionless and she would not, or could not, speak. She could walk across a room but when asked to return, she walked backwards. She could not turn around. A few days later she was sent to Darwin Hospital where she remained for two months.

**Toadfish Poisoning**

Another case of food poisoning ended tragically. On 11 April 1959 a lad of fourteen years was brought to the clinic late in the afternoon; he appeared to be having a fit or to be
hysterical. He could not speak clearly and mouthed his words in a peculiar fashion. At first the people said that he had only eaten the school children's dinner but just before he died at 6.15 pm someone admitted he had eaten a toadfish. When Rev Edgar Wells asked the men why they had let the boy eat toadfish they replied that, 'he wanted to eat it'.

**Influenza in 1959**

An influenza epidemic widely known as Asian influenza swept Australia during 1959 and caused many deaths in all age groups. On 7 May 1959, before the arrival of Sister Judith Brockhurst, Sister Smith recorded 79 patients of whom she admitted eleven in her six bed hospital. The school teacher, Miss Forbes, closed the school and helped in the clinic. By the 8th they had 107 patients, 16 of them in the wards. On top of the clinic work they visited everyone in the village to ensure there was no one ill who had not reported. It was a nightmare experience with 315 patients. All staff members helped until they too became ill. Some patients died suddenly and unexpectedly, a feature of that epidemic being heart complications. On 23 May, 21 people were receiving injections of penicillin. All syringes had to be washed and boiled on a primus as there were no disposable syringes or long-acting penicillin. A total of 11 deaths were recorded.

As influenza was widespread it was not possible for the Department of Health to send assistance. The one Survey Sister, Ellen Kettle, was visiting cattle stations in the East Kimberleys when the epidemic struck that area. People sought help via the Wyndham Royal Flying Doctor Service base station and the usual report was that workers and others were just collapsing and could not walk. Sister Kettle rushed from one station to another assessing the sick and leaving instructions. Aspirin was used to control temperatures and all patients with excessively rapid pulses were ordered strict rest. The Aborigines could feel the rapid heart beats for themselves and understood that this meant serious trouble. Everybody had to help each other as white staff were also ill; no lives were lost on any of those cattle stations.

There was a further epidemic of influenza in January 1962. Sister Smith reported a total of 147 patients and several deaths, one being a pregnant woman who came into premature labor. Both the infant and mother died within a few hours of delivery.

Sister Smith first recorded the use of influenza vaccine in November 1965 when it was given to 135 people. Supplies of vaccine were limited and it was used on those people considered to be most at risk.

Sister Eva Jones had left Milingimbi early in 1959 and her replacement, Sister Judith Brockhurst, did not arrive until late June when the worst of the influenza had passed. One pregnant woman died and two babies had been born prematurely to women ill with influenza. The premature infants were peculiarly red in appearance, a redness that lasted for several weeks. A few days after arrival Sister Brockhurst conducted her first delivery, a teenage primipara. The delivery was normal and the infant healthy but then the mother lost consciousness and died. The diagnosis was a ruptured uterus from which she bled to death internally(13). Having a doctor's advice available by radio was no help in cases like this. On top of that was the disadvantage of having the mission transceiver radio either in the Superintendent's house or in an office under the house. With two Sisters one could leave and go to the radio, but when alone it meant leaving the patient unattended for several minutes. Transceivers were installed in most bush hospitals (health centres) during 1973-74.

There were lighter moments as well as the tragedies. Following the influenza epidemic an old man was very ill with a urinary tract infection and was not passing any urine at all.
After two weeks of hospital care he was much better and amidst strong protests from the patient, the Sisters took him walking with one person on each side of him. Most Aborigines will not stay in bed but the odd one enjoyed the regular meals and attention and was reluctant to go home. This man's relatives abused the Sisters for their lack of kindness but no sooner was he discharged from hospital than he disappeared. Sister Smith asked after him and was told he was at Maningrida, 80 kilometres distant. She was astounded and asked 'How did he get there' to which came the reply, 'He walked'. He died in March 1979, just 20 years later.

For the nursing staff, life at Milingimbi was seldom quiet. On 3 July 1960 while people were sleeping outside under the tamarind trees, a bullock walked on the head of a baby. The infant died a few hours later. There were also crocodile bites to be cleaned and dressed; Sister Smith recalled three incidents in which men were severely bitten by crocodiles they had shot. Crocodiles were food and their skins were valuable.

Epidemics of diarrhoea occurred almost every year and there could be sixty to seventy infants ill at any one time. This was not peculiar to Milingimbi. In the early 1950s the nursing staff were advised to provide oral rehydration with a weak mixture of saline and glucose. Some doctors advocated a teaspoon of cornflour twice daily to soothe the gut. Then came electrolyte fluids with instructions for preparation. Some mothers were helpful in feeding fluids to their infants but others would not persist when babies spilt the fluids out. In March 1963 Sister Smith was working alone and felt overwhelmed by the amount of work and a baby ill with diarrhoea and pneumonia. She had been in touch with a doctor by radio and received reassurance but no physical help. Then a voice behind her said, 'Can I be of any help Sister?' It was Dr Lloyd P Jenkins of the RAN who had heard the medical report aboard HMAS Bass and came ashore to offer help. He cared for the sick baby throughout the night which allowed Sister Smith to have a night's rest. The next day the infant was flown to Darwin where she died.

The first paediatrician appointed to Darwin Hospital was Dr Alan C Walker in October 1967. During 1968 he taught many of the outback nursing staff how to give fluid to dehydrated babies by intraperitoneal drips. This technique was widely used at Milingimbi and transformed the situation. At the same time the use of other medications for diarrhoea ceased.

In between epidemics and accidents there was a continuing campaign to reduce the hookworm load. By 1960 Health Inspectors were visiting regularly and teaching Aborigines at the same time as advising on toilets and garbage disposal. In February 1961 Sister Smith received her first supply of Alcopar (Bephenium hydroxynaphthoate) which was said to be less toxic than tetrachloroethylene. Alcopar was not the answer as it was made up of heavy granules that would not remain in suspension in water. Adults could swirl it around in a glass and swallow it in one gulp but not so the small children. The granules settled in their mouths and in particular between their lower teeth and their cheeks from where they would remove it with a finger. Those who did manage to swallow it often vomited it back. It was a yellow substance and all too often there was more of it on faces and on the ground than in their stomachs. The giving of Alcopar was a task no one enjoyed.

On 18 February 1962 some of the school staff went out fishing by boat and discovered a party of ten Indonesian men shipwrecked on Rabamar Island. The men were brought to Milingimbi where they were isolated in quarantine until Dr Ian Byrne, together with a police officer and a customs officer arrived. The men were all in good condition and had no obvious infections apart from boils. They were flown to Darwin in an RAAF Dakota and isolated at the quarantine station. This was the third group to land on the northern
coast since the war, the first party having landed on Bathurst Island on 22 February 1960 and the second at Cape Don on 19 March 1960. There was no airstrip at Cape Don lighthouse; the keeper reported their boat to be of wood and bamboo infested with borers. On 25 February 1963 the Methodist Mission boat Larrpan radioed that they were towing an Indonesian fishing boat with eleven aboard to Croker Island. All told there were twelve landings by Indonesians over the next eight years to March 1968. The greatest risk seen at the time was smallpox and all coastal Aborigines were vaccinated. Doctors started the vaccinations and taught the technique to the outback Sisters as it was not expedient to have too many Aborigines ill with reactions at any one time.

In March 1965 Sister Smith recorded problems with one of two young men who were having daily insulin injections for diabetes. Milingimbi mission had always restricted sales of sugar but Aborigines were buying 70 pound (32 kilos) bags of sugar at Maningrida so it was available in the bush areas on the mainland. The movements of diabetic patients was restricted by the need for daily injections. One man went to the mainland and refused to come back until his friends carried him to the clinic in a comatose state. His life was saved once but the next time it happened he died.

Sister Jocelyn Yeatman joined Sister Smith at Milingimbi in April 1965 after Sister Judith Brockhurst had been transferred to Elcho Island. Sister Yeatman later married Mr Les Shepherd and worked for a few years at Nangalala on the mainland before moving to Ramingining when that Aboriginal township was opened up. Milingimbi mission transferred the first eighty head of young cattle by boat to the Glyde River landing in September 1961 where these cattle grazed between Nangalala and Murwangi, the site of the early Florida station. For the first few years the cattle were supervised by local Aborigines with a long-range plan to provide beef for Milingimbi and elsewhere.

On 11 September 1965 a bushman of about forty years of age came to Milingimbi because of a lump in the vicinity of his liver. He went to Darwin Hospital and was diagnosed as having an inoperable cancer of his liver. He remained at Milingimbi until his death on 23 March 1967. This man was most grateful for everything done for him and never once complained. As a bushman he had lived almost exclusively on bush foods and had certainly never imbibed any alcohol.

The hospital at Milingimbi had always been inadequate for the size of the community and the need for beds during epidemics. On 26 April 1968 a party of twenty six men and four women who had given up their annual holidays to help, arrived from Noble Park (Melbourne) to build a new wing on the hospital. One of the women was a trained nurse and this was timely as one of the men fell from the scaffolding and suffered a fractured pelvis. He was flown to Darwin by the Aerial Medical Service. By 22 May the building was complete and the party had gone. Dr Peter Moody and Dr John Tibbs were the first to occupy the new hospital extension when they came in June 1968 for a ten day survey of Treponemal disease (yaws).

During June 1969 an epidemic of measles affected 142 people under the age of nineteen years(14), it being twenty years since the previous epidemic in 1949. At one stage there were 60 patients occupying the accommodation designed for 13 while others were protected from the weather under a large marquee near the hospital. Two Sisters with the help of the Aboriginal nursing assistants and the school teachers were able to cope and no lives were lost. On 19 November that year Measles Vaccine was given to all those who had not developed measles and its regular use continued from there on(15).

The first Sabin vaccine was given at Milingimbi on 12 September 1969. A Department of Health team was flown in by the Aerial Medical Service and administered the oral
vaccine on sugar cubes to 294 children and adults(16). Sister Smith and Sister Yeatman had the task of identifying and recording the recipients. The second dose was given a few weeks later.

**Groote Eylandt**

In 1958 MacRobertson Miller Airways had a regular air service along the north coast and Sister Kettle was flown from Milingimbi to Angurugu on Groote Eylandt on 7 May 1958. From there she travelled overland in a trailer behind a tractor to Umbakumba which in late 1957 had been taken over by the Church Missionary Society. A Welfare Branch officer, Mr E 'Ted' Egan, had improved the road by constructing bridges over sharp, deep creek beds but even so the journey took three hours during which time the passengers were smothered in dust and grit thrown up by the tractor tyres.

Sister Edna Brooker from New Zealand had arrived at Umbakumba two weeks earlier, just after a destructive cyclone had swept through the area uprooting many trees. She travelled the 35 miles (56 kilometres) in the trailer behind the tractor on the first trip after the cyclone. It took eleven and a half hours as the men chopped and removed fallen trees. Once when the trailer bogged deeply, the tractor reared like a horse with its front wheels high in the air. With the exception of the driver the men leapt to safety and the tractor slowly settled down again(17).

There had not been a tidy handover from Mr Fred Gray who had several months earlier moved to the remains of the flying boat base pending his departure from Groote Eylandt. The missionaries had long contended that a private operator should not be in an Aboriginal reserve and Mr Gordon Sweeney, in 1951 and 1953, had supported this view. In the meantime the gardens at Umbakumba were deserted and the few buildings disintegrating. Mr Fred Gray finally departed by boat on 7 May 1958 a few hours after the arrival of Sister Kettle. Mr Keith Hart, with several years experience behind him at Roper River Mission (Ngukurr), took over as the new Superintendent.

A two rooms house with a front verandah had been set aside as a hospital. It was high enough off the ground for Aborigines to camp underneath with their smoky fires. The equipment found in this building was only one bedpan labelled Darwin Hospital, one 2 ml syringe and some needles, some aspirin and literally gallons of sodium salicylate. Sister Brooker had to order supplies and wait months for them to arrive. There were no medical records so Sister Kettle's visit was timely. Copies of the Department of Health records were transcribed later for use in the Umbakumba clinic.

Several attempts were made to open an air strip at Umbakumba and much of the necessary clearing of trees was done. However, the countryside was too sandy and the strip was never licensed. This left the settlement without ready access to a doctor.

**Influenza** broke out at Umbakumba shortly after Sister Brooker's arrival. Mattresses were made for the patients by filling washed flour and sugar bags with long grass from the bush. Sister Brooker kept the most seriously ill children in the limited space of the hospital and slept on the floor with them to attend them during the night. No lives were lost during the epidemic.

Although Umbakumba was possibly the most isolated settlement in the Northern Territory, it was not entirely neglected by the Department of Health. Dr Richard Brock carried out the first medical survey during December 1951 when he had to travel by boat from Angurugu mission. A total of 185 Aborigines were examined, 97 of whom were under sixteen years of age(18). Only 5 people were classified as elderly. Broadly
speaking their health was good there being no diagnosable leprosy or tuberculosis, and only 4 people with evidence of tertiary yaws. Mr and Mrs Gray had established a dining room which they considered made the best use of the available food. Although water was scarce the garden was productive, in particular the crops of sweet potatoes. A herd of 90 goats was milked daily and the milk was given to the small children. There were also 30 head of cattle but as these were needed for breeding only a few bullocks could be killed each year. The poultry farm was excellent with over 700 fowls, 200 ducks and some white turkeys. Bush and marine foods such as fish, turtles and turtle eggs were plentiful and the people were well nourished.

Mr Fred Gray loved Umbakumba and worked immensely hard for small remuneration. In 1953 he was given some financial support by the Welfare Branch but more finance and staff were required to meet Welfare policies. He also 'adopted' a number of children. Bruce Herbert, who later became a Health Worker, was one of these.

Dr J Tarlton Rayment spent two weeks at Umbakumba in October 1955 having crossed by boat from Roper River Mission (Ngukurr). He examined 186 people and found no leprosy, tuberculosis, anaemia or hookworm infestation. Dr Rayment considered it an ideal settlement but in later years others found the sandhills that fronts the sea very wearing. Much that had been very good deteriorated during the time Fred Gray spent at the old flying boat base before the takeover by the Church Missionary Society staff in February 1958. Dr Dennis G Stanbury visited during 4-6 February 1957 and found a disturbed situation. Only 79 Aborigines were at the flying boat base. Many others were temporarily at Angurugu. Mr Gray did engage a trained nurse but the isolation was not conducive to long-term service and once the mission opened in the area there would be no subsidy for Mr Gray's settlement.

Sister Edna Brooker experienced problems in convincing mothers that the babies needed solid foods in addition to breast milk. Most mothers had adequate breast milk for several months but there were always a few exceptions. Mothers repeatedly ate the special baby food or let older siblings eat it. Blue boiler peas were still on the official ration scale and these had to be soaked overnight and cooked for four hours before they were sufficiently soft to eat. Much more popular was turtle meat and partly hatched turtle eggs.

At first, sick Aborigines were reluctant to stay in hospital, but later, when they realised the meals served were good, it became difficult to discharge them. When told they could go home next day they would develop new symptoms. However, Sister Brooker would occasionally go back to the hospital after the village lights were out and find the patients gone, but they would be back in bed by 6 am next morning. This reluctance to leave was cured as Sister Brooker would send them to have a shower, take the sheets off the bed and then say, 'you are better now, you can go home'. No one ever bore any resentment.

A rough track was cut through to Angurugu but during wet weather it was impossible to cross the swampy areas. For many years all people needing to see a doctor and all patients for evacuation to Darwin had to be taken over the bumpy road to Angurugu. It usually meant a whole day away for Sister Brooker. When Dr John Hargrave stayed overnight at Angurugu there was ample time for him to examine all patients and to discuss them with the Sister who needed reassurance that her assessment had been correct. When Dr Langsford streamlined the service in the early 1960s, there was never time for the doctor to examine all the patients let alone discuss problems. This policy greatly increased the responsibility carried by the nursing staff.

After two years at Umbakumba Sister Brooker transferred down the road to Angurugu. She returned to Umbakumba again in 1966 and at that time started seriously training
indigenous staff to help with the work. Bruce Herbert was one of those trained by Sister Brooker. Mrs Thelma Wrightson (nee Gough) did the medical work for a time then Sisters Joan Levy, Joan Mulloy and Jillian Moore were each there in turn.

The mission completed a new health centre in March 1966. The church mission was unable to supply the staff and the finance necessary to meet the requirements of the Welfare Branch and this mission became a Welfare settlement from 1 February 1966(19). For a time the church continued to provide the nursing staff but, due to shortages elsewhere, Sister Brooker was transferred to Roper River (Ngukurr) in 1968. The 1966 health centre was destroyed by fire on 20 August 1971 and a staff house then became a health centre. All the medical records were lost. Dr Donald S Jacobs, one of the first Department of Health doctors to take a special interest in the promotional aspects of child health, carried out a survey of the infants at Umbakumba during March 1967. He examined fifty-five infants under five years of age and found from the records that most growth patterns were satisfactory during the first year of life but by five years of age they were far below the expected weight of white children according to Clements’s 1933 standards(20). At the same time Mr Phillip Roberts carried out a survey for hookworm and found only 15 per cent of the community to be infested. Sister Brooker had given regular treatment for hookworm and it never became a major problem. She commented later that about this time the Department of Health’s requests for records, reports and special forms became excessive and placed a heavy burden on the nursing staff; most of her evenings were spent writing up records. Other Sisters in the outback also commented that the number of forms required for most aspects of the service had become far too time consuming.

Angurugu

The population at Angurugu had been decimated by the epidemics in 1949 (Chapter 18). Dr Richard Brock carried out the first medical survey in November 1951 and his description of the mission is impressive for that era. The site had been surveyed with the church situated in an inner circle and the village radiating out from it. The postwar airstrip was developed on the northern side of Angurugu River and the weak link between it and the mission was an inadequate bridge. Each year during the wet season the small mission-built bridge was either severely damaged or washed away. Patients were often carried across the river to the waiting Aerial Medical Service ambulance aircraft.

At the end of 1951 there were 250 people, 130 of whom were under sixteen years of age. Dr Brock examined 247(21). Just after the survey there were staff changes when Rev Ron Ash and Sister Hilda Villiers left and were replaced by Mr and Mrs Kevin Hoffman and Sister Eileen V Goodwin (later Mrs Mildenhall). The mission had an agriculturist, Miss Dulcie Levitt, who had arrived the previous year and who, over the next quarter century, made a considerable contribution to the local production of food. There was a small herd of 24 cattle and goats were being milked for the households. All missions had goats at one time but most found it difficult to keep them out of gardens unless continually shepherded. Goats also had to be yarded at night to protect them from dingoes and camp dogs. With few exceptions goats were later used for meat and not replaced. In 1951 the building program, using locally milled cypress pine, was in advance of most other missions.

Dr Brock recorded two leprosy patients on treatment, no tuberculosis, no anaemia and only 6 per cent of a cross-section of the population showed hookworm infestation. He treated one case of tertiary yaws osteitis with Acetylarsan and only one other person had evidence of old yaws. The isolated position of Groote Eylandt may have lessened earlier
infections. There was limited trafficking with the mainland via Bickerton Island. Tribal fighting was a problem and the doctor treated eight victims during his few weeks visit.

Dr WA Langsford carried out a further medical survey in March 1953 and found no anaemia or hookworm. The people previously treated for hookworm were clear. He saw only five people whose lesions suggested tertiary yaws. Dr Langsford noted what he classified as post traumatic corneal scarring and specifically stated that there was no trachoma(22). Three years later in August 1956, Professor Ida Mann examined 308 people of all ages and considered that 228 had trachoma, of whom eight had impaired sight and one was blind. Later, in the 1960s, when Dr Langsford was the Director of Health, there was much controversy over trachoma and this is recorded in Chapter 19.

Dr Langsford recorded 28 people with tinea corporis but much of the tinea did not respond to treatment. A similar infection was also widespread elsewhere having been frequently described as ringworm. In 1973 Dr Allen C Green, a dermatologist from Adelaide, identified the condition as *Trichophyton rubrum*(23).

A further medical survey was conducted by Dr J Tarlton Rayment in October 1955 when he examined 330 people. He found no hookworm and no anaemia and commented that all the northern missions had old microscopes. About 1950 the School of Public Health and Tropical Medicine replaced its microscopes and instead of disposing of the old ones they sent them to Darwin for use in the outback. Dr Rayment made the first comment on widespread scabies and babies with crusted sores on their arms and legs. A baby that had been at Bagot came home a couple of months earlier and no one had recognised the condition, having not met with it before. The doctor ordered 16 gallons (73 litres) of Benzyl Benzoate Lotion and left instructions for the staff to paint 330 people every day for three days(24).

Dr Rayment had the mobile X-ray equipment with him. He took 120 X-rays of the people who had positive Mantoux tests and remarked that the films showed no evidence of tuberculosis. All films were then sent to Canberra for a specialist opinion. As well as the BCG vaccinations, Triple Antigen was given for the first time on Groote Eylandt.

Dr Dennis G Stanbury spent January 1957 at Angurugu and checked the health of 460 Aborigines, over 100 of these being from Umbakumba. Dr Stanbury did Mantoux tests on all, of whom 115 were still negative in spite of previous BCG vaccinations. He gave BCG to 111 and commented that two had now received four BCG vaccinations, 24 had three vaccinations and 115 had their second vaccination(25). Just prior to his visit a child was admitted to Darwin Hospital with a tuberculous infection of one hip. Tuberculosis was not a problem on Groote Eylandt but the possibility of its introduction warranted vigilance. Dr Stanbury treated four children for primary yaws but someone else wrote Chicken Pox as an outbreak of that infection was just starting. He also noted ten women each with one atrophied breast due to non-usage when lactating. If a breast was too painful to allow the baby to suck it could be let atrophy, with the result that the used breast became elongated and the other would be shrivelled. Nursing staff were alerted to watch for painful breasts and, for the sake of new infants, to prevent this happening.

Miss Margaret Corden, the dietitian, visited Angurugu during March 1957. At this time only school children and the babies were being fed in a communal system. The mission had been providing meals for adults but decided it was better to ration fresh foods daily and allow families to do their own cooking. As there was no bulk freezer for storage, the fish catch and all fresh fruit and vegetables were distributed daily to specific persons from village groups who in turn gave each family their share. All foods not locally produced were delivered three times each year by the *MV Cora* from Thursday Island. As there was
no jetty, the men made a barge of 44 gallon drums to float out to the Cora for unloading; it was a slow and clumsy process until a mining company built a wharf.

A severe epidemic of Asian influenza infection, which had swept the world with widespread morbidity and mortality, broke out at Angurugu during July 1957. Seven deaths were reported before Dr John Hargrave was flown there at the beginning of August. The first patient, an old man, had been flown to Darwin Hospital where he died. The autopsy revealed he had multiple lung abscesses and a culture of the pus produced a pure growth of a coliform organism(26). Some patients discharged before the doctor's arrival were readmitted with bronchopneumonia. Among the deaths were a week-old baby and a premature baby. Most of the white staff were also ill. This was possibly the first time a doctor remained on a mission or settlement and handled an epidemic until it began to wane. Strict control prevented the infection from spreading to Umbakumba. A similar outbreak had occurred at Roper River (Ngukurr) but it had been less severe.

Sister Kettle visited Angurugu between 10-20 May 1958 to introduce an infant health clinic. Sister Enid Jones had only recently arrived and was endeavouring to sort out facts from fiction. Having been taught by Professor AP Elkin in Sydney that all Aboriginal mothers had adequate breast milk no one had questioned the validity of the hypothesis. There were infants urgently in need of supplementary feeding, one case being a baby orphaned during the epidemic the previous year. This baby was given to a sixteen year old mother to breast feed in conjunction with her own baby; the outcome had been one dead baby and the other in Darwin Hospital with serious malnutrition. All supplementary feeding of infants had ceased and had to be reintroduced.

As most of the infants were not accustomed to being weighed they were uncooperative and this upset the mothers. There were 84 infants under five years and of these, 82 were examined; one was in Darwin Hospital and another was with her parents at Snake Bay (Milikapiti) where her father had been sent for punishment. There were some hot-headed men on Groote Eylandt who readily imposed their wills on others through their skill with a spear. Officers with the Welfare Branch preferred to banish them for a couple of years rather than have them convicted for what were tribal fights. Several families were either at Snake Bay or Delissaville (Belyuen) where they were open to infection with both tuberculosis and hookworm. There was no liaison between the Department of Health and the Welfare Branch on the movement of people.

The hospital at Angurugu had two invaluable workers. Didjidi, who reared twelve children of her own and Aringari, a conscientious and keen young man. Aringari had been to school and was keen to undertake training but the Department of Health had no formal training course to offer. Sister Enid Jones spent two years at Angurugu before being transferred to Oenpelli. She was replaced by Sister Joan Levy and then, late in 1960, Sister Edna Brooker was transferred from Umbakumba and spent the next six years at Angurugu before returning to Umbakumba. From this time on between twenty-five and thirty babies were delivered in the hospital annually. When mothers came into labour at night they would send for Didjidi who would open the hospital and prepare for the delivery before sending for Sister Brooker.

Premature twins, Jill and Ann, were born in the Angurugu hospital on 24 September 1960 shortly after Sister Brooker's arrival. The smallest twin weighed 2 pounds 8 ounces (1134 grams). In September on Groote Eylandt the nights can be very cold and the babies were kept warm with hot water bottles that required frequent refilling. Breast milk was expressed and fed to the infants by gavage tubes every three hours. The mission's power plant was only run for a few hours each evening and was switched off at 9.30 pm, so a pressure lamp and primus stove had to be lit each time the babies were attended. Sister
Brooker slept in the hospital to attend the babies but it meant broken nights for many weeks. Two doctors visited Angurugu about a week after the babies were born and they decided Sister Brooker was competent to rear the infants. Sister Kettle visited a week later when Sister Brooker was exhausted from lack of sleep and struggling to care for other infants with diarrhoea, along with the daily work in the medical clinic. Within days a semi-trained nurse was sent from Darwin to help. After that there were usually two Sisters at Angurugu which meant they could alternate the night work.

A dramatic change occurred on Groote Eylandt during the 1960s which completely changed life for the Aborigines. The mining of manganese commenced in 1963 along with the development of the town of Alyangula. There followed employment for those men who were prepared to work and royalties that allowed Angurugu to become a town with good housing. It also led to the introduction of alcohol to the Groote Eylandt Aborigines. The story of this development is in Chapter 31.

As the Angurugu mission grew larger it became more difficult for the church to staff it and in 1967 the first Welfare Branch school teachers were appointed. Mission Sisters continued for a further twelve years before the hospital was staffed by the Department of Health in 1979. Survey Sisters from the Department of Health continued survey work and in 1967 this included Mantoux and BCG, leprosy, audiometric testing of school children, haemoglobin tests on infants, and hookworm eradication (the prevalence of hookworm was not noted). There were further outbreaks of influenza, mumps and chickenpox that year. Dentists had visited twice during the year as the teeth of the people had shown a marked deterioration and fluoridation of the drinking water commenced in 1973(27).

On 18 July 1966 a District Welfare Office was opened on Groote Eylandt to ensure good relations between mining people and the Aborigines. Welfare Officer Ted Egan had been there for some years prior to that and he also spent time near Yirrkala when mining was opening up near Gove airstrip.

In 1951 Dr Brock described the Angurugu Hospital as being the best mission or settlement hospital in the country. But in 1966 this same hospital was described as old and ramshackle since as facilities improved, so values changed and demand for better quality facilities increased. The Welfare Branch provided financial support for a spacious new hospital that was opened early in 1968. Sister June Ashbury and Sister Philippa Reaney staffed the new hospital; both later worked as nurse educators with the Department of Health. The population at Angurugu was by then 508 of whom 287 were children.

Numbulwar

Missionaries with the Church Missionary Society at Roper River and later on Groote Eylandt had, as early as 1918, promised the Aborigines on the eastern shores of Arnhem Land that they would open another mission for them at Rose River in the heart of Nunggubuyu country. Further north at Walker River in the vicinity of Blue Mud Bay is the traditional land of the Rirrinyu people, a group who wander over a large tract of country and have close contact with the people inland from Milingimbi, Mainoru, Roper River and other centres along the way. These wanderers may have been responsible for the spread of diseases such as yaws and leprosy.

Due to financial stringencies and a shortage of staff, it was not until 14 August 1952 that a party set out by boat from Roper River mission to commence the work at Numbulwar near the mouth of the Rose River. Mr John Mercer from Roper River mission led the party which landed on the evening of the 16th. A couple of days later the more experienced missionary, Rev GR 'Dick' Harris, arrived from Groote Eylandt and the two white men,
guided by the local leader Mardi, tramped far and wide searching for suitable sites(28). Within days there were over one hundred Aborigines present and it seems to have been the Aborigines who chose the site on country that was largely sandhills.

Numbulwar itself had limited potential for gardening except for a small swampy area between the sandhills and the beach. In this same area several 44 gallon drums were sunk into the ground to collect spring water for both the staff and Aborigines. The estuary of the river abounded in sea food and records for March 1953 showed 30 turtles (90 kg each) and 5 dugong (180 kg each) killed for food(29).

Mr and Mrs Ralph Barton came from Roper River and were joined by Mr Alf Wilson and his wife Helen for a few months before they went on furlough. Temporary housing was quickly erected using local bush materials none of which were waterproof. By October enough building materials had arrived by boat from Angurugu for work to commence on permanent housing for the staff.

The weather was mild and the sea calm which allowed free movement of boats bringing both official visitors and those whose services were needed. The first representative of the Department of Health was Mr F Thornton, a dentist, who visited on 4 November 1952 for a couple of days; he inspected 70 mouths and extracted 11 teeth.

Sister Eileen Goodwin from Angurugu visited Numbulwar on 8 November 1952 but there is no record of how long she remained. When Dr WA Langsford undertook the first medical survey in April 1953, there was no trained nurse. He recommended that a nursing Sister be appointed as a matter of urgency as both 'leprosy and yaws are endemic'(30). An elderly man and his two wives, all seen for the first time, were in an advanced stage with leprosy and there were 11 others with suspicious signs who needed to be kept under regular supervision. Dr Langsford stressed the urgent need for a transceiver but nothing could be hurried. Of the 140 Aborigines known to be at the new mission 132 were examined. Of these, 126 were given Mantoux tests for tuberculosis and 73 (58 per cent) had positive reactions. All negative reactors received BCG vaccination.

Dr Langsford commented on 18 people with cardiac murmurs and 'a further 4 in whom definite organic cardiac disease was detected'(31). In 1951 Dr Brock had found a similar situation on Groote Eylandt. At that stage the cause could only be speculation but twenty years later there were several Nunggubuyu people with pacemakers.

A small airstrip was opened on 8 June 1954. Mrs Mercer with a three weeks old baby accompanied the airport inspector who passed the airstrip for commercial use. Shortly after this an Aerial Medical Service aircraft, with a doctor on board, made an unscheduled landing to attend a sick woman. Then on 17 August 1954 the Health Inspector, Lyle M Tivendale, was flown to Numbulwar to check all aspects of sanitation and to advise the mission staff.

Dr Tarlton Rayment visited Numbulwar early in November 1955 following his survey at Angurugu. He was accompanied by the medical assistant, Phillip Roberts, who knew many of the people from their earlier visits to Roper River. Prior to leaving Groote Eylandt the missionaries took Dr Rayment by boat to Blue Mud Bay, Caledon Bay and Trial Bay. He had anticipated seeing about one hundred people but they had dispersed. At Trial Bay he met the influential old man Wongu with some of his wives and children and described them as 'a pathetic remnant of people living in bark shelters on the beach'(32). They were in fact living the way they had always lived. One young woman with obvious tuberculoid type leprosy asked for medicine but her family would not allow her to go to a mission for treatment. She was undoubtedly treated later at Yirrkala where
Wongu, in 1958, chose to retire following the treatment of malaria at Caledon Bay by Sister Audrey Fielding in 1957.

With Wongu's family at Trial Bay was a young man of about twenty five years who was completely paralysed from the hips down with gross wasting and deformity of his limbs. He was well cared for and as his chest and arms were normal he could paddle a canoe. By the 1970s there were several people with similar conditions. The survival rate could have been due to the care available on the church missions. Dr John Cawte explored the possibility of the neuromuscular disorder being familial, but from genealogy compiled by Sister Philippa Reaney this was not conclusive(33). Most Aborigines are related to the people in adjoining tribes and Groote Eylandt people have relations at Caledon Bay and further inland. Several possibilities were explored but the cause of the condition had not been conclusively identified at time of writing.

Dr Rayment took the mobile X-ray unit to Numbulwar and with the help of Phillip Roberts he X-rayed all persons with positive Mantoux tests. In November 1957 Dr Hargrave mentioned one adult with tuberculosis who was doing well(34).

Sister Ruth Hepper arrived at Numbulwar on 4 October 1956 almost a year before the neat little hospital built of locally milled cypress pine was ready for use. The hospital, minus doors, was used for the first time during Dr Hargrave's visit. Dr Hargrave approved of the hospital but was concerned over the lack of equipment; boiled jam tins were in use in place of bowls and kidney dishes. The missions relied on donations from church members interstate to equip their hospitals. The Department of Health took no responsibility apart from suggesting what was required. About 1960 the Welfare Branch began to make finance available to the missions for hospitals and equipment.

Dr Hargrave examined 145 people of whom 29 were under five years of age. He considered the nutritional status of those he saw was satisfactory. When Sister Kettle visited in June 1958 to commence an infant health clinic, there were 34 infants under five years whom she examined. Children had come in from Roper River, Bamyili and Groote Eylandt and three of these, along with one local baby of 12 months of age, were in a seriously debilitated condition. Their condition was reported but Darwin Hospital lacked a nutrition unit and the Department of Health was reluctant to bring them to hospital. By September 1959 when Sister Kettle visited again, all four were dead.

An English nurse, Sister Ann Cook, and her school teacher sister, Cecily, were at Numbulwar during 1959-60 for one year. Mr Colin Gilchrist from Roper River Mission had been appointed as Superintendent, a position he held for eighteen years. Various schoolgirls had been helping in the medical clinic but one, Jangu, had decided to be a nurse. Jangu worked in the clinic in the morning and had school lessons under a huge shady paper bark tree in the afternoons. As she grew up she determined to stay single rather than marry an old man to whom she was traditionally promised. She became a leader in her own community and at time of writing she is the mainstay of the health service at Numbulwar.

Sister Joan W Levy relieved at Numbulwar for a time prior to the arrival of Sister Joan Smedley on 3 August 1961. With the exception of holidays Sister Smedley spent the next seventeen years at Numbulwar. The population increased as people came in from the bush but later, when transport was available, some groups returned to their homeland at Koolatong where there was permanent water and good hunting. There was a steady increase in the number of babies but eighteen births in 1963 seems to have been a peak. In a small community more attention can be given to individual mothers and babies and this certainly happened at Numbulwar.
Dr EC Iceton carried out a medical survey in 1961 and Dr Don Jacobs an infant health survey during July 1966, but apart from these the Survey Sisters did the mass surveys and referred to a doctor those people requiring further investigation. The number of Survey Sisters had by then increased. This allowed a more economical use of the limited number of doctors. In September 1962 Sister Ngaire Stichbury spent fourteen days giving antimalarial treatment to the entire population as part of a malaria eradication program. A total of 230 Aborigines and 15 staff were treated. At the same time Sister Stichbury checked the population for leprosy and anaemia. Hookworm was never out of hand at Numbulwar due to vigilance and regular dosing with Alcopar; the highest prevalence reported during the 1960s being 15 per cent of a cross-section of the community.

During the next survey in December 1965 Sister Heather Graham checked 319 people. Sister Jillian Moore visited for two weeks in January 1967 and examined 309 people, nine of whom were leprosy patients on treatment at home. A few months later Dr Hargrave examined the people referred by Sister Moore and diagnosed another early case of leprosy.

The first audiometric screening of school children was undertaken by a Survey Sister in May 1965. In later surveys when time did not permit testing of all children, the school teachers were asked to send those children whose progress suggested poor hearing for audiometric testing. Sister Jan Wylie carried out a full survey of ears and hearing in December 1969. At that time five children had hearing aids. Some teachers found it wise to keep the hearing aids for use in the classroom as the users, when teased, removed the aids and all too often lost them. Of the 93 children examined, 42 had infected or otherwise damaged ears. Infection and hearing loss presented a major problem in most Aboriginal communities. It was 1974 before an ENT (Ear, Nose and Throat) specialist was appointed to the Department of Health but prior to that guidance and assistance had been given by staff of the National Acoustics Laboratory and Dr Rory Willis from Melbourne (see chapter 31).

The Church Missionary Society retained control of the health centre (previously the hospital) until the 1980s. Government finance was made available for a new health centre which was opened on 20 November 1979; both Sister Smedley and Jangu were still providing the service. Over the years other nursing staff were appointed for varying periods.

**Roper River Mission (Ngukurr)**

At the time Numbulwar was opened in mid-June 1952, the mission at Roper River (Ngukurr) was in the throes of a very serious drought that could have pre-empted the move of people to the new site. The Roper River itself was so low, the salt water from the sea had intruded further upstream than the mission. At low tide the water was very discoloured and all who drank of it developed diarrhoea.

Dr John R Carter, an English doctor at Katherine Hospital, was flown to Roper River Mission on 20 March 1952 to investigate a severe outbreak of diarrhoea. The mission itself was being supplied with water carried in 44 gallon drums from a lagoon 1.5 kilometres to the east. Bacteriological examination showed the lagoon water to be heavily contaminated. To make the situation more difficult, Aborigines had shifted to the lagoon and were wading into it to fill their billycans and to wash themselves. The few septic tanks at the mission were fouled due to lack of water to flush them.
Mr Gordon Sweeney had visited the mission late in November 1951 and commented then that there had been almost no rain for the year. The following year was the same; they missed two 'wet' seasons in succession and needed Government help to sink bores for adequate safe water. Gardens and crops failed from lack of rain and most food had to be imported from Queensland in the MV Cora which called four times each year.

The population in 1951 was recorded as 192 local people plus 45 from Rose River. Of these, 125 were children under fourteen years of age(35). Some of the children were there from cattle stations to attend school.

A new hospital, under construction in 1951, was ready for use late in 1952. It was built within the steel frame of a Sydney Williams hut. Sister Erica S James was the only trained nurse and included among her patients were seven on treatment for leprosy.

Dr WA Langsford carried out the first medical survey at Roper River Mission during April 1953. There were then 150 Aborigines, while a further 148 were said to be holidaying in the Limmen River area. There were two trained nurses but Sister Leila C Medley had married one of the mission staff, Mr Keith Hart and was no longer working full-time. Dr Langsford was concerned to find that Sister James had to live in the hospital. It was certainly lonely for her as she was removed from the company of other staff. Sister James was also cooking for and feeding infants within the hospital.

It was at Roper River that Dr Langsford met the Aboriginal motor mechanic, Phillip Roberts, who later joined him in medical survey work. A survey for hookworm revealed that 62 per cent of the population were infested. Haemoglobin estimations were performed on adults and older school children but not on the most vulnerable group, namely the infants. The youngest tested was twelve years of age. Mantoux tests on 141 people showed 32 per cent positive, a much lower reaction than could have been expected in a community with long contact with outsiders. BCG vaccinations were given(36). There were seven people receiving treatment for leprosy and a further four were referred to Dr AH Humphry for his opinion. Dr Langsford did not classify any eye conditions as trachoma but he did note nine with corneal scarring and two with entropion. In 1944 the ophthalmologist, Major Michael Schneider, had diagnosed a high prevalence of mild trachoma.

Dr Dick Webb accompanied Fr Frank Flynn and Professor Ida Mann during a survey for trachoma in August 1956. They recorded 186 people (83.8 per cent of the population) with trachoma. Of these, two had impaired sight, four were totally blind and one was blind in one eye(37).

Early in 1953 Mr Colin D Gilchrist, the Superintendent at Roper River Mission, had established a committee of senior Aboriginal people to represent the community in planning the development of the mission and to exercise authority in matters of welfare and discipline(38). Many Aborigines had been to Katherine and elsewhere and were aware of goods available in shops. They wanted more spending power but due to droughts and floods the mission could not afford to pay more in wages. The mission endeavoured to give many people a small income each rather than paying higher wages to a few. The formation of the council was timely as there were problems ahead.

The RAAF flew Dr Tarlton Rayment and his X-ray equipment to Roper River mission in a DC3 aircraft on 10 September 1955. The Aerial Medical Service aircraft could not lift the doctor and his 2,576 pounds (1168 kgs) of equipment in one action. Dr Rayment repeated the Mantoux tests and found 20.5 per cent positive - many less than in 1953 unless the
criterion for a positive reaction has been interpreted differently. Those with a positive reaction were X-rayed(39).

Sister E Mirfin, a married woman, was in charge of the hospital in 1955 and Dr Tarlton Rayment was most impressed with the facilities which included a kerosene refrigerator. He gave Triple Antigen to 99 children under fourteen years of age and was able to send further supplies for Sister Mirfin to complete the course.

Twenty miles (32 kilometres) upstream from Roper River Mission is the long-established police station at Roper Bar. Dr Dennis Stanbury and his wife visited by road in a Land Rover late in June 1956. With the exception of the police trackers and their families, the rest of the group of forty Aborigines were in a pitiful condition which the doctor considered was due to starvation(40). The Aborigines regarded Roper Bar to be their land and did not want to transfer to the mission. Dr Stanbury's survey did not include the mission but he did drive over the precarious road between the two places. For the four wet months each year the road was impassable and at other times the tide could hold the fresh water back and raise the level at the Wilton River Crossing.

After the years of severe drought there was another disastrous flood in the Roper River in March 1957. It was overshadowed a little by the floods in the Katherine and Daly Rivers at the same time. Mission gardens had been planted near the river again to make full use of the water in the river for irrigation. The gardens were destroyed along with the boat shed and some of the houses for Aborigines.

Infant health at Roper River Mission seemed to fluctuate and the loss of the mission gardens would not have improved the situation. Sister Joyce Kendall arrived in October 1957 and was the only trained nurse when Sister Kettle visited in June 1958 to start infant health work. Of the 70 infants on the mission register, 47 were examined and assessed; other infants were absent on cattle properties. The Mission kept a record of all babies in that area so birth dates were available when children came of school age.

Newborn babies averaged seven pounds (3.175 kg) at birth but by three months of age most were in need of supplementary feeding. The babies were bigger at birth than elsewhere, but by three months their weights were falling below the expected standard in comparison with five months in most other areas. Following the flood the diet for mothers and preschool children was mainly starchy foods with perhaps some meat twice each week. The mission cattle had been decimated during the earlier drought and it took several years to breed up the herd again. In the meantime foods like flour, white rice and macaroni were too widely used. Most of the preschool children had cracks in the corners of their mouths suggestive of a riboflavin deficiency. They responded well to multi-vitamin therapy so it was clearly a nutritional condition.

Sister Kendall mentioned to Sister Kettle the presence of a crippled child whom the Aborigines kept hidden in the camp. The two Sisters approached at siesta time and caught a glimpse of the child before dogs gave the warning and blankets were thrown over her. After assuring the parents the child would not be sent to Darwin, she was uncovered to reveal gross bowing of both forearms and tibiae caused by yaws. The child was brought to the hospital each day for food and physiotherapy; within a few weeks she was walking. She then voluntarily presented herself in school and received special tuition to catch up with others of her own age.

Sister Valerie Fizzell joined Sister Kendall at Roper River on 21 January 1959 and remained there over eight years. Other Sisters came and went, some for a short period only, but most of the time there were two sisters on the staff.
Malaria was a recurring problem in the Roper River area and the Department of Health endeavoured to assist with mosquito control. The Health Inspector, Jim Dewey, using a Swing Fog Machine with 10 per cent DDT fogged all buildings on 15 June 1960. He also checked all waterholes and drains for mosquito breeding. On 16 March 1962 Sister Fizzell reported several people with high temperatures and Dr Max J Richards and Dr WA Langsford were flown to the mission accompanied by a Health Inspector. One case of malaria was confirmed by blood slides(41). Action was taken to eradicate malaria and Survey Sister Ngaire Stichbury visited for two weeks early in September 1962 to administer antimalarial drugs to the whole community. This was followed-up by Dr Noel Vawser and Dr Bruce McMillan, the latter from the School of Public Health and Tropical Medicine (Sydney), on 23 June 1965. They made 322 blood slides but no malaria was found(42).

The Aboriginal cultural practice of circumcising teenage boys continued and on 8 March 1963 Sister Fizzell had to send one of these lads to Darwin Hospital. Following this, Dr Michael Ryan spoke with the men on the local town council and it was agreed to have a doctor do the circumcisions in the hospital at Roper River. The relevant senior men were present. Similar arrangements were made elsewhere to prevent infection and mutilation.

Sister Stichbury did the first audiometric screening of school children at Roper River in April 1964. Following this survey four children were examined further and provided with hearing aids. Eyesight was also tested to ensure the children could both see and hear in the classroom situation.

During the 1960s there was a good deal of turmoil at Roper River (Ngukurr) due in part to educated young men wanting more than the mission could afford to give them. In 1965 a full cash economy was introduced which meant the recipients of pensions handled their own money, spent it as they wished but expected the mission to continue to provide the same services without that money. Shopping facilities were expanded but the pensions were squandered instead of being used for food. People became hungry and morale dropped to the point where many were just sitting in the shade gambling and doing little else. The mission handed over control to the Welfare Branch from 1 July 1968 but retained the hospital and nursing staff positions.

Sister Edna Brooker with over ten years experience was transferred from Umbakumba to be in charge of the hospital during a most difficult time. Sister Margie Nicoll had been there since 1964 but she left in August 1968 and was replaced in December that year by Sister Philippa Reaney from New Zealand.

A referendum in 1967 gave Aboriginal people full citizenship rights. This was long overdue but the top priority for many was the right to drink alcoholic beverages. Most of the money earned by working or acquired through pensions was spent on alcohol brought in from Katherine. There followed terrible fights. The population in 1968 was recorded as 268 of whom 153 were children. Some time later, during a visit by Department of Health staff, an Aboriginal man arrived by truck with forty flagons of wine and twelve bottles each of rum and whisky. Following this binge, during which many children were also drunk, the nursing staff refused to provide medical certificates for people unfit to work. A medical certificate would permit men to draw pay from the Welfare Branch while recovering from hangovers. Two senior men sacked the Sisters and ordered them off the place(43). The Department of Health did not send in alternative staff since no one would go there; the time had come for the local populace to review what they were doing. Sister Reaney left in 1971 but the mission continued to send other nursing staff to work

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with Sister Brooker. The situation steadily settled and some of the argumentative and heavy drinkers left Ngukurr to live in Darwin and elsewhere.

Sister Brooker was not well and she packed her bags to leave mission work. After a few weeks in Darwin and then at Oenpelli she was well and fit once more and the people at Roper River asked her to return. She was an outstanding and dedicated nurse in every way and there is no doubt that her calm approach and wise counselling played a significant part in helping the local community come to grips with managing their own affairs.

A new health centre (new classification) replaced the previous hot, unlined galvanised iron hospital early in 1974. Excellent progress was made in training Aboriginal staff to do most of the work and to take responsibility for management of the centre. The paperwork required had become a considerable burden to a nursing Sister and this aspect had to be taught to the Aboriginal Health Workers. Sister Edna Brooker, MBE, retired to work in New Zealand in January 1982.

Oenpelli

Throughout the war there was only one white missionary at Oenpelli. Staff began to arrive late in 1945, but there was no trained nurse until Sister Elizabeth Halse was appointed on 23 April 1948 for a period of three years. The mission suffered a major setback in 1951 when most of the staff left over Administrator AR Driver's directive to issue plug tobacco as a weekly ration.

Dr Richard Brock was allowed one week, late in May 1952, to conduct a medical survey prior to going to the Alice Springs area in June. The question of tobacco, still much in the minds of new staff and those transferred from elsewhere, was expounded during the doctor's visit. The mission had ceased issuing tobacco in 1939 but during the war army personnel freely handed it out in exchange for services rendered. Aborigines became almost beggars in their quest for tobacco. White men's pipes had been introduced much earlier and were passed from mouth to mouth with even infants being taught to draw. Tobacco now had to be sold in the mission store where it was given high priority by the Aborigines.

There was no trained nurse to help with Dr Brock's survey as Sister Halse had left and Sister Irma E Faulkner arrived a few weeks after his visit. There were said to be 350 people in the area of whom 165 were fairly permanent. Dr Brock mentioned that the original inhabitants, the Kakadu people, were now very few, confirming the prewar findings of Mr Gordon Sweeney. He would have gleaned this from the pioneer Mr Dick Harris and from Mrs Oats, a linguist who was studying the Gunwinggu language. Forty children were in school and 84 men and women were in employment, 15 of the men full-time shooting and skinning buffaloes and supplying the mission with ample good quality meat. When buffaloes were shot several miles from the mission, the warm meat was butchered, salted and carried in pack-saddles on horseback. For six months of the year it was impossible to take a truck out for meat. Sometimes during the dry season the buffaloes would wander through the mission grounds but there were inherent dangers in attempting to use a 303 rifle near the houses and hospital. Another 40 men were engaged in planting fruit and vegetables in a fenced paddock of 34 acres. Women were largely involved in craft work making mats and baskets from pandanus leaves.

An unlined galvanised iron building (15 ft x 18 ft) partitioned to provide a ward, served as a hospital. The cement floor could be readily washed but the heat and humidity inside the building was intense. These iron buildings were expedient at the time but they took a toll
on the health of staff who had to work in them. Oenpelli was beautiful but tended to be airless and the need for mosquito nets for sleeping ensured sweaty bodies were never dry. Most staff and many visitors suffered sleepless nights from the skin condition known as prickly heat.

Oenpelli is an area where it could have been anticipated that tuberculosis would present a problem. There had been long if not close contact with Pine Creek. Dr Brock did Mantoux tests and of the 107 who returned for reading of the test, 59 per cent had a positive reaction but he found no active disease. Those with a negative reaction were 'vaccinated with reconstituted dried BCG vaccine'(44). This survey was followed up three years later during 4-9 July 1955 when Dr J Tarlton Rayment was flown in by the RAAF in a DC3. At that time he recommended that the Department of Health should acquire its own DC3 instead of another Drover aircraft as the latter required two or three flights to move the X-ray equipment. Dr Rayment worked alone; he took the X-rays and developed them and also did the clerical work with the assistance of mission staff.

The population at Oenpelli fluctuated. It was a halfway resting place for people from the Milingimbi and Liverpool River (Maningrida) area travelling to Darwin or south to Beswick-Bamyili. Dr Rayment thought many disappeared when he arrived so he was only able to give and read 133 Mantoux tests. BCG was given to 105 while 67 with positive reactions were X-rayed(45). From his own cursory examination of the X-rays he did not anticipate any new tuberculosis patients. All X-rays were sent to Canberra where Dr Hilary Roche read them and reported.

In 1952 Dr Brock mentioned two people with leprosy and two others with suspicious lesions who disappeared. By 1955 Dr Rayment recorded 14 diagnosed and receiving treatment, one of whom later became a most competent member of the local hospital staff. A further ten were recorded as suspect for leprosy and five of these were later diagnosed. This seeming increase in the disease may have been due to people coming out of hiding in response to Dr AH Humphry treating them at home. Unfortunately, one lad of thirteen years with lepromatous leprosy was hidden by his family but with domiciliary treatment the fear of people being taken away from home has been gradually overcome.

Sister M Winifred Preston staffed the inadequate little hospital at Oenpelli from 4 June 1954 to 20 April 1955 and was then replaced by Sister Eileen Goodwin (Mrs Mildenhall) who stayed until 21 May 1958. Nursing staff were often moved by the mission so it is difficult to determine who was where at a given time.

Various doctors visited with the Aerial Medical Service and examined those people who had medical problems. Full-scale medical surveys steadily grew less which meant an even greater responsibility was placed on nursing staff to recognise medical conditions to present to the visiting doctor who called for a couple of hours every six weeks. Dr Dick Webb had visited in May 1956 and noted three people with trachoma. He invited Fr Frank Flynn and Professor Ida Mann to include Oenpelli in their 1956 survey for eye disease. Oenpelli was visited on 7 August when 129 people were examined. Dr Webb recorded 43 (33.3 per cent) affected of whom four were blind and one had impaired sight(46). Treatment was introduced but it placed a heavy load on one nursing sister on top of her day-to-day work and caring for many leprosy patients. When Sister Kettle visited for a few days in February 1958 she reported one schoolboy with florid trachoma who had arrived from Beswick-Bamyili about six months earlier. The infection appeared to have been passed to other children not previously recorded as having trachoma. In the absence of the nursing Sister, the school teachers agreed to give the treatment twice daily for five days of the week.
Sister Kettle visited again late in May 1958 to start infant health work. Sister J Pascoe was relieving until Sister Goodwin returned at the end of May. There were 39 children under five years registered at Oenpelli but only 25 of these were examined as the other 14 were said to be visiting Darwin or Bamyili(47). Goats milk was available for some needy infants. The Superintendent had plans to start a dairy again, but the cost of installing dairy facilities to Department of Health standards was prohibitive.

A hospital, designed and built by the Superintendent of Oenpelli, was open for use in 1959. It was an airy building and cool but it was too close to the staff houses and too low on the ground for effective drainage. The original building used as a hospital then served as an outpatients department.

Dr Edgar Emmerson conducted a medical survey from 22 January to 4 February 1959 and examined 269 people of whom 109 were under fifteen years of age(48). The increase since earlier surveys was mainly due to migration. The number of births per year was small with a maximum of 11 births in 1956. In 1959 there were 25 people on treatment for leprosy. Sister Goodwin had married (Mrs John Mildenhall) and gave up nursing to rear a family. She was replaced by Sister June D Armstrong on 6 April 1960 who staffed the hospital for over six years with others to relieve or assist her.

Early in 1963 Oenpelli Mission appointed Miss Barbara Maidment as a physiotherapist to care for leprosy patients and to develop craft work that would exercise their fingers. At that time Dr Hargrave was doing much reconstructive surgery on hands and feet and the physiotherapy allowed many patients to receive both pre-operative and post-operative care at home. Miss Maidment gave two valuable years of work prior to marrying and transferring to Angurugu.

In 1964, shortly after his promotion as Director of Health, Dr WA Langsford convened a meeting to establish a Health Education team. The leader of the team was Dr Noel D Vawser, a 1963 graduate from Adelaide and appointed to Darwin in February 1964. All sections of the field services, doctors, nursing staff, health inspectors, dietitian and an Aboriginal health worker would make up the comprehensive team. This was in line with the latest thinking emanating from the World Health Organization. The problems overlooked in planning were the lack of accommodation on both missions and settlements and the fact that a large team would disrupt the normal routine work. Private individuals graciously provided a bed and meals for government personnel in their own homes but staff on Welfare settlements had, a few years earlier, begun to protest. Each year the number of official visitors from various government departments increased and financial remuneration did not offset the disruption to family life.

The first team of Dr Noel Vawser, Sister Ngaire Stichbury, Miss Moira Rankin, dietitian, Health Inspector, Mr Jim Sheppard and Mr Phillip Roberts, the Aboriginal Medical Assistant, arrived at Oenpelli on 22 June 1964(49). Much of the information sought by Dr Langsford was already available on the excellent medical records belonging to the Department of Health. The mortality was known but the degree of morbidity presenting at the mission had to be extracted from the mission records. All people at Oenpelli were to receive a full medical examination but this aspect, which would have greatly helped the mission Sister, was never completed.

Dr FW Clements from the Institute of Child Health, within the School of Public Health and Tropical Medicine at Sydney University, was sent a copy of the report on Oenpelli. Dr Clements had been one of a team who developed Health Education with WHO shortly after the second World War. He had also carried out nutrition surveys for the same organisation and was prepared to provide guidance in the Northern Territory.
Arrangements were made for Dr Clements to visit Oenpelli during February 1965 accompanied by Dr Don Jacobs and Sister Kettle. All infants under five years were examined and for the first time the local staff received the guidance of an experienced paediatrician. In addition Dr Clements sat on the grass under a tree with a group of women and in a short time they were telling him what their babies needed. A new era of health education had begun.

In June 1965 Sister Kettle followed up on Dr Clements's visit and found a marked improvement in the health of the infants at Oenpelli. Sister June Armstrong had adopted Dr Clements's subtle methods of teaching and this had transformed her relationship with the mothers. Dr Clements visited Oenpelli briefly again in July 1966 when he came to study the infants at Maningrida(50). The Oenpelli women were there in a crowd waiting to tell him more and to see how well their babies were progressing.

There was a measles epidemic at Oenpelli in November 1965 but due to the improved nutritional status of the infants no lives were lost. Fresh cows and goats milk was available and it was believed this helped the infants make a quick recovery. Measles vaccine was introduced that year but due to a shortage in supply not all children had been protected.

In August 1961 Sister Kettle made the first survey by road of the properties south of the East Alligator River. At that time of the year the river crossings were at their lowest and Mr Alf Wilson, who was transporting supplies by road from Darwin to Oenpelli, considered the track to be dry and safe. The only route was via Pine Creek. The three small cattle properties of Munmalary, Mudginberri and Goodparla were visited along with the Nourlangie hunting and shooting holiday resort. Only forty-seven Aborigines were seen during the visit but one fourteen year old boy with leprosy was found and taken in the Land Rover to Darwin. There was much movement of people through this area and the number of Aboriginal people fluctuated. Others were camping away from white settlements and were most difficult to locate.

Sister Jillian Moore visited Mudginberri in April 1968 when there were eighty Aborigines and eight Europeans there. Some of the Aborigines acknowledged that their usual home was Maningrida. Dr David Cooke accompanied Sister Moore on a second visit by charter aircraft on 29 June 1968 when only twenty-four Aborigines were present. Two people were sent to Darwin Hospital. It was most difficult to provide a regular medical service to these small properties as the airstrips were too short for the Aerial Medical Service Doves.

During the late 1960s a white trader opened a store on the southern bank of the East Alligator River near Cahill's crossing. He offered a wider range of supplies than Oenpelli Mission and acquired a licence to sell alcohol. This man convinced a number of people that they should have their pension cheques addressed care of him. New social problems were introduced and much of the money, child endowment included, that should have been spent on food for infants was soon being spent on alcohol. It was many years before the Gagadju Association was formed and the Aborigines themselves had the area declared dry.

**Goulburn Island - Warruwil**

The RAAF had used Goulburn Island during the war and the enemy had bombed it. Their missionary, Rev Leonard Kentish, had been captured by the enemy and executed. He was replaced in 1946 by Rev Alfred HM Ellison, an energetic man who spent the next eleven years making this the most attractive and advanced mission in the Northern Territory at that time.
Goulburn Island was caught up in the measles epidemic in 1949 (Chapter 18) but the population was small and manageable. Sister Ivy Robb was there from 1948 to 54 and worked with only a small and very hot iron hut for a dispensary. There was no hospital.

As the first school teacher was appointed in 1916 and the number of students small, many of the Aborigines had learned to communicate well in English. In 1951 there was a move by the Methodist Missions to use the local dialect, but they were forbidden to do so by Mr Lyle Newby, then in charge of Aboriginal education(51). However, linguistic work had already commenced on recording the Maung language; church services were in Maung and Bible translation followed a little later.

In December 1951 Mr EC Evans of the Welfare Branch recorded the population of 243, 82 of whom were children. Besides Maung people there were Iwaidja, Walang and Gunwinggu. Prior to the opening of Maningrida in 1957 there was much movement among people from the mainland and many Gunavidji-speaking people visited Goulburn Island. About one hundred and sixty people identified themselves as Maung-speaking.

Dr Richard Brock conducted the first medical survey on Goulburn Island during May 1952 and he was most impressed with both the people and the mission. Early Fijian mission staff had upgraded their natural skills in basket and mat weaving and in wood-turning. High quality craft work was selling well interstate, along with buffalo hides from the mainland and a few crocodile skins. The people had some money to spend and were using it wisely. There was an excellent garden of 1000 pineapples, 80 papaws, 15 bananas, 12 mango trees and 100 or more coconuts. In addition there were eight acres growing potatoes, yams, cassava, maize, sorghum, beans, tomatoes, egg fruit and melons. Fourteen nanny goats yielded 3 gallons of milk daily. There were three good wells for drinking water and another eleven wells from which water was drawn for the gardens. With very few cattle the mission relied on sea foods including dugong and turtles.

Mantoux tests on 159 people showed 64 per cent positive but no active disease was found. When Dr Tarlton Rayment visited in July 1956 he commented that from 111 chest X-rays only one needed further investigation(52). He further remarked that of the 55 given BCG by Dr Brock in 1952 only 12 remained positive. Dr Stephen Watsford stated in 1953 that no cases of tuberculosis had been admitted to Darwin Hospital from Goulburn Island(53).

The first case of leprosy recorded among the Maung was diagnosed in 1949. By 1953 there were five patients from Goulburn Island at Channel Island leprosy hospital and two others were receiving treatment at the mission. From the records, only nine Maung people had been diagnosed up until 1970(54). Prior to 1957 when Maningrida was opened many Walang, Gunavidji and Gunwinggu people frequented Goulburn Island and there was a considerable amount of leprosy among these groups.

Sister Heather Hinch took over the medical work from Sister F Gaby early in 1958. She was there in February that year when Sister Kettle and Mrs Ingrid Drysdale from Maningrida stayed overnight, pending the arrival of HMAS Emu to pick them up to travel by sea to Maningrida. Sister Kettle visited again at the end of May to establish infant health records. There were then 41 infants under five years recorded as belonging to Goulburn Island but only 29 were available for the survey. All the infants seen were well nourished including the bottle-fed baby of a woman in Darwin Hospital with tuberculosis. Goulburn Island averaged about ten births per year; there was never a population explosion that occurred elsewhere.
From the time of her arrival Sister Hinch was interested in language study but it was not until 15 June 1966 that Sister Edna Zampech from Bundaberg arrived to release her for full-time linguistic work and Bible translation.

**Croker Island - Minjilang**

A few Iwaidja people, the remnant of the original people from Cobourg Peninsula, frequented Goulburn Island and moved back and forth between there and Cape Don lighthouse. Gradually they began to take up residence on Croker Island (Minjilang) although they were not initially encouraged to do so. The mission for mixed race children on Croker Island had been reopened again in 1946 when about seventy children returned from Otford, near Sydney. Some earlier children had grown up and sought employment elsewhere. Over the next decade a few more children were sent to the mission along with a few from broken homes in Darwin.

The Welfare Branch which subsidised the welfare children on Croker Island required that a trained nurse be available at all times at the mission. Each of the successive nursing staff filled the role of a cottage mother with a group of children in her care. There was no separate infirmary; the Sister attended anyone requiring rest in bed in their own cottage and the bathroom served as a dressing room. Among the nursing staff who worked on Croker Island were Sisters L Noble and Betty Knowles and for many years, Sister Lois Bartram.

The school age mixed race children enjoyed an annual medical health check by the Schools Medical Officer, Dr Helen Phillipps, from 1955 onwards. More is written in Chapter 28 on her work.

A few cases of leprosy occurred among the children. In view of their family backgrounds this was to be expected. However, another strange infection occurred in three young people that was diagnosed as *Mycobacterium ulcerans*. This disease is also common in the Sepik River area of Papua New Guinea but it has seldom been diagnosed in Australia. The infection manifests as a deep and spreading ulceration and is very painful. A child from Croker Island had been treated in Darwin Hospital in 1951 but it had not been conclusively diagnosed as *Mycobacterium ulcerans*. The first new case in November 1960 was an Aboriginal woman of eighteen years who would never have been away from that area. She was followed by a mixed race girl at the end of 1960 and a mixed race boy in March 1961. There was no relationship or known contact between the Aboriginal woman and the two mixed race children. The latter two lived under ideal hygienic conditions. All of these patients spent a year or more in hospital and once the disease was arrested they required extensive skin grafts(55). No further cases occurred.

The last of the mixed race children from Croker Island were transferred to the Somerville Homes in Darwin just before Christmas in 1967. The buildings on Croker Island then became home for the Iwaidja people and this move drew off a number of people from Goulburn Island.

**Daly River**

The new Daly River mission, opened in 1956, was the first of the Catholic missions visited by Sister Kettle to commence infant health work. The mission, built along the northern bank of the river, was on land believed to be above flood level (records of floods were kept at the police station half a mile upstream). There had been disagreement among the local populace as to whether or not the site was safe.
Early in March 1957 there was heavy rain. On Wednesday, 6 March the mission received a radio warning of a cyclone about fifty miles (80 kilometres) to the north and that the river at Katherine was very high. As the Katherine River flows into the Daly River, Fr Leary, in charge at the mission, foresaw the possibility of a serious flood. The river rose steadily and a swiftly flowing stream cut the mission off from behind, making the area an island. On Monday, 11 March the mission’s boat was used to shift the sisters and children to higher ground. Sister Eileen Mulhall and thirty three children were taken to a hill before word was received that a white family downstream was in serious trouble and the mission’s largest boat was diverted to rescue them. This family had been told to move but left it too late. The mission boat was lost in that operation and Aborigines in canoes rescued the family along with Brother Welsh.

Sister de Lourdes Usher and Sister Anthony Mary Menhinnitt, the one trained nurse, were still at the mission. Sister Anthony Mary had a weak and anaemic infant, David, in her care. That night the river rose rapidly and the two Sisters spent the night on the roof of the flooded convent with the sick baby and a group of small children. It was a tense night with the Sisters ensuring the children did not roll off the roof in their sleep. Added to the sound of swirling water were the terrible cries from the mission goats as they were swept away.

It was not until the 13th that Fr Leary obtained another boat and shifted the group from the convent roof to the closest hill - it was too late in the day to reach Sister Eileen. On that day an RAAF aeroplane flew low and dropped food by parachute. By the 14th Fr Leary had shifted them all to Sister Eileen’s hill along with some adult Aborigines. At that time the mission was providing education and a health service and most adult Aborigines were scattered among the many little farms; they were not resident at the mission. Fr Leary joined the group on the rocky hill where he used the food drop parachute to make a shelter for fifty children. A piece of canvas made a wind break for the Sisters and the sick baby. An attempt was made to light a fire to cook rice and damper but the wood was too wet so they all lived off the tins of meat that had been dropped. On the night of the 16th heavy wind blew down the children’s shelter but by the 17th there was evidence of the water beginning to recede. On the 19th Sister Anthony Mary and the sick baby were returned to the mission but most of the school children remained on the rocky hill until the 25th(56). All suffered from exposure and sunburn but no lives were lost.

Another devastating flood occurred at Daly River mission late in March 1974(57). This time RAAF helicopters were used to evacuate the population north to the township of Batchelor where there were buildings in which to shelter. There were blankets, dry clothes and cooked meals - a very different story from 1957.

On 6 July 1958 Sister Kettle accompanied Dr Rene Manning to Daly River by road in the unlined Land Rover. This vehicle was excellent for rugged country but Dr Manning was a fast driver and, while he had a steering wheel to support him, the passenger was thrown in all directions. Seat belts in road vehicles had not yet been invented. There were no bridges or built-up crossings but the Landrover, when driven carefully, could traverse most hazards. The countryside teemed with wallabies and a smattering of big kangaroos and the mission made full use of these for food. Dr Manning was given the use of a comfortable room in the presbytery and Sister Kettle a more humble room at the end of a large iron shed. It was most difficult for women to visit Catholic missions as there was nowhere to stay.

A total of twenty one infants under five years were seen at the mission; another four were in Darwin Hospital. Much time was spent visiting the peanut farms where a further eight
were examined. Sister Anthony Mary did not have transport to visit all the farms hence the mission had not established a register of infants. The police station did not keep a record of births and the peanut farmers and others were not interested. Discussions were held at the mission to find ways for the nursing Sister to supervise the health of children in the whole area. People moved between Daly River, Port Keats and Delissaville so it was never easy to state who belonged at Daly River. However, with a health service in the area the population did increase.

At times when Daly River Mission lacked a religious nursing Sister other trained nurses were employed. Housing was provided for both school teachers and nursing staff and these positions were subsidised by the Welfare Branch. An English nurse, Sister Joan Mahan, was there in 1968. She had earlier worked at Victoria River Downs and learned by experience not to expose Aboriginal mothers to over-zealous care which they might not understand. A woman in early labour had been given an enema, a routine procedure in hospital, but she was offended and gave birth under a coolibah tree with a relation in attendance. At Daly River Mission most of the women came to the clinic for antenatal care. However none of them had any concept of their last menstrual period so all calculation of due dates depended on the physical examination. Mabel Meinbel, the mother of seven living children, was pregnant for the ninth time. Her son David was the baby cared for by Sister Anthony Mary during the flood in 1957 and he had died about a year later. As Mabel grew larger Sister Mahan began to suspect twins and started to prepare the mother. On 23 March 1968 a doctor and Sister with the Aerial Medical Service visited and both assured Mabel that there was only one vertex presentation (head first). Shortly after that Mabel had some labour type pains but these stopped and in the meantime her abdomen was becoming very large. On Saturday, 6 April she began having pains again and Sister Mahan could palpate feet and hear foetal hearts literally everywhere. She was concerned and called the Aerial Medical Service. Dr Brian Kirkup agreed to bring Mabel to Darwin and, as there was an empty charter aircraft in the area, Ossie Osgood in a small aeroplane was asked to bring her in. When Ossie Osgood saw the patient he was most apprehensive but was reassured that the flight was only 35 minutes so he took off at 3.30 pm.

Mabel travelled well and on arrival at Darwin Hospital she was promptly X-rayed. The senior obstetrician, Dr Tom James, examined the X-ray and agreed there were triplets but as he was committed to fly to Alice Springs on Sunday morning he handed over the patient to the registrar, Dr Graham Isaacs. Mabel came into labour late on Sunday and the first baby, a breech presentation, was born at 8.40 pm; another breech followed at 8.57 pm but the third one was born head first. Everyone sighed with relief until Sister Lesley Young, with her hand on the mother's abdomen, said 'there is another one'. The fourth, another breech, took a little longer. Mabel was silent so no one knew her thoughts but she certainly was not laughing. The news spread throughout the hospital and by Monday morning most doctors had looked at the X-ray; a fourth spine could be seen high up but the head had been too high for the picture. The total weight of the four baby girls was 10 pounds 14 ounces (4933 grams).

The babies did well in humidicribis until one developed chest complications and eventually died. In the meantime Mabel became famous and was interviewed - it is doubtful she said more than 'yes' or 'no' but she did smile for the cameras. There were many gifts including a new housecoat which she promptly gave to another woman. Back at the mission the news was heard with some degree of shock and when Fr John O'Carrigan told the community, Dandy, the father, hung his head while the other people moved off in small groups with their heads down. There was grave concern for the future of the babies so photographs were sent for, or found, of white triplets and quadruplets to assure the people it was a natural phenomenon. They were also reassured that the mission and the
government would feed the babies. The family did not have a surname and at this time the community gave the name Jimarin.

By the time the three quadruplets were let go home, things had settled down at Daly River. The Department of Health sent Sister Margaret Cook and Nurse Mercia Roberts (the sister of Phillip Roberts) to assist with the care of the babies. They were provided with a caravan. This was timely as shortly afterwards Mabel was pregnant again and on 20 March 1969 she gave birth to twin girls bringing the total number of children up to thirteen, which is large for an Aboriginal family.

The Daly River community steadily expanded but not without hardships and hazards. A privately owned store with a liquor licence was opened just a few hundred metres from the mission and led to great distress in homes and in the community.

Bathurst Island

Sister Kettle visited Bathurst Island Mission by air on 3 September 1958. Sister Marita Scullion was the only trained nurse and she had been there since 1945. Most of the young women on Bathurst Island had been educated at the mission and Sister Marita had trained several of them to work in the hospital - she could never have managed without them. There was no hospital on the mission when she arrived but a second-hand Sydney Williams hut was erected in 1946. The ex-army huts were being sold cheap but the buyers had to undo the nuts and bolts and reassemble them on their new site. Ex-army beds, many of them the folding iron type, were used to equip both mission and welfare settlement hospitals.

Sister Marita had earned a reputation for her care of mothers and babies but this was not without trauma and heartache. Very early in her experience she had a woman with a retained placenta and a doctor was flown out from Darwin. As the doctor attempted to manually remove the placenta the woman died. There had not been a serious loss of blood but the woman had been grossly anaemic from hookworm infestation, a condition about which Sister Marita was just learning. She had trained at Warnambool in Victoria where there was no hookworm. As mentioned earlier, hookworm had become a serious problem before the war and little had been done to reduce it during the war. The main public toilet at that time was the sandy beach beside the mission from which the faeces were removed each day by the tide; however, the moist sand proved ideal for hookworm larvae.

As soon as there was a hospital and beds, women came for delivery. During the 1950s Sister Marita was averaging about thirty deliveries each year - this was not happening to the same extent elsewhere. It had taken some time to build up this level of confidence among the women. In September 1946 one of Sister Marita’s Aboriginal staff came to her in the evening to say a woman was giving birth to twins on the beach and the second wife had already dug a hole to bury the second baby as soon as it was born. Another Sister accompanied Sister Marita while their helpers brought a stretcher to carry the mother and two male babies to the hospital. The mother seemed quite happy with her infants but when she was being discharged she handed one, Theodore, to Sister Marita with the advice that she only wanted one, Eustace. Sunshine powdered milk was sent from Darwin and Theresa, the most experienced nursing-assistant, helped rear Theodore. He was three years old when his family agreed to have him back again.

Wilma Therese was the most famous of Sister Marita’s successes. On 15 June 1953 two women came across Apsley Strait from Paru village by canoe to tell Sister Marita that a woman had given birth, too soon, to a very small baby girl. The women were given cotton wool and a cotton rug and asked to go back and bring in the mother and infant. They
return day the next day with the baby weighing a total weight of 5 lbs. and the mother was
healthy. She was brought to the hospital of the hospital, but was found to be anemic, and
Wilma weighed 5 lbs. or so, she was clinically three weeks old. The mother said she would
indicate. Sister Marta considered Wilma might not survive a trip to Talise, so
she nursed her in a shoe box. Various lactating mothers expressed breast milk and Wilma
gained this milk by phlegm every few hours. After several weeks she was sufficiently
strong to suck from a breast. Wilma was a mother idea but the cause of death is not yet
known. The hospital staff helped care for this baby and an American woman, Nora, adopted
her. She grew up as a very fine girl. At thirteen years she started traveling with her mother
twenty-one she had a severe fit while away on holidays. Wilma had not taken any
medication and she died.

In August 1930 Sister Martin was transferred to Fort Kears Mission,
Mr. E. Calkins

Hookworm infestation continued to be a major problem, particularly in those children
White people had been taught that hookworm lives in the body and that it caused
frequently in these children. It was not known if the infants did not become infected
without treatment until they started to walk. Once at Dondole Mission, Father Havana and Sister Kette were
presented with an infant of six weeks who was grossly anaemic. A hemp bag was put on the
baby, until he passed stools, which revealed a heavy load of hookworm. This would
suggest it had been laid on contaminated ground shortly after birth. People spent
the beach and babies were laid on the beach at Bathurst Island. Clothes were not a deterrent
to hookworm, a fact demonstrated by the army on Bougainville Island during the war.

Tetrachlorethylene was the drug for hookworm; Alcopar came a few years later. On top
of that an iron preparation, Ferrous Lactate, was given to children and parent sulphate to
adults. The iron preparation helped them to maintain red blood cells. The parent sulphate was
prescribed for an aggravated, leading to the improvement of iron mixtures did not cause
decreased red cell count or iron deficiency so it was given in milk and swallowed quickly. The treatment was
simple and effective. In 1935 an intramuscular injection, Inferon, became available. Dr. Langston had been to Bathurst
Island and on 13 May he sent some of the first batch of Inferon to Sister Marta to treat
four very anaemic children. It was successful. But the load of hookworm was so heavy that the
anaemia soon returned. Inferon became widely available and was given to all children
over 4 months old.

In September 1938 there were 142 infants recorded under the age of five years of whom
Sister Kette examined one hundred and four. Six months earlier, during March to May 1937,
Dr. Stephen and Sister Kette had conducted an extensive survey during which he examined 1,200 people.
He did not give a population breakdown but the under five years group would have made
up 20 per cent of the total. It could therefore be anticipated that 50 per cent of the
population were children under seven years. There were twice as many people as when
the mission had started in 1917. The school children were receiving prepared meals while
most adults received dry rations and went hunting for most of their protein foods.

The mission cattle herd was small, and certainly not sufficient for the size of the population.
Dr. Stephen was concerned about the health of many infants and, aged 75 years
old, he suggested that an adequate herd of cattle should be introduced. The herd
would provide milk, meat and other commodities. The work was done by the one
hunting Sister Kette and recommended at least two, more trained nurses. When Sister Kette
visited six months later, Sister Marta said without extra-trained help and the
feeding of some infants, was under the supervision of a non-nursing Sister. The overall
impression then was that the infants were generally below their expected weight for
age. The mission authorities, quite apart from the one nurse, were of the opinion that
there was ample bush food available whereas it was more likely that the population had
expanded beyond the island's carrying capacity. Dr. Stephen in a 1939 paper in January 1939,
reported obvious undernutrition and considered then that there was not enough bush food.
For the size of the population. Fewer than half of the small children seems to
have been diseased. The mission gardens were good but not enough. Typically,
In August 1959 Sister Marita was transferred to Port Keats Mission. Her replacement, Sister Benedicta Carroll, was transferred from East Arm leprosy hospital. These transfers were made by the Catholic missions. A new hospital had been opened in the Mitchell Island and it was later the staff movement and Sister Marita spent the next seven years working in another location. She was transferred to Port Keats in 1959. During these years the hospital underwent a complete change, from a small, basic hospital to a modern, well-equipped facility. The hospital staff included Sister Benedicta, Sister Barbara, and Sister Elizabeth, who provided nursing and medical care to the community.

In 1966, Sister Benedicta was appointed as the first nurse to the hospital. She was assisted by Sister Barbara and Sister Elizabeth, who provided nursing and medical care to the community. The hospital was equipped with modern medical facilities and was able to provide quality care to the patients.

During the early years, the hospital was served by a small medical staff, including Sister Benedicta, Sister Barbara, and Sister Elizabeth. They provided nursing and medical care to the community, and were able to provide quality care to the patients. The hospital was equipped with modern medical facilities and was able to provide quality care to the patients.

In the early 1960s, the hospital was served by a small medical staff, including Sister Benedicta, Sister Barbara, and Sister Elizabeth. They provided nursing and medical care to the community, and were able to provide quality care to the patients. The hospital was equipped with modern medical facilities and was able to provide quality care to the patients.
during the year and three of the infants were in Darwin Hospital with encephalitis; it was the year of the epidemic.

When Dr John P Kerins conducted an extensive medical survey during November to December 1957 he recorded 406 people of whom he examined three hundred and thirty-one. He considered that 350 people normally resided in the area and that the remainder were transient from elsewhere. At this time the missionaries had much to say about Aboriginal men going to work elsewhere and leaving their women and children in the care of the mission. The medical clinic was in the care of Sister Marion Whelan who reported 19 births and 3 deaths for the year. If this continued the population would soon show a marked increase, which it did. Wherever there were trained nurses taking a keen interest in the mothers and babies, the number of babies increased; this became obvious before the end of the 1950s and continued from there on.

Sister Kettle visited Port Keats for five hours on 12 July 1958 to establish standard infant health records. Sister Marion was away and the mission was without a nursing Sister. At this time there were 73 infants recorded under five years of age of whom Sister Kettle quickly weighed, measured and checked sixty-five. Weight graphs for the babies were started in Darwin and sent to the mission. Two babies were artificially fed, one being the baby of a woman in hospital with leprosy. Only one infant was seriously anaemic, others having been successfully treated with intramuscular injections of Imferon.

Anaemia had become a serious problem among the infants and some of the women. Hookworm was the obvious cause but Dr John Crotty, the pathologist who had been investigating the problem, was of the opinion 'that hookworm is not an important aetiological factor' (64). Other doctors were inclined to agree yet there was no widespread gross anaemia where there was no hookworm. Fresh beef was available at Port Keats where two bullocks were killed each week. Dr Kerins had spent some time questioning Aborigines on their bush remedies and recorded that a special white clay was eaten for the treatment of diarrhoea. Whether it was this clay or some other is not certain but clay eating at Port Keats became a considerable problem during the 1950s and several women and children blocked their bowels securely and were sent to Darwin Hospital. On examination their colons were readily palpable and required many enemas to help pass the clay.

Dr Michael Ryan looked after the health of the people at Port Keats and would spend a couple of days there at a time. He transfused many of the grossly anaemic babies with blood from their male relatives. Early in 1961 during cyclonic weather, when the Aerial Medical Service could not land at Port Keats, a woman suffered a severe post-partum haemorrhage. Dr Ryan had left blood transfusion equipment at Port Keats and he was able to tell Sister Marita whom to bleed for a transfusion so the woman's life was saved.

At the time Sister Marita Scullion was transferred to Port Keats in about August 1959, the hospital was in a Sydney Williams hut. As described by Mr Jeremy Long in 1963 there was a women's ward with seven beds, one obstetric bed, a men's ward with four beds and a store. Two other small iron buildings were used as kitchen and an outpatients clinic. The last two buildings were erected about 1960. Sister Marita had 15 women on her staff, three of whom were experienced nursing assistants, while others did the laundry, cleaning and cooking. In June 1963 Mr Long counted 424 people of whom 193 were under 14 years. He estimated the crude birth rate as 40.5 per 1000 compared with the Australian rate of 22.5 per 1000 (65). In the population breakdown only 17 people were believed to be over 60 years of age.
A new hospital of 22 bed capacity was completed at Port Keats in February 1967(66) and Sister Thomas Mary (Yvonne Gleason) arrived to work with Sister Marita. By that time the Department of Health had several Survey Sisters who visited Port Keats and elsewhere, one or two at a time, to carry out Mantoux surveys, infant health assessments and full surveys for leprosy. It was not physically possible for the nursing Sisters on the mission to do this work on top of their routine work. Sister Shiela Summerton from the Tuberculosis Control Unit, in July 1968, carried out Mantoux tests on 523 people of all ages and gave 420 BCG vaccinations(67); the records alone were a time-consuming task.

The Aerial Medical Service was called to Port Keats Mission on 3 February 1962. Sister Marie Yapp was on board and Sister Marita showed her a child of two years who had an infected foot that was not responding. As the child had a temperature and swollen glands in his groin, Sister Yapp brought him to Darwin. The abscess was opened and drained on the 6th but a further abscess developed on his scalp. Pathological investigation revealed a rare condition, Melioidosis (Ps pseudomallei), which responded to none of the available antibiotics. The autopsy following death on 2 March revealed a lung abscess and the right adrenal gland destroyed by another abscess - there were in fact multiple internal abscesses. In June 1960 a mixed race man had died in Darwin Hospital with Melioidosis but there was no connection between that man and the previously healthy little boy at Port Keats(68).

The domiciliary care of leprosy patients added to the work of nursing staff in the outback. As well as regular medication the patients' hands and feet required constant supervision and care. In February 1969 there were 49 diagnosed leprosy patients, many of whom were seriously deformed and although Aboriginal staff had been trained to care for them, the Sisters were responsible overall.

**Malingrida**

The Methodist Missions were aware of a large population in the vicinity of the Liverpool River midway between Goulburn Island and Milingimbi. The measles epidemic in 1948 (Chapter 18) tragically revealed the need for another mission and a health service but the Methodists had neither the manpower nor finance for the undertaking. Most of the churches were heavily committed in Papua New Guinea where there were thousands of people compared with hundreds in the Northern Territory.

Following the closure of Mr Syd Kyle-Little’s camp at Malingrida late in 1948, the area and its people were largely neglected. Many had visited Milingimbi and Goulburn Island while others were tramping overland to Darwin. Mr Gordon Sweeney, writing in September 1955, stated there were approximately two hundred people from the area in Darwin at that time(69). Men were taking their women and children to Darwin, an indication of their intention to stay.

To complete the census of Aborigines undertaken in 1955, Mr Gordon Sweeney and Patrol Officer Alan Pitts were flown to Goulburn Island on 3 August 1955. Mr HC Giese had invited the Department of Health to have a doctor accompany the census team but the Survey Medical Officers were busy bolstering hospital staff and could not be released. From Goulburn Island the two Patrol Officers travelled in the 30 foot mission boat MV Derna to Malingrida on the 5th. Miss Beulah Lowe, the teacher-linguist from Milingimbi, had already compiled a census of all people known to the missionaries at Milingimbi. Similar information was also available from Goulburn Island. The two Patrol Officers called at all known camping areas on the way. They travelled by dinghy up the tributaries of the Liverpool River and then visited the Blyth River and Cape Stewart where they had the assistance of Harry Mulumbu, who had at one time been a police
tracker in Darwin. On 19 August, with the survey almost completed, Mr Alan Pitts developed fever (he had been in Papua New Guinea) and a dash was made for Goulburn Island which they reached at 3 pm on the 20th.

Mr Gordon Sweeney reported seeing several people with obvious leprosy and many children with ugly sores (yaws). He estimated about four hundred people between the Liverpool and Blyth Rivers who were not in contact with the neighbouring missions. Mr Sweeney recorded about ninety people less than he had seen in 1939 but considered this was due to their movement west and into Darwin and south through Mainoru to Beswick (Bamyili). No attempt was made to gauge how many perished during the measles and whooping cough epidemics.

To encourage the wanderers from the Liverpool River area to return to their own country, the Welfare Branch planned to open a trade store at Maningrida. Concern was also felt over the reports of widespread leprosy in the area. Mr David Drysdale and his wife Ingrid, both experienced mission staff from Western Australia, were selected for the pioneering task. A young Patrol Officer, Mr Trevor Milikens, was sent to work with them while Patrol Officer Ted Egan accompanied them to make a foot patrol of the area. Rough weather delayed their departure a couple of days but they eventually put to sea on the tide at 11.30 am on 5 May 1957. Someone inadvertently stacked the lunch basket in the hold which left them with only bread, potatoes and canned meat. The night of the 7th was spent ashore on Goulburn Island where they took aboard a Gunavidji family returning to Maningrida. As their arrival was late and the river estuary choppy, they spent another night on the boat in the lee of Entrance Island and started going ashore at 7 am on the 9th (70).

Six Maningrida men with a good knowledge of English had travelled with the party from Darwin and they took command in organising the local men to help with the unloading. There was great excitement and the new arrivals were made most welcome. Ted Egan helped until 16 May when he left on his foot patrol to tell people what was happening. By the 26th, leprosy patients started arriving and the condition of most of them was such that Ingrid Drysdale recommended a separate camp. A site was selected beside a sandy beach upstream from the new settlement. The Aborigines called the new isolation camp Alamace. Mrs Drysdale had no technical knowledge of medicine but, having reared her own family on isolated missions, she had lots of experience and sound commonsense. With no thought for herself she commenced daily dressings on the many raw ulcers and other appalling lesions, but she could not commence medication before the patients were diagnosed by a doctor.

The next supply boat arrived on 6 June bringing a Department of Civil Aviation surveyor to select the site for an airstrip. By that time over one hundred Aborigines had gathered at Maningrida and all men who wanted work were employed in clearing the heavy timber from the airstrip site. At the same time the white men, with local labour, were erecting two Sydney Williams huts, one of which became staff accommodation and the other a store. The former was partitioned with hessian to provide privacy for bedrooms while flour bags on the floor kept sand out of the beds.

A bread oven was installed outside and within two months there were two Aboriginal men employed baking bread. The workers and patients received an issue of bread instead of flour for damper.

Dr John Hargrave, recently returned from the Lake Mackay expedition, was the first doctor to visit the new settlement. He arrived on 11 September 1957 after a rugged trip by sea on the launch Temora. Accompanying the doctor were two Aboriginal medical
assistants, Phillip Roberts from Roper River and Nabilia from Groote Eylandt. One patient, Molly Wadamguga, a Burara woman who had been on Channel Island and then East Arm Hospital for ten years, returned home in Temora and received a great welcome as people realised who she was. She had gone to hospital from Milingimbi and her return, without a blemish on her body, greatly impressed everyone. Molly had forgotten the Burara language and had to learn it again. She became a most valuable home helper for Mrs Drysdale and later an experienced Health Worker.

Facilities at Maningrida were still most primitive but a bark hut had been built for the doctor and his two assistants. All Aborigines had to be identified and recorded on medical record cards. Much of the work of sorting out families and their relationships was done by Phillip Roberts and Nabilia both of whom were well accepted by the local people.

Mrs Drysdale had been treating many children with ugly sores. Dr Hargrave diagnosed secondary yaws in 14 of them plus 13 others with tertiary yaws(71). Injections of penicillin brought dramatic healing which the whole community were able to observe. So much penicillin was used that Dr Hargrave had to order more. Captain Jack Slade accompanied by Mr Arthur Marshall from the Methodist Mission office in Darwin made an air drop by parachute on 21 September(72). Arthur Marshall executed the actual drop.

Leprosy proved to be far the greatest medical problem at Maningrida. During this initial survey 370 people were given a full clinical examination; 24 new cases of leprosy were diagnosed, four of whom were lepromatous (infectious)(73). Much physical damage had already occurred. While Mrs Drysdale was drawing water from the spring she was approached by a nervous young man who wanted treatment but needed assurance he would not be taken away. Bundawabi was walking on the anaesthetic stumps of what had once been feet; all that remained of his fingers were deformed nails, the fingers having been resorbed. Later, his natural sense of fun made him the life of the party at the Alamace camp.

Those leprosy patients who were prepared to stay in the Alamace camp were started on treatment with Avlosulphyde (Dapsone). To avoid any reaction to the medication the initial dose was small and gradually increased, a policy that was later reviewed and revised. Phillip Roberts volunteered to stay at Maningrida to care for the many patients until a nursing Sister could be appointed. An iron roof with brush walls was erected at Alamace to provide shelter and an elderly woman was appointed by the community as a chaperone, an arrangement acceptable to all. The medical clinic was a series of empty drums up-ended under shady gum trees. Everyone slept on the ground as there were no beds.

Dr Hargrave taught Phillip Roberts and Nabilia how to remove dead flesh and old callus from ulcers; they were joined by a new volunteer, Jimmy Gularawuna. He was young and enthusiastic and although illiterate he learned quickly. Dr Jimmy, as he came to be known locally, worked off and on for many years as a valuable member of the health team at Maningrida.

All people were examined for trachoma. Four were totally blind and four others had lost the sight of one eye. Fifty five people had corneal scarring while a further ten had advanced to entropion and trichiasis, the inversion or incurring of the eyelids when the eyelashes brush on the eyeball itself. This latter condition is immensely painful. A couple of years later when Sister Kettle visited Marragalidan, south-west of Maningrida, she recorded for the first time a ten year old girl whose eyeballs had been destroyed by infection. Bush Aborigines did not appreciate being questioned but they did agree the
child had been born with normal eyes. In 1957 Dr Hargrave was not able to commence treatment for trachoma as there was no one to carry it out.

Dr Hargrave saw no obvious anaemia at Maningrida. He did not test for hookworm because in the initial survey of bush people, he wanted to be careful not to offend anyone. Hookworm examination required specimens of faeces.

During the first medical survey Trevor Milikens made several patrols on foot and by canoe to invite people to come and see the doctor. He saw more people with leprosy but they would not all come in at that time. Dr Hargrave reported later that there was reason to believe many more cases of leprosy existed but they needed to overcome their fear and come to Maningrida voluntarily. In the meantime he recommended that no one be forcibly removed to East Arm Hospital as this would jeopardise the good will he had endeavoured to achieve.

Two cases of malaria were treated and several other people had enlarged spleens. One of the men with a positive smear for malaria was from Goulburn Island. No other cases of malaria have ever been reported from the Maningrida area.

During his stay at Maningrida Dr Hargrave treated five people stung by box jellyfish (Chironex fleckeri) or sea wasps as they were then known. Within a couple of hours of his departure Mrs Drysdale had to treat three small children who were stung. One child was in a serious condition but he did recover. In later years the occasional death occurred. One of these was a small child who did well at first but a few hours later collapsed and died.

On 12 October 1957 Rev A Ellison on Goulburn Island called on the radio transceiver to advise that a landing barge, Wewak, was on its way to Maningrida with stores. It arrived at 8 am on the 13th and as it came right in to the beach the local people fled to watch from the safety of the tall timber; the front of the vessel opened and out ran their first 4WD Land Rover. Next morning Wewak left on the high tide taking Dr Hargrave, Phillip and Nabilia en route to Milingimbi where the Aerial Medical Service would pick them up. A canoe was also taken aboard as medical supplies were to be picked up at Milingimbi. A few days later Phillip Roberts returned to help Mrs Drysdale as the many leprosy patients were too much for any one person. Phillip remained about a year and was joined there by his wife and family.

On 5 November the Temora came into the river estuary with supplies. Mr EC 'Ted' Evans was on board and had brought a new transceiver for Maningrida which allowed them to contact their neighbours more readily at Goulburn Island and Milingimbi. There was a very ill baby which everyone said was dead (this was not so). Ted Evans took the infant with him in Temora when it sailed for Milingimbi on the 8th. Sister Smith cared for the infant that night and the Aerial Medical Service aircraft called early next morning and took the baby to Darwin.

Some other patients were urgently in need of medical care but, apart from advice by radio, help was not available. A young woman in the leprosy camp suffered a reaction to her medication. Dr Hargrave was out of Darwin and no one else seems to have made the right diagnosis. Dr Hargrave spoke on the radio on the 12th and stopped the medication but without specialist care the patient died on the 17th(74). This was the incident that brought about a major change in radio communication and doctors were once more permitted to speak direct on the radio instead of having to send telegrams. Unfortunately it required a tragedy to effect change. After the death the camp at Alamace had to be promptly moved to fresh ground.
Mrs Drysdale needed to go to Perth to see her aged mother and when the Methodist Mission boat Larrpan put in behind Entrance Island for shelter on 27 January 1958, men went in a canoe to make contact. The boat was headed for Darwin and Mrs Drysdale was taken aboard at 7.30 am next day. During her absence a woman gave birth to a premature baby. David Drysdale sought medical advice but the radio reception was poor due to inclement weather. Captain Jack Slade, flying in the vicinity, heard the call and he circled Maningrida to relay the doctor's advice. The infant lived 36 hours. The Aerial Medical Service Drovers and Doves could not land on beaches as the smaller Dragon aircraft had done earlier.

As Dr. Hargrave was going to Sydney for a diploma course in Tropical Medicine and Hygiene, he was unable to return to Maningrida and asked Sister Kettle to make the journey. Ingrid Drysdale was back in Darwin and the two women were flown to Goulburn Island on 17 February 1958 where HMAS Emu picked them up at daylight the next morning. The Navy was taking a consignment of fuel to Maningrida where they arrived just before dark. HMAS Emu stood off for two days to take Sister Kettle and Mr Jim Gallagher, then in charge of Aboriginal education, back to Goulburn Island.

A review of the leprosy patients at Maningrida revealed that Phillip Roberts was doing an excellent job in caring for them. He had trained another young man, Toby Barmadla, to assist him with the many daily dressings. Sister Kettle told them of the canvas boots made by Sister Jessie Smith at Milingimbi to protect bandaged feet and these were copied as soon as canvas was available. Sister Kettle made the first mittens to keep dressings on the remains of hands and these became most popular. It was difficult for people who had always hunted to sit back and rest. Instead they were into the nearby mangrove mud hunting crabs and other delicacies. Canvas boots, however, kept the mud out of the dressings and bandages.

Mrs Drysdale looked after the many undernourished children, most of whom came from the upper reaches of the Liverpool River. Most of the undernutrition was to be found in distinct family groups. Sister Kettle assessed each of these infants and gave individual advice on their care. Immunisations were not commenced until there was a trained nurse to continue the injections. On 16 April Mrs Drysdale recorded seeing a pandanus cone walking about with two very thin legs underneath; she thought it was a child playing and removed the cone to reveal an old woman grossly disfigured by yaws. The woman was given material for a skirt and other gifts and assured that she did not have to hide any more.

The local hunting at Maningrida was good. The hunters would return by canoe each evening laden with food: turtles, fish, dugong, crabs, singed flying foxes on a spit, honey in the comb and various bush fruits. When the seagulls were nesting, many eggs were collected and likewise with the magpie geese in inland lagoons. Crocodile meat was readily available as Aboriginal men were hunting for skins that could be bartered at the trade store. The Drysdales dined well on local food but when the first aircraft landed on the new airstrip on 24 April 1958, they were delighted to receive some beef to roast. There were few buffaloes in the vicinity of Maningrida so they seldom had beef.

On 29 April 1958, Lieutenant Palmer of the Salvation Army landed his aircraft on the airstrip and out stepped Mr Harry Giese on his first visit to the new settlement. Mr Les Penhall of the Welfare Branch was the next official visitor to arrive by air on 17 May in a Beaver aircraft. A month later, on 22 May, Rev Harold Shepherdson flew Dr Rene Manning in for a week. Dr Manning reviewed the patients at Alamace but he did not
remark on any new cases being diagnosed. Likewise he did a Mantoux survey but did not provide a report except to say he had insufficient BCG to vaccinate all the negative reactors. He saw no obvious tuberculosis but mentioned a healed patient who was living there. With the help of Phillip Roberts some specimens of faeces were checked for hookworm and one was found to contain hookworm ova. He did some haemoglobin estimations on small children and found one with 6.5 gm per cent while the rest were above 10 gm per cent (75). Hookworm and anaemia were not a major problem at that time but this situation changed a few years later.

Dr Manning was concerned that too much flour, sugar and biscuits were being sold in the trade store. He omitted to say that Mrs Drysdale was most generous with boiled lollies for the children. At that stage most people had good teeth. Maningrida was a popular place because no restrictions were placed on the sale of sugar and biscuits. Indeed a child could even make a meal from a packet of sweet biscuits whereas the neighbouring missions did not stock lollies or biscuits and restricted the amount of white sugar a family could purchase.

It was a momentous day when on 21 June 1958 an Aerodrome Inspector arrived to licence the airstrip. He was accompanied by Mr Giese and his family. On 12 July Mr Giese visited again accompanied by the Federal Minister for Territories, Paul Hasluck. Maningrida was to become a settlement and the Welfare Branch required extra finance.

During August progress was made on a cottage next to the Drysdale's home for a trained nurse. Sister Eileen Jones who had earlier been at Hooker Creek, was flown in on 12 August 1958. Mr Trevor Miliken, who was immensely popular with the local people, was transferred out on the same aircraft. The new cottage was humble but attractive with a magnificent view over the beach and the river estuary. The sea breeze was cool and refreshing, a great advantage over the Nissan huts built for nursing staff a few years later. Those Nissan huts had windows above the heads of the occupants but there was no breeze at all at sea level.

Just after the arrival of Eileen Jones, a woman went beserk; the first mental patient at the new settlement. She had a machete with which she was threatening people and with one stroke she decapitated a dog. This woman respected Mrs Drysdale's grey hair and authority and handed over her weapon. She was taken to Darwin Hospital on the first available boat and Mrs Drysdale accompanied her as an escort.

Dr Hargrave paid a brief visit again on 28 October 1958 on his return from Sydney. Captain Harry Moss landed a Dove on the airstrip, the first landing made by the Aerial Medical Service. There were some very sick patients whose families refused permission for them to go to Darwin. By this time a medical clinic had been constructed. There was a room with canvas walls and roof and an extended bough shelter for the outpatients clinic. Shell grit was brought from the beach for the floor and all cupboards and furniture were made from packing cases. About eighteen months later the whole clinic was protected by a higher roof of old galvanised iron. There was no accommodation for inpatients.

On 20 November a young man of about eighteen years died from leprosy. This death had been expected but he had enjoyed good food and care during the last year of his life. By this time a child, Dick, who had been diagnosed as having lepromatous leprosy at seven years of age, was acutely ill and his parents agreed for him to go to Darwin; he was the first of the leprosy patients to go and he lived another four years.
Dr Hargrave was at Maningrida again on 24 November 1958 for a few days. Another small boy, Johnny, was seriously ill with a grossly distended abdomen, but his father refused to let him go to hospital; he wanted him to die in his own country. Dr Hargrave promised the father that if the doctors in Darwin could not cure him he would bring him home to die and a letter to that effect was sent to Dr Desmond Cooper, the surgeon specialist. The parents agreed on the condition that his nineteen year old sister, Mondalmi, be allowed to go with him. Mondalmi had lepromatous leprosy and it took about an hour each day to renew the dressings on her hands and feet. These wrecks of humanity landed in Darwin as a QANTAS flight from London discharged its passengers.

When Johnny underwent surgery Dr Cooper found a tuberculous infection of his abdominal nodes. He responded well to medication and a few weeks later was at home where Sister Eileen Jones continued the treatment. Mondalmi was admitted to East Arm Hospital where she spent most of the next year in bed where the ulcers on her hands and the stumps of her feet were healed with skin grafts. She was then provided with surgical boots and went on to enjoy another twenty years of life.

On 27 November 1958 a new type of problem arose when a small group of Aborigines arrived from the Blyth River bringing a baby weak from hunger. Rex had been born about the 13th and his mother, an advanced case of leprosy, had died about five days later. Some of the father’s other wives had supplied enough breast milk to keep him alive until his father, Jabalali, presented him to Mrs Drysdale with the request that she rear him(76). Sister Eileen Jones nursed him through the first night while he was so weak, but once he had food inside him he soon gained strength. The two white women took it in turns to have him at night. Rex was unique inasmuch as he was bald, having only fine fluff for hair. This is uncommon in Aboriginal babies who usually have much hair on their heads at birth.

Several weeks after the advent of Rex another baby, Janet, was brought to Mrs Drysdale with the same story that her mother was dead. On 18 February 1959 Sister Kettle was flown to Maningrida to relieve Eileen Jones who was a patient in Darwin Hospital. Janet had just arrived and was being fostered by another woman who did not have sufficient breast milk for her. Furthermore, rumour had it that her mother was alive but very sick with leprosy. After reassurances that she would not be sent to Darwin, the mother came out of the bush. She was a painfully thin woman of about sixteen years with both her hands and feet grossly deformed from leprosy. The mother agreed to stay at Alamac and receive good food, while Janet was taken into the house where Sister Kettle cared for her while Mrs Drysdale looked after Rex. On the 27th Janet was sick and when Sister Kettle attempted to feed her the baby had arching of her back and head retraction. By radio Dr Hargrave ordered penicillin and by evening she was able to drink again. It was many months before the head retraction improved and the baby was able to curl up once again.

The first large group of five leprosy patients volunteered to go to Darwin in a charter aircraft on 19 February 1959. This was a considerable step forward. Mrs Drysdale had been telling them they could not go to Darwin until many had reached the stage where they decided for themselves that they wanted to go. On this occasion they had been told there was room for only five and the patients selected who should go first. Over the next few months most of the leprosy patients were transferred to East Arm Hospital and others kept coming in from the bush.

Dr Hargrave visited again on 28 February 1959 and diagnosed four children with leprosy, the youngest being two and a half years old. Later, another girl of three years was diagnosed. Over the next few years leprosy was diagnosed in many children. Most children given medication at Maningrida were healed without a blemish left on their
bodies. However, some parents continued their nomadic life and when their children were seen again their hands and feet were irreversibly damaged.

Maningrida did not have a duplicate set of the Department of Health medical records. Sister Kettle worked long hours at night by hurricane lantern to transcribe the records. This task was completed by 9 March 1959 when Eileen Jones returned by air and Sister Kettle was flown back to Darwin. Eileen Jones continued to make duplicate records for all new people who came from the bush. An infant health clinic with records and graphs had been started by Sister Kettle and these records were retained at Maningrida. There were then ninety-two infants under five years and this number rapidly increased over the next few years(77).

In line with the requirements of the Public Service Board for more highly educated men as Superintendents on Aboriginal Settlements, a new Superintendent was appointed over the pioneer, David Drysdale. Colonel Michael Casey, who had been in India with the British Army, arrived in mid-1959. It was a traumatic experience for all as there was no adequate accommodation and no lines of control. A few Aborigines had seen something of army routine during the war but any attempt to introduce army drill and standing to attention when addressed was not understood. A previously happy situation became very tense for both the staff and the Aborigines.

On top of the new routine there were many visitors, anthropologists, photographers and visitors from other government departments. Professor AA Abbie, with a party from Adelaide University, spent three weeks there in August 1959 taking anatomical measurements, and examining teeth. Very little dental caries was found, a pattern that altered dramatically over the next few years as the people had even more access to sugar, lollies, biscuits and soft drinks from the canteen. Professor Abbie also made a study of blood pressure in both men and women from childhood to 65 years (or thereabouts). There were no significantly high measurements; he had earlier found a similar pattern among primitive desert people of Yuendumu(78).

During August 1959 Dr Rene Manning, using a multiple puncture Heaf gun for skin testing for tuberculosis, did a survey of the population. In mid-September 1959 the mass X-ray survey team from New South Wales was flown to Maningrida by the RAAF. Sister Kettle and Phillip Roberts were flown to Maningrida a couple of days in advance. Sister Eileen Jones was there but she had enough daily medical work with which to cope without the added pressure of the survey. A large canvas shed was erected to provide shade for the X-ray equipment. Dr Hargrave arrived in the RAAF DC3 to help with the identification of the Aborigines. Each person presenting for Xray was checked against their medical record and where no record existed a new record was started after first ascertaining if they had ever been to Goulburn Island or Milingimbi. The men doing the X-rays said they could go faster, but they were assured that there was no point in X-raying people if they could not be identified later. This was the first time the X-ray team had worked among bush people. An Aboriginal interpreter of each sex had to stand by to explain to people how to breathe deeply and then hold their breath. There was much giggling and many X-rays had to be repeated. Sputum specimens were collected from all persons with questionable X-rays. No active tuberculosis was found but other conditions were revealed that required further investigation. New patients with leprosy were found and Mr Drysdale was asked to either offer them employment or find some other way of keeping them at Maningrida until they could be convinced that they needed treatment.

Sister Eileen Jones left Maningrida early in November 1959 for recreation leave and on her return she was appointed to Delissaville (Belyuen) settlement. Sister Kettle returned to Maningrida for a couple of weeks to care for the leprosy patients until the arrival of
Sister VG Weir about the 14th November. As the Land Rover was unserviceable Sister Weir was met at the airstrip with a wheelbarrow and walked the short distance to the settlement. A few months later Sister Weir married a Hungarian gardener, Zoli Eperjesy, and is best remembered as Sister Toni Eperjesy by which name she is referred to in this record. Assisted by Sister Kettle she conducted her first delivery on the sandy beach that first evening and readily adapted to the still primitive situation. Sister Kettle remained a few days longer to introduce Sister Eperjesy to the specialised care of the leprosy patients in whom she demonstrated a very caring and special concern during her years at Maningrida.

A few months later Sister Emma Bresnahan and her husband were appointed to the staff at Maningrida and spent several years there. She was a kindly woman and did as much as she could manage along with rearing her own children. However, all the responsibility fell on Sister Eperjesy who had recently added an orthopaedic nursing certificate to her qualifications. That extra knowledge stood her in good stead when two men collided during a game of football. One suffered a compound fracture of a tibia (lower leg) and there was a threat of payback until Sister Eperjesy arrived with dressings and plaster. All thoughts were diverted while some held the patient’s shoulders and others stretched the fractured leg. Sister Eperjesy plastered the leg with a window over the broken flesh. Later when X-rayed in Darwin, the fracture was in good position and the original plaster remained intact.

Sister Toni Eperjesy became skilled in the recognition of the early stages of leprosy. Regular visits were made to Maningrida by Dr Hargrave and the number of patients on treatment at the settlement steadily grew. A hospital along the same lines as those built on other settlements at the time was opened late in 1960. Dr Hargrave wanted a clinic set up for the care of leprosy patients and a part of one verandah was set aside along with a few beds for people who needed bed rest while ulcers on their feet healed.

The Aborigines at Maningrida had to adjust to many staff changes. It was the policy of the Welfare Branch to shift staff. The settlement was surveyed on paper in Darwin to become a township and when the draft plan was sent to Maningrida, it revealed that the extensive fruit orchard of citrus, mangoes and many other beautiful trees was to be replaced by staff houses. Mr David Drysdale tried to reason with his Director, Harry Giese, and was transferred to Hooker Creek at the end of 1960. The atmosphere on the settlement changed markedly with the departure of the Drysdales. Most staff loved Maningrida and would have stayed indefinitely had they been allowed to do so. A missionary, Rev Gowan Armstrong, was appointed in 1963 but he was confined to teaching the Bible and to counselling individuals and families.

Dr Hargrave visited Maningrida whenever he could spare a few days. During a survey from 20 to 30 June 1961 he examined 380 people and diagnosed six new cases of leprosy. One of these was a small boy of the Rembarrnga tribe which made circuitous visits to Oenpelli, Mudginberri, Bamyili, Mataranka, Mountain Valley, Mainoru and back to the upper reaches of the Liverpool River. These wandering people had a tendency to use different names in different places which added to the difficulty of finding and identifying them. During this visit to Maningrida, Dr Hargrave went inland with two Aboriginal guides in an attempt to find missing patients. They travelled up the Liverpool River as far as it was navigable by boat and then walked across extensive grass plains to two separate but unnamed camping sites. Patients were seen but they were reluctant to stay at Maningrida or to let their children remain there for treatment. However, the contact gave them something to think about and it all helped to break down resistance. From there Dr Hargrave and his guides walked east to Mamaidjpa near the Tomkinson River where he
was able to review some of the missing Nakara and Burara patients before returning down the river again to Maningrida(79).

Sister Kettle frequently visited Maningrida to check the health of infants and to conduct surveys for leprosy. She was there in November 1962 when there were four trained nurses with Sister Helen Miller in charge. Sister Eperjesy had been transferred to Bamyili (Barunga). Sister Miller was the only midwife; there was no one qualified in infant health work. A total of 891 people were examined for leprosy. Of these, 42 were diagnosed patients and 49 warranted further examination by Dr Hargrave. There was much coming and going among the leprosy patients and Sister Kettle recommended in writing that one Sister be appointed specifically to the care of leprosy. The many changes in staff meant no one was an expert in this specific area of work. Sister Kettle also suggested that the Aborigines be encouraged to establish permanent outstations where wandering patients could receive their medication. Very few patients could be relied on to take their tablets on their own volition. Dr Michael Ryan visited Maningrida on 13 November 1962 and diagnosed three more cases of leprosy, but others who could have been diagnosed at that stage disappeared when the Aerial Medical Service aircraft landed.

Sister Brenda Divine accompanied Sister Kettle to Maningrida again in April 1963 when 701 people were checked. From the medical records there were a further 245 somewhere in the area who were not checked. The known population in the area was 946 of whom 80 were leprosy patients. Dr Hargrave had diagnosed a further eight most of whom were children. The Superintendent, Mr Harry Srigdwick, arranged for Sister Kettle to be taken inland by Land Rover and a further 60 of the missing people, with several new cases of leprosy were seen at Marrgalidban; these were Gunwinggu people. One of the senior men in this group accused doctors of taking his children and not bringing them back. This was in part true as the said children were in a serious condition when diagnosed and special care was necessary to save their lives. This particular father was invited to travel to Darwin with the Aerial Medical Service to visit his sons and see other children from the same group. Sister Kettle took him to East Arm Hospital where he was so overcome that he wept. One lad who had not walked for years was on his feet and wearing surgical boots but another who had required an amputation had to meet his father in a wheel chair as his artificial leg was in Adelaide for repairs. All of the Maningrida patients in East Arm Hospital were seen so he returned home with much to tell.

Sister Lyel Vivienne Lehmann was the first Sister appointed specifically to leprosy work at Maningrida in mid-1963 and she took a keen interest in the work. When she married and transferred, she was replaced by Sister Cecily J Schroeder who married Mr Ernest Carey. As Sister Cecily Carey she cared for up to one hundred and eleven leprosy patients at Maningrida until August 1974. The number on treatment at one time may have been more as further patients were diagnosed. During this period the long-acting sulphone known as Hansolar was introduced. Hansolar was given by injection every ten to twelve weeks and Sister Carey travelled to the several outstations to give the medication to people who could not report to the clinic.

During the survey by Sisters Kettle and Divine in April 1963 it was found that 12 infants were grossly anaemic(80). There had always been movement of people as far afield as Bamyili, visiting Pine Creek, Mudjinberri and Oenpelli along the way. It was inevitable that hookworm would be introduced. Adults may have used the toilets provided but the small children certainly did not, hence the spread of hookworm. Two of the infants were sent to Darwin Hospital for blood transfusions: Christine, three months old, with a haemoglobin estimation of 5.4 gms per cent and Elsie, three years, only 3.8 gms per cent(81). Imferon had been extensively used at Maningrida but the side effects of so much intramuscular iron were unknown. Hookworm was not being treated as it was not
considered a problem in the area. Most people were under the impression that hookworm entered the body through bare feet and were not prepared to concede that hookworm larvae could enter through any part of the body that came in contact with contaminated soil. Mr Giese stated he did not believe a three months old infant could have hookworm until he received proof from Darwin Hospital.

Although Dr Hargrave was by this time specialising in leprosy, he went to Maningrida to investigate the acute anaemia. He looked at the nutritional aspect. The meals served in a huge communal kitchen were of good quality but, while mothers ate the meat and vegetables, small children filled up on bread and gravy or later on biscuits from the canteen. Following this visit the Health Inspectors undertook a survey for hookworm in which Phillip Roberts participated. To everyone's consternation hookworm was found to be widespread.

When Sister Kettle visited Maningrida late in April 1965 she recorded 186 infants under five years of age. Of these she was able to examine only ninety-eight. At this time one quarter of the 98 tested for anaemia had haemoglobin estimations under 6.0 gms per cent. A child, Maud, admitted to Darwin Hospital with a haemoglobin of 2.5 gms per cent had died in hospital(82). The veins of such babies collapsed and it was difficult to transfuse them. There was controversy over whether anaemia was nutritional or due to hookworm infestation and there was no paediatric specialist in the Northern Territory to make a study of the situation.

Dr Alan C Walker was appointed in October 1967 as the first paediatric specialist but his work was mostly in Darwin Hospital although he made occasional visits to outlying areas. A few years later he reviewed four cases of infants admitted with gross anaemia. All had alimentary bleeding with dark blood (melaena) in their stools. These infants came from Snake Bay (Milikapiti), Port Keats (Wadeye), Elcho Island (Galiwinku) and Bagot in Darwin. All were given multiple blood transfusions but soon slipped back again. In two of them, laparotomy revealed no cause of anaemia. However, when all four were treated with anthelmintics for hookworm they passed many adult worms identified as *Ankylostoma duodenale*, the species of hookworm known for heavy blood loss. Dr Walker considered that infants lain on contaminated ground had received massive infestations of hookworm. He advised that all anaemic infants with melaena stools be first treated for hookworm before other investigations were undertaken(83).

By 1965 the communal feeding situation at Maningrida had become too large to be effective. To reduce excessive penalty rates for staff, the dining room was expected to be empty and all cleaning completed by 6 pm. Similar policies existed for the kitchen and dining room staff in the Department of Health's hospitals where patients were served an evening meal between 4.30 and 5 pm. At Maningrida the infants under five years were fed at 7 am, 11.30 am and 3 pm. For most, the evening meal was far too early. When asked their opinion the mothers said the food was good but the infants cried from hunger at night. They were then given sweet biscuits from the store(84).

Gastroenteritis began to emerge as a considerable problem among the infants and by 1965 there were frequent and serious outbreaks. Many infants suffering from both anaemia and diarrhoea, either acute or chronic, were admitted to Darwin Hospital. This situation had not existed to the same extent earlier. Factors that had changed were the large crowd of people together in one place and the introduction of communal meals. More is recorded on the causes and treatment of diarrhoea in Papunya and Yuendumu in Chapter 21.

During 1969 an Infant Health Centre was opened separate from the hospital. Infants were then fed at this centre. However, by 1970 there was a move to encourage Aborigines to
buy their food and cook it in their own camps. By this time much of the hunting for bush foods and sea foods had been abandoned. The population increase would also have greatly reduced the availability of local foods.

Much more could be written about Maningrida but some of it is mentioned elsewhere. However, an event which contributed to opening up the country was a patrol by Land Rover from Darwin to Maningrida through Oenpelli in 1963. Mr EC 'Ted' Evans led the patrol assisted by Patrol Officer Trevor J Milikens who already knew much of the country. A forestry team accompanied the party in two Willys Jeeps fitted with winches. They left Darwin on 6 August 1963 and travelled via Pine Creek. Once they left Oenpelli travel was slow as they sought to find the most suitable way through and to scarf trees along the way to mark the route. They reached Maningrida on 16 August having met several groups of Aborigines along the way(85). This expedition proved that it was possible to drive through during certain months of the year. The Arnhem Highway to Jabiru and the Kakadu National Park were not even considered then; it needed mining to justify expensive highways.

A brief account has been given of the health problems and services on each of the missions and settlements. Devoted staff have worked hard and long to bring long established diseases under control and to temper all with tolerance and understanding of Aboriginal culture. For the most part church missions encouraged staff to remain in one area, to know the people and to learn the local language. On the other hand, the Welfare Branch frequently moved its staff and few had time to learn a language. Unfortunately there are many Aboriginal languages which made adequate communications most difficult. Most young Aborigines now speak fluent English so that earlier barriers have been overcome.

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Staff of Yirrkala mission in 1955. L-R: Fijian Taniella Lotu and family, Sister Audrey Fielding, Alison Hull (teacher) Rita and Rev Gordon Symons with children Heather and Graeme (photo: E Kettle)

Sister E Kettle outside the Yirrkala dispensary, October 1956. A ward of arcmesh and thatch with a sand floor is on the left (photo: E Kettle)

Wongu from Caledon Bay, a key figure in the 1933 events on Woodah Island retired at Yirrkala about 1958 (photo: A Fielding)

Sister Audrey Fielding cared for Wongu in his latter years (courtesy: A Fielding)
Aboriginal children were always carried on the shoulders leaving the mother's hands free for other tasks. Yirrkala 1958 (photo: E Kettle)
The modern Health Centre opened at Yirrkala in August 1975 (Dept of Health)

Staff in 1970, outside the Yirrkala Hospital that was built in 1958. L-R: Duwarwar, Liyapidiny OAM, Bambaranging and Laklak (photo: J Moore)
Rev Harold and Ella Shepherdson who founded Elcho Island mission in 1943. They spent 50 years in Arnhem Land. 'Sheppy' developed the first outstations which he visited by air in his own aeroplane every three weeks. Ella Shepherdson remained in Arnhem Land with her husband throughout the war (photo: J Slade)

Sister Cathie Langdon at the Galiwinku hospital on Elcho Island in February 1952. The first medical clinic is on the right (photo: R Brock)
Rev Harold Shepherdson arrives at Elcho Island airstrip with Mrs Joyce Gullick and Sister Cathie Langdon, 1952 (photo: R Brock)

Sister A Fielding beside Rev Shepherdson's aircraft at Caledon Bay in 1957. Many Aborigines travelled by air with 'Sheppy' before they even saw trucks or cars (courtesy: A Fielding)
Two sets of twins at Milingimbi in 1958. Eva's babies (seated) were born in Darwin Hospital but the two standing were from Arnhem Land bush. Twins were not always welcomed (photo: E Kettle)

Sister Jessie Smith MBE (left) and the linguist Miss Beulah Lowe MBE at Milingimbi in 1958. Both spent many years there (photo: E Kettle)

Sister Jessie Smith and pilot loading a patient at Milingimbi during late 1960s (photo: D Hayes)
Sister Edna Brooker MBE from New Zealand gave outstanding service at Umbakumba, Angurugu and then Roper River (Ngukurr) from 1958-1982 (courtesy E Brooker)

This building at Umbakumba was used as a hospital for several years. Sister Brooker slept there when there were inpatients (photo: E Brooker)
Didjidi, an outstanding nursing assistant at Angurugu during 1950-1970. At the same time she reared her own twelve children (photo: E Brooker)

Aringari from Angurugu; a most capable Health Worker, then Town Clerk and in the 1980s the Rev Aringari (photo: E Brooker)
Rev GR Harris on steps of the large airy hospital built at Angurugu in 1950 with locally milled timber (Dept of Health)

In December 1951 Rev Ron Ash from Angurugu took Dr R Brock by canoe to bring in a patient from another island (photo: R Brock)
The hospital at Numbulwar built in 1958 from locally milled timber. It was replaced in 1978 (photo: J Moore)

Sister Joan Smedley MBE spent 20 years at Numbulwar from August 1961. She then went to Pakistan as a missionary (Church Missionary Society collection)

On steps of Numbulwar hospital March 1960. L-R: Cecily Cook (teacher), Sister Anne Cook and Colin Gilchrist the Superintendent (photo: E Kettle)

Jangu started as a Health Worker at Numbulwar in 1959 aged 12 years and is still working. She is a missionary among her own people (photo: J Moore)
Mr Phillip Roberts OBE (Wodjari-Wodjari) from Roper River did outstanding work as a medical assistant. He treated the leprosy patients at Maningrida during 1957-58 and made foot patrols among the bush people (photo: unknown)

Sister Philippa Reaney at Roper River (Ngukurr) 1969. Later a tutor in School of Nursing, Darwin Hospital (photo: E Brooker)
Isaiah Burunali (left) from Oenpelli in July 1970. He was one of the first paramedical staff trained at East Arm Hospital to care for leprosy patients at home (photo: J Moore)

Oenpelli Mission (Gunbulunya) about 1950. The medical clinic is on the right with a dark roof. A hospital was built on the left of it in 1959 (photo: J Slade)
Mission hospital Oenpelli built about 1959, with original clinic on left. During the typhoid outbreak in March 1962 there were 'Welfare' tents on the lawn (photo: J Moore)

Dr Edgar Emmerson and Priscilla Girrabul (nursing assistant) at Oenpelli in 1959 (photo: RC Webb)
Sister Heather Hinch did the medical work on Goulburn Island from 1958-1966 when she became a linguist and recorded the Maung language. She married Russell Hewitt (photo: Uniting Church collection)

Goulburn Island mission about 1950, showing superintendent’s house (l) and Sisters House (r)

The Health Centre on Goulburn Island in 1987 (photo: D Lamb-Jenkins)
The Jimarin quadruplets born in Darwin Hospital on 7 April 1968. One died at a few weeks old (Dept of Health)

Mabel Jimarin at Daly River with her three surviving daughters. Twins followed in 1969 bringing the family to 13 living children (photo: Women's Weekly)
Sister Joan Mahan at Daly River mission in 1968 diagnosed multiple pregnancy and the mother was flown to Darwin (courtesy: J Mahan)

Dr G Isaacs who delivered the four baby girls (Dept of Health)
The first mission hospital at Daly River in 1957. The river is behind the trees (photo: RC Webb)

Dr Age Dyrting and Sister Elizabeth Schmidt check a small patient at Daly River, August 1971 (photo: JJ Duffy)
Bathurst Island mission about 1950. The hospital roof can be seen among the mango trees on the left of the buildings at the top (photo: J Slade)

The kitchen end of Bathurst Island hospital about 1950. L-R: Sister Marita Scullion (nurse) who came in 1945, Father F Flynn (ophthalmologist), Sister Laurentia. Sister Marita worked 14 years in that iron hut and another 14 years at Port Keats. Father Flynn found no trachoma on Bathurst Island in 1956 but it was introduced (photo: J Slade)
The Catholic Missions' lugger 'Margaret Mary' at the Port Keats landing. The coastal missions were dependent on boats for transport and supplies (photo: J Slade)

Port Keats mission about 1950. Extensive use was made of ex-army Sydney Williams huts. The hospital is upper left (photo: J Slade)
Sister Benedicta Carroll MBE and Dr Richard Brock outside the Port Keats Hospital during a medical survey, July 1951 (photo: R Brock)

Port Keats (Wadeye) Health Centre (central) in 1984. The building on the left replaced the earlier Sydney Williams hut in February 1967 (photo: D Lamb-Jenkins)
David and Ingrid Drysdale were honoured for their work at Maningrida where they pioneered a new settlement in May 1957. They lived for years in an iron hut with an earthen floor (photo: Alan Anderson)

Sister Eileen Jones at the back door of the nurses cottage. She was at Maningrida from 12 August 1958 to October 1959 and was replaced on 14 November 1959 by Sister Toni Eperjesy (courtesy: E Jones)

These bush babies at Maningrida in 1959 had been reared by Mrs Ingrid Drysdale and Sister Eileen Jones. (Left) Janet’s mother was ill and (right) Rex’s mother had died when he was born (photo: E Kettle)

The first nurses cottage at Maningrida overlooked the river estuary and was cool (T Eperjesy collection)
When Dr J Hargrave made the first medical survey at Maningrida in September 1957, ten per cent of the people had leprosy. A separate camp ‘Alamace’ was started upstream. The woman seated is a chaperone (photo: E Kettle)

Sister Toni Eperjesy beside the temporary medical clinic at Maningrida in 1960. The original tent and bough shelter was later protected with iron. The floor was earthen (courtesy: T Eperjesy)

The modern Health Centre at Maningrida in 1984 (photo: D Lamb-Jenkins)
CHAPTER TWENTY-ONE

CENTRAL AUSTRALIA: MISSIONS AND SETTLEMENTS

The hub of preventive health and curative medicine in Central Australia was, for many years, Alice Springs Hospital with the Medical Superintendent in charge of both the hospital and the health of the community. All too often in the early 1950s one doctor was expected to do everything. As described earlier, Dr Bill Alderman had to cope alone with widespread measles and a few years later Dr Bert Welton had a disastrous epidemic of poliomyelitis on his hands.

From the community health aspect Dr Welton's main thrust was the area of tuberculosis control. He had no field staff to assist him. On top of that he dealt with all emergencies reported by radio and investigated outbreaks of epidemic disease. In September 1952 Sister Kettle flew with him from Yuendumu to the Granites gold mine to investigate an influenza outbreak that had claimed three lives. The news media was claiming *Kurdaitcha*, an evil spirit, was killing terrified Aborigines. Sister Kettle remained there three weeks and ensured there were no further deaths.

The early days of the Welfare settlements have already been described in Chapter 18. As had happened during the war, hundreds of hungry Aborigines from the western desert steadily moved towards Haasts Bluff (later Papunya) and Yuendumu. There was widespread drought in 1952 with the countryside littered with the skeletons of cattle. The drought continued for many years with only the occasional scattered light fall of rain. It was inevitable that people would migrate to places where food and water were available. Whilst Director of Health in 1953, Dr Stephen Watsford had warned the Welfare Branch and the church missions of the dangers inherent in large groups congregating without adequate hygiene facilities. On top of that, an illiterate people had to be taught the need to use the facilities, but without a good knowledge of the local languages there was no real communication.

Dr Richard Brock, who had already carried out extensive surveys in the northern region, started surveys in Central Australia in June 1952. Yuendumu was the first settlement visited. More is written on his work in the section on tuberculosis control. Dr Brock was asked to relieve Dr Welton for holidays and became very ill with hepatitis which was for many years a considerable problem among the white population in Alice Springs.

In January 1956 Dr John Hargrave was appointed as the first Survey Medical Officer for Alice Springs. Dr Stephen Watsford became the Medical Superintendent of Alice Springs Hospital shortly afterwards as well as filling the role of surgeon and it was he who briefed the newcomer on the work and reports required. During his time in Central Australia Dr Hargrave reported a great reservoir of treatable medical and surgical conditions, but at that time there was neither the staff nor hospital accommodation to handle the work. This in itself was frustrating but even more so were the many times he was diverted from field work to help staff the hospital.

The medical records for Aborigines, started during medical surveys, were left in the care of Sister O'Keefe. She was supposed to add to the records a precis of all treatment given in hospital but the task was too much; she needed clerical assistance. In Darwin the records were maintained by the Aerial Medical Service but for many years the Public
Service Board refused a similar service for Alice Springs. Dr Watsford, who had initiated the medical records for Aborigines, was most concerned over the lack of maintenance but not even he could convince the Public Service Board of the need for staff.

In 1958, when standardised infant health work was introduced on the Aboriginal settlements, Sister Kettle spent a few months in the Alice Springs area. The Bungalow was the first settlement visited. Sister L Bailey, a married woman, was providing care five days each week. At this stage the settlement had not yet moved to Amoonguna. At both Jay Creek and Areyonga settlements married women were providing the nursing service but were not coping under the rugged conditions. It was more than most women could manage to care for their own homes never mind provide a health service.

Santa Teresa

The Little Flower Catholic Mission which had been at Arltunga since September 1942 was transferred to a new site on the Phillipson block 59 miles (96 kilometres) south east of Alice Springs in June 1953. The founder of this new mission was Fr John Flynn but Fr Summerhayes has been given credit for the village built of local stone and mud brick. For several years Sister Joan Benbow (Imelda) provided the health service and achieved a high standard of health and nutrition among the infants. Babies were fed at the hospital and the food was excellent. In July 1958 the thirty-two infants at the mission were among the most healthy in the Northern Territory. The population was small and the environmental hygiene manageable. Many of the school children were from neighbouring cattle stations and were living in dormitories. This was in marked contrast to the situation existing on the large government settlements and even the small settlements at Jay Creek and Areyonga.

Hermannsburg

Early in the war the Army had ordered the white women to leave Hermannsburg and they were not permitted back until after the cessation of hostilities. This greatly added to the burden of work carried by the few white men who remained. Mr Rex Batterbee had been sent to Hermannsburg for the duration of the war and he remained until just before Christmas 1945.

On 7 November 1945 the Minister for the Interior, Mr Johnson, accompanied by his Secretary, Mr JA Carrodus, made a very brief visit to the mission. The Minister saw little more than dirt, dust and flies. Mr Batterbee, writing after the visit added that:

> When we can understand the native mind and realize the disregard they have for cleanliness, it can be seen that future generations of social workers will have more than enough work to uplift these people into better living conditions(1).

However, Mr Batterbee considered there was much beauty to behold at Hermannsburg once one took one's eyes off the immediate surroundings and he added that he had just sold fifty-two water colours on behalf of five of the young artists who clearly had the potential to earn money and to help themselves.

Sister Saleen Lindner arrived in mid-November 1946 and after the first few days of adjustment she realised that many infants were seriously underweight. She promptly started a weekly infant health clinic along with extra food for the babies most in need. The first inpatient was a young woman who was carried in on a stretcher, too weak to
walk. She was washed, dressed in a nightdress and put to bed between white sheets. Just after dark the patient disappeared, leaving her nightdress behind, but at daylight she was back in bed as if she had not left it.

During 1947 there was a widespread epidemic of impetigo and people came from outlying stations for treatment. On top of that was a severe outbreak of eye infections during June and July. Most patients made their own decisions on when to stop treatment so that many infections relapsed. All too often patients sent to Alice Springs Hospital absconded and returned to Hermannsburg to be cared for there, placing a heavy burden on the one nurse. Sister Lindner recorded outbreaks of infantile diarrhoea as an annual occurrence from 1947 onwards but she did not lose any babies. There were seventeen births at the mission during 1947 and a total of seven deaths, some of these being people with tuberculosis(2).

Sister Ida Wurst, who had been appointed to Haasts Bluff in July 1945, was finding many more undernourished infants than at Hermannsburg. While there was no Sister at Areyonga, Sister Lindner would visit that settlement by truck whenever she could manage it.

The nightmare measles epidemic has been recorded elsewhere (Chapter 18) but other diseases continued to sweep through the country and although there was no loss of life at Hermannsburg these episodes proved exhausting for the few nursing staff. Sister Grace Jarrick came in October 1951 and served until February 1957. During her time there were epidemics of influenza, mumps and chickenpox. As Sister Jarrick wrote in November 1952, penicillin and the sulpha drugs had greatly reduced chest complications and shortened the length of illnesses(3).

Dr Richard Brock and his wife Betty spent three weeks at Hermannsburg during August 1952 to conduct a full medical survey. Pastor SO Gross was then in charge and Pastor FW Albrecht was in ministry in Alice Springs. Sister Grace Jarrick's arrival brought the health staff to two trained nurses. Dr Bert Welton had already made considerable progress in controlling tuberculosis. In 1951 he had taught Sister Lindner how to do Mantoux tests and she had surveyed about 200 of the 350 population(4). All persons with positive reactions had been taken to Alice Springs Hospital for chest X-rays and in August 1952 there were 13 on chemotherapy. Dr Brock did Mantoux tests on a further 143 people bringing the total tested to 343 of whom only 100 had negative reactions. BCG vaccination was given to 77 persons under forty years of age. The tuberculosis patients on medication were treated as outpatients as the hospital was too small. The hospital, built of local stone and mortar with a cement floor, had two wards with bed space for six adults. The dispensary was in a separate building but plans had already been drawn up for a new and modern hospital.

Trachoma was still widespread in 1952 but although two people had each lost the sight of one eye, no one was totally blind. Most people had received treatment for trachoma in 1945 and Dr Brock ordered mass treatment again using oral sulphamerazine and 30 per cent sulphacetamide eye drops twice daily. Sister Kettle spent from 15 November 1955 to 23 December at Hermannsburg helping Sister Jarrick treat trachoma. Dr Welton checked the diagnoses and 76 school children and 34 adults received a course of sulphadiazine tablets and aureomycin ointment in their eyes. Dr Hargrave conducted a full medical survey during May to June 1956 but did not record ordering further treatment for trachoma.

Both Dr Brock and Dr Hargrave commented upon the industry at Hermannsburg where most adults were busy with stock work, the tannery or the vegetable garden. It was mission policy that all should be industrious. However, as early as 1952, the wealth of the
Aranda artists had begun to affect the community. Earlier the whole mission had benefited from a percentage of the new income, but public pressure insisted that the artists have all the money themselves. Some artists moved out to live on the fringe of Alice Springs but still expected the mission to educate their children and care for aged relatives without any contribution from them. As the artists could support themselves financially they were granted full citizenship which gave them unlimited access to alcohol, usually flagons of wine. People who did not want to work soon joined them and massive new social problems began to manifest themselves.

In 1956 Dr Hargrave recorded nine Hermannsburg people as obese(5), a condition not seen among the desert Aborigines at Haasts Bluff and Arelyonga. Neither Dr Brock nor Dr Hargrave recorded either hypertension or diabetes at that time. The situation changed markedly later.

A modern and fly proof school replaced earlier school buildings at Hermannsburg in 1952. A preschool followed shortly afterwards. All children were well fed and looked healthy. Dr Hargrave noted two people with old yaws osteitis of the tibiae and one with damage to the nasal septum but apart from that there was no evidence of earlier yaws. Pastor Albrecht had treated much primary and secondary yaws in the 1930s and this could have accounted for the absence of tertiary lesions.

The nursing staff with the Lutheran Missions were moved occasionally as the need arose. Sister Ida Wurst, who had earlier spent seven years at Haasts Bluff, arrived in September 1958 to take charge of the health service at Hermannsburg. Prior to that Sister Ruth Simpfendorfer spent most of 1953 there followed by Sister Edna Dalwitz in 1954-55. Sister Doreen Lawton had visited Alice Springs for the opening of the John Flynn Memorial Church where she met Pastor SO Gross; she spent a year at Hermannsburg from May 1956 to February 1957. Other nurses came for much shorter terms but there were usually two on the mission staff.

Sister Kettle visited Hermannsburg again on 29 July 1958 for a few days to introduce the standardised infant weight graphs. Sister Wurst had not yet arrived and some of the clinic work was not up to date. The babies at Hermannsburg were fat compared with the many underweight infants on the neighbouring settlements of Papunya, Haasts Bluff and Arelyonga. It was not easy to draw comparisons as too few babies had been weighed at birth and all had been weighed fully dressed. There was no malnutrition among the infants. Artificial feedings were prepared at the hospital for the babies of women on treatment for tuberculosis. No anaemia was found among the sixty infants examined at the clinic(6).

On 31 July 1960 a beautiful new hospital was dedicated, although some sections had been in use prior to that. A midwifery ward was detached along with a separate unit for the treatment of tuberculosis and Aboriginal women were trained to work as nursing assistants.

Pastor Philip A Scherer wrote the Finke River Mission report for May-December 1961 and mentioned the visit on 3 August 1961 of the Select Parliamentary Committee for Aboriginal Voting Rights. Five staff members and five Aboriginal men made statements. The Aborigines agreed with voting rights but expressed real concern that full citizenship would mean the right to drink alcohol(7). They had already witnessed the effects of alcohol on the artists and their families; they had also experienced the arguments that followed the invasion of drunken men from Alice Springs and they were most concerned. At a much later date the local people had their mission declared 'dry'.

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Pastor Paul Albrecht, who had been reared at Hermannsburg, replaced his father as Field Superintendent in Alice Springs in May 1962 as the mission work moved into a new era of delegating progressively more responsibility to the Aboriginal people. However, in spite of the long contact and generations of education, they still felt the need for the support of Registered Nurses in their health work. Sister Doris Lubisch was appointed to Hermannsburg in June 1966 and was still there at time of writing. By 1984 the population was over nine hundred, half of whom were living on outstations. A team of experienced Health Workers provide much of the health care. The problems, as they see them, include too much alcohol and (still) a lack of hot water source in their home(8). After forty years of treatment trachoma still remains a problem.

**Haasts Bluff**

The early days of the settlement at Haasts Bluff and of the measles epidemic have been recorded in Chapter 18. There was never sufficient water and it was inevitable that the settlement would have to be transferred. In the meantime progressively more people of the Pintubi tribe kept arriving from the western desert across the border with Western Australia. The scope of health work needing to be done required an experienced nurse and in June 1952 Sister Saleen Lindner was sent from Hermannsburg.

There were repeated droughts in some parts of Central Australia and it was the lack of food that forced the desert Aborigines to move to Haasts Bluff. On 24 January 1953 there was widespread rain with 7 inches (177 mm) at Haasts Bluff, 4 inches (102 mm) at Hermannsburg and 10 inches (254 mm) at Yuendumu. The food store at Yuendumu was flooded and many bags of flour, sugar and salt were ruined. Water surrounded the hospital at Haasts Bluff but apart from the few days of inconvenience there was great rejoicing over the breaking of the drought. No trucks could move and no stores could be carried for a few weeks. However the rains did not continue and very few people, having experienced receiving food on a regular basis, were prepared to return to their former state.

In September 1952 Dr Richard Brock carried out a full medical survey of the 253 available persons. There were 477 names on the settlement records and of these, 187 were children under fourteen years of age. Dr Brock did not comment on the whereabouts of the missing people. Sisters Ida Wurst and Saleen Lindner were in charge of the large iron hospital and the health work in general. The Aborigines were living in wurlies of their own making and as they shifted camp at regular intervals they built new wurlies. The Superintendent, Rev H Pech, was having an uphill struggle to discourage the people from cutting down the trees and mulga and denuding the surrounding country.

Dr Brock was most concerned at the general lack of hygiene and he called a staff meeting to discuss this aspect. There were so few local people with any concept of basic hygiene to teach the newcomers. Very few spoke any English. The herd of cattle was being depleted to supply meat to Areyonga and Jay Creek settlements when there was not even sufficient for the needs of Haasts Bluff. Gardening was restricted by an inadequate water supply.

Dr Bert Welton had already done much work on tuberculosis and had twelve people on treatment at Haasts Bluff. Forty two per cent of the population had a positive reaction to the Mantoux tests and 169 were given their first BCG immunisation. Dr Brock found it difficult to adequately assess trachoma as many people were reluctant to submit to an adequate medical examination. However, he ordered treatment for those whose sight was threatened and left it to the Sisters to ensure cooperation. Basic schooling had not yet commenced so it was difficult to insure any continuity of treatment among the children.
However, apart from tuberculosis, the greatest threat to health was infantile diarrhoea and one infant died during the doctor's visit in spite of parenteral normal saline(9).

In December 1956 when Dr John Hargrave conducted a full medical survey he examined 401 people, 174 of whom were under fourteen years of age. This number included people on the new settlement site at Papunya and also at Mt Liebig. Sister Lena Scherer was there alone and the workload that needed to be done was beyond the scope of one person. Sister Esther Scherer was away on sick leave but she did return. Dr Hargrave described thirty three persons, mainly babies, as too thin and mentioned the major task of feeding malnourished infants. Many more nomadic Pintubi people had come in from the western desert where food was once again scarce but babies reared on lizards and witchetty grubs did not readily adapt to porridge, custard or vegetables. On top of this, scabies had become widespread and thirty six of the children had secondary infections from scratching. Another major problem not reported earlier was infected ears; fifty children were in need of twice daily treatment to their ears(10). At this time there were very few lavatories at the settlement's administrative centre and none in the Aboriginal camp. Mr Clarrie Bowden, the settlement Superintendent, and others who followed in that role, found it difficult to appreciate the urgent need for lavatories. There was so much other work to be done and so few staff at that time to do it.

The new settlement at Papunya was not opened until March 1959 and in the meantime the Superintendent, Mr Jeremy Long was endeavouring to care for over five hundred people living in very primitive conditions. During the clinics conducted by Sister Kettle on 5 and 6 August 1958, 116 infants under five years were weighed, measured and assessed - this was a difficult exercise as many of the babies had not previously been weighed and they objected lustily. Forty three infants were listed as being in a serious state of under nutrition and of these, twenty one were considered to be in grave danger should an epidemic occur. The Department of Health was furnished with the names and full particulars. The child mortality at Haasts Bluff was already giving cause for grave concern. Of the 139 births recorded over the preceding five years, 29 (20%) of these had died(11). There was a tendency to believe that once the settlement was moved to Papunya the situation would improve but this was not to be. The story of Papunya is continued further on.

Yuendumu

From Haasts Bluff Sister Kettle travelled overland to Yuendumu on 9 August 1958 visiting Glen Helen and Mount Wedge on the way. The next day was Sunday but instead of a day of rest she was given the hospital work for the next five days. Mr Ted Egan, a keen young man, was the Superintendent but Sister Verle Van Hemelryck, the only nursing Sister at Yuendumu, was in Alice Springs for a coronial enquiry. There had been several staff changes but in spite of this the hospital records were in good order and a favourable comparison was made between the Yuendumu infants and those at Haasts Bluff. Mrs Pat Fleming of the Baptist Mission had been providing porridge, milk, fruit and cheese for the preschool children for many years and this age group was in good condition. However the mortality among the babies had been very high, 40 deaths under two years of age from among 150 births in five years. It was just five years since Sister Kettle had left Yuendumu in August 1953 and something had changed quite dramatically. Causes of deaths were listed as diarrhoea, 15, pneumonia, 13 and other causes, 12. Most of the deaths had occurred in Alice Springs Hospital and although the cause was recorded as pneumonia, it was frequently a sequel to diarrhoea. With six years hindsight Sister Kettle was of the opinion that infective diarrhoea had been introduced to the settlements; it had not occurred with the same severity in the early 1950s. Epidemics of diarrhoea became the greatest single problem with which nursing staff in the outback had to cope; it
reached nightmare proportions over the next few years. The dry climate of Central Australia served to enhance the rapid dehydration of infants suffering from gastroenteritis; life saving rehydration had to be fast or it was too late.

Late in August 1958, Sister Kettle visited Warrabri settlement before returning to Darwin. Mr Creed Lovegrove was in charge while his wife Jean and Mrs Ingram, both trained nurses, were providing the health service. There were only seventy one infants under five years of age and this was a much easier group to manage as, due to long contact, most parents had a good understanding of English. This was in marked contrast to Haasts Bluff and Yuendumu where few people understood English. There were six undernourished babies and arrangements were made for these to have supervised meals. Twins had been born five weeks earlier and as neither was thriving, a childless couple was found to foster one of them. The fostered baby remained among its relations and everyone was happy. Up to that time very few twins had survived in Central Australia.

Sister Kettle visited Alice Springs and Yuendumu again in May 1959. Dr WA Langsford was the Medical Superintendent and Dr George Tippett had recently been appointed as the Medical Surveys doctor for the area. Conditions in the outback were affecting the hospital which did not have the facilities to adequately handle the large numbers of sick Aboriginal infants.

Dr Tippett was energetic and enthusiastic but he wanted autonomy in his organisation and management of the health services in the outback and this was not forthcoming. He did not undertake medical survey work as such but he did plan routine medical visits on a regular basis to all areas. For the first time the cattle station people on the Barkly Tablelands had a service on which they could depend instead of the occasional visit when a doctor could fit it in. This was long overdue. Dr Tippett was a man of action who tried hard to find ready answers to the hygiene problems. He left in 1961 to go into private practice in Melbourne. He was replaced for a time by Dr Ned (EA) Iceton who had been doing medical survey work in the northern region.

Gastroenteritis is a disease of poor hygiene. While nomadic people lived in isolated groups, infective diarrhoea was not a problem. However, after contact with hospitals and the holding centres at Bagot and the Bungalow, children could have acquired pathogenic organisms in their intestines and taken them back to settlements and cattle stations. Very few Aborigines were using lavatories and in many places the lavatories did not exist. It was inevitable that diarrhoeal diseases, once introduced, would become endemic. The disposal of body waste was a delicate subject that required the interviewing skills of an anthropologist to elicit what would be acceptable to Aborigines in terms of the siting of lavatories. There was no soundly based policy; the construction of lavatories was usually left to individual settlement Superintendents who already had more to do than they could manage. Suitable lavatories were not given the priority necessary to prevent a disaster. People did not readily accept communal toilets because they were frequently fouled and smelled offensive. If people were to wash their hands there needed to be a tap near every lavatory. Superintendents were reluctant to install reticulated water because people left taps running and emptied the storage tanks. For many years there was not enough water for it to be wasted. Many people admitted to Alice Springs Hospital did not know how to use a lavatory and had to be taught. When left without instruction they squatted on top of the seat and fouled it; there were never any squatting type toilets provided. The author recalls a visit to Alice Springs Hospital when late one evening a small Aboriginal child was reported missing. The police came with powerful torches and searched widely. The child was found in the toilet bowl of the nursing staff lavatory. He had slipped in and although cold and wet, he was sound asleep when found. There were no little toilet seats for inexperienced children. In the outback most small children would not attempt to use a
seat over a pit latrine for fear of falling in. There were many reasons why lavatories were not used but the failure to use them undoubtedly contributed to the spread of diarrhoeal infections.

By the late 1950s more Health Inspectors were appointed. Mr CG Rider became the senior Health Inspector for Central Australia. He was provided with a four wheel drive vehicle which he equipped with everything he needed to simplify travel and camping. His road maps were mounted on spring rollers like blinds and his camp stretcher could be slipped in or out with a minimum of movement. This was what Survey Sisters had always needed for their work but no transport officer had understood the need. Mr Rider maintained the vehicle in perfect running order, but, during a time when all the other government vehicles were in disrepair he was directed to hand his vehicle to the general pool; that was the end of his vehicle and equipment.

The Health Inspectors (later Health Surveyors) did excellent work in locating fly breeding areas and identifying sources of infection. Doctors dealt mainly with the end result of an outbreak of gastroenteritis whereas Health Inspectors sought the cause. The work had to be coordinated. Unfortunately most of these men tended to be aggressive in their reports and this led to resentment and friction between the government departments. Mr Con Mappas followed Mr Rider at Alice Springs and continued a vigorous approach to achieve a safe environment.

As the population at Haasts Bluff, and later at Papunya, steadily increased due to migration from the western desert, officers with the Welfare Branch planned an expedition to investigate the country from which the people were migrating. It was hoped to assess the number of people still living in desert areas and to assess the availability of food and water. There were people who saw the risk to the health of the nomads if they congregated in large numbers. There were also the critics who saw attempts to keep the people in the desert as depriving them of the right to education and access to the health services.

**Lake Mackay Expedition**

The Lake Mackay expedition in June-July 1957 had been planned for some time pending the availability of adequate vehicles for a hazardous journey. There had been reports of nomadic desert Aborigines in the vicinity of Lake Mackay and Mr EC Evans of the Welfare Branch led an expedition into the area immediately north of Lake Mackay. He was accompanied by Mr Jeremy Long, Dr John Hargrave, a botanist, a geologist, Mr Ted Cooper as a driver and Mr W Braitling of Mt Doreen Station. An anthropologist, Dr Donald Thomson, accompanied the expedition in his own vehicles although he maintained that he was quite independent from it(12).

Leaving Alice Springs on 7 June 1957 they travelled west through Yuendumu, Mt Doreen and Mt Singleton. On 12 June, near the Western Australian border, they put up a signal smoke and received five acknowledgements. Later that day they were contacted by one old man and two boys. Heavy rain made conditions cold and travel harder. Many tracks were seen in the damp ground. On the 24th a group of forty-two people were found waiting for the visitors at Kimai well. The Aborigines were of the Pintubi tribe and offered no objection to being medically examined. All were naked. There was no evidence of yaws, a surprising feature in view of much tertiary yaws among the neighbouring Wailbri. Dr Hargrave was surprised to find twelve with carious teeth in an area where there was no ready access to flour and sugar. Trachoma was present and there was old damage to both eyes and eyelids. One man had a below knee amputation, but, with the use of a stout stick, he moved freely on one leg. Dr Hargrave remarked that this

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small group of Pintubis were in much better health than a group from the south of Lake Mackay whom he had examined at Haasts Bluff the previous year; on that occasion he listed thirty-three people as malnourished(13).

Although only forty-two people were found, Mr Evans considered there could be up to one hundred and fifty in the area. Water was scarce and the Aborigines had dug out soaks down to five metres to form wells. Hunting was limited to lizards and small rodents and the occasional rabbit. Bigger game like kangaroos were scarce. Twenty seven years later in 1984 Dr Hargrave met and was remembered by some of the Pintubi men again when he visited Kintore near the Western Australia border. In view of the infections at Yuendumu and Haasts Bluff, it was strongly recommended that the people not be brought in or encouraged to come to a settlement. However, it was just a matter of time before they came of their own volition, in small groups at first. For people who lived precariously from day to day, news of a regular food supply would have been a temptation few could resist.

Papunya

By June 1962 there were 620 people residing permanently at Papunya and others were still migrating from the desert areas. Mr Jeremy Long made a patrol into the country south of Lake Mackay and found people who were planning to migrate. He investigated several alternative sites for temporary camps between Papunya and the border and in July 1962 he recommended that a search for underground water be made as soon as possible. The people could be settled in small groups and the health service be extended to them on a visiting basis from Papunya(14). Mr Long considered there was light grazing country where more cattle could be bred for beef once bores and windmills had been established. As finance was required and other government departments were involved, nothing was achieved before more Pintubi people moved into Papunya. A group of 60 Pintubi people, possibly the largest group ever, came to Papunya in 1964 and were reported to be in poor condition from lack of food. These people brought the population at Papunya to 724 of whom 374 were children(15).

During a severe outbreak of gastroenteritis at Papunya in 1950, Sister Jeanie Bennett was transferred from Bamyili where the work had been as heavy as a retired person could handle. Papunya could only be described as a nightmare situation and when several more infants died, the Alice Springs Magistrate held an inquiry during which he censured both the Alice Springs Hospital and the one Sister at Papunya. The real cause of the problem, the poor hygiene at Papunya, was not mentioned.

When Sister Bennett resigned, Sister Angela Smith, who was trained in General Nursing only, was transferred to Papunya from Areyonga where she too was expected to cope with a task that required three Sisters. There were more infant deaths, many of them in Alice Springs Hospital. In early 1963 there were two Sisters and a Nurse Aide working at Papunya. The Welfare Branch, with the approval of the Director of Health, Dr WA Langsford, had begun to employ Registered Nurses with only one certificate and Nurse Aides or nursing assistants, many of whom had no qualifications at all.

As mentioned in Chapter 22, Professor George M Maxwell from Adelaide University was invited to advise on the child health situation in Central Australia. During his first visit in August 1964 he went to Papunya. There were then three Registered Nurses. This initial visit was the forerunner of a long association. However, other doctors were also interested in Papunya and Dr Bryan Gandevia from the University of New South Wales and Prince Henry Hospital, Sydney, visited during May 1965 to study the prevalence of broncho-pulmonary diseases. He was particularly interested in comparing recently arrived
Pintubis with those who had been there for some years. He found a much higher prevalence of chest infections (80%) among the thirty four newest arrivals than in other longer term Pintubis or Wailbri people (35%)(16).

Dr Geoffrey C Morlet, an ophthalmologist, was the next to visit in June 1965 to carry out scientific research into trachoma. This is recorded in more detail in the section on trachoma (Chapter 19), however it is notable that everyone was found to be affected by this eye condition. Dr Morlet was still at Papunya when Professor Maxwell arrived to conduct an extensive study of the health of children under the age of fifteen years.

Professor Maxwell’s large team was given one of the staff houses and catered for themselves. He was accompanied by Dr RB Elliot and a technician, Mr AB Holt. From the Northern Territory were Dr ND Vawser, Sisters E Kettle and N Stichbury and the Health Inspector, Mr CG Rider. Mr Creed Lovegrove, the District Welfare Officer was present to ensure cooperation and to minimise any adverse criticism. There were three registered nurses led by Sister K Partridge who knew all the mothers and infants.

On top of full medical examinations twenty four cooperated in lactose tolerance tests. Similar tests were also carried out later at Maningrida to determine whether Aboriginal infants had a genetic intolerance to cows milk. In spite of the tedious nature of the tests, the mothers who cooperated showed great patience although not really understanding. After extensive research lactose maldigestion was demonstrated in many of the infants studied(17). Its relationship to gastroenteritis was not clear. In later years it was conceded that lactose intolerance was the outcome and not a cause of gastroenteritis. In most cases the condition corrected itself; it was not genetic. The problem of recurrent episodes of diarrhoea was to be found in the unhygienic Aboriginal camps, a situation which the local inhabitants did not understand.

Although 324 children were examined, Professor Maxwell found he had 328 individual records. There followed the small problem of sorting out which four had been examined twice. Heights and weights were compared against the Australian standard prepared in 1957 by the Institute of Anatomy, Canberra, and revealed that 50 per cent of the children were in the 3rd to 10th percentile. For clarification, most two year old infants were the weight expected of one year old white Australian children(18). Professor Maxwell recommended an annex be attached to Alice Springs Hospital where the most seriously underweight infants could receive special feeding in hygienic conditions.

This was not approved since Dr Langsford believed that this was the responsibility of the Welfare Branch. He had long resisted pressure from concerned people to provide a mothercraft home or child nutrition unit on the grounds that it would rob mothers of their responsibility. The aim of the proposed unit was to educate the mothers, some of whom were still teenagers themselves. This was not achieved until 1972 when the then Minister for Health intervened.

Professor Maxwell noted the widespread ear, nose and throat problems and considered there was enough work for a specialist. Dr Hargrave had made a similar recommendation in regard to Bathurst Island in 1957. With few exceptions most children had purulent nasal discharge leading to exoriation around their noses and upper lip while 27 per cent had bilateral chronic suppurative otitis media. In some, otitis media had first appeared in the first month of life. It was a grim picture and required one Sister working full-time to even start to reduce the rate of infection. No attempt was made to screen ears for hearing loss; that was later undertaken by Survey Sisters with the Department of Health.
No examination was made of eyes as Dr Morlet was currently attending to that aspect. Anaemia was not a problem and no evidence was found of asthma. Professor Maxwell was most concerned about chest infections some of which he considered clinically to have developed bronchiectasis. He asked for eleven children to be sent to Adelaide Childrens Hospital and a further eleven to go by road to Alice Springs Hospital for X-rays and further medical investigations(19). Welfare Branch officers had the delicate task of approaching the parents most of whom eventually cooperated.

During his visit in July 1965 Professor Maxwell noticed that the infant feeding bottles were in the same sink in the treatment room in Papunya Hospital as the kidney dishes and forceps used in handling septic infections. He spoke to the nursing staff and secured a completely separate room for these normally clean procedures. Although this source of cross-infection was corrected, it did not remain so. There was a considerable turnover of staff with no induction course or inservice training; there was also no nursing supervision to maintain standards at a desirable level. During 1966 a total of nineteen infants from Papunya died. A similar picture existed at Yuendumu where nine died in the first six months of the year. Action was taken at Yuendumu to clean up the hospital and baby feeding situation and only three deaths occurred during the rest of the year(20).

In 1974, the first civilian radiologist appointed to Alice Springs Hospital, Dr HG Hiller, reviewed many earlier X-rays including those of the children from Papunya. For his own interest, and without first knowing the subsequent histories of the Aboriginal paediatric patients, he studied the earlier X-rays. In his opinion about seventy per cent of the films were normal, yet a total of thirty-two children had undergone lobectomy in Adelaide. The many X-rays showed no evidence of rickets, scurvy or other skeletal abnormalities that might have been expected in so many undernourished children(21). There seemed to be little wrong with the children that hygienic living conditions and good clean food would not correct.

Sister Helen Wagner from Sydney was appointed as a Survey Sister in Central Australia in late December 1965. She had been briefed in the work she was to do while in Darwin but, on arrival at Alice Springs, she found that Dr John Wilmot, the hospital Superintendent did not approve of nursing staff driving themselves around the outback. Much local authority was delegated to the Medical Superintendent at Alice Springs and later to the Regional Director, irrespective of whether they had relevant background experience. Eventually, with the high infant mortality at Yuendumu, Sister Wagner was sent there to help and soon pinpointed sources of infection occurring within the hospital. Overworked nursing staff sometimes let standards slip. On top of that were the 'matrons', women with no medical training who, in many situations, were either doing the medical work or assisting in the infant feeding programs; their domestic hygiene was not adequate to prevent the spread of infections in communal feeding situations. Within the hospital itself babies' bottles were washed in the same trough as infected dressing bowls and kidney dishes; nothing was boiled, not even the water for milk mixtures. Sister Wagner had all clean activities removed from the area of infection in the dressing room where infected ears were syringed each day and where masses of flies entered on the clients backs. She introduced hygienic practices once again and sterilised all baby feeding utensils in Milton.

While awaiting a coroner's permission for burial, Yuendumu Hospital had been used as a mortuary for persons who had died elsewhere. It is normal practice to remove bodies from the hospital as soon as possible to lessen the risk of infection. Although no similar reports came from Papunya, nonetheless the practices corrected by Professor Maxwell once again slipped back into short cuts. Undoubtedly there were many other factors contributing to the epidemics of diarrhoea that killed so many babies, but taking every precaution was
essential to ensure the outback hospitals (later health centres) did not become sources of infection.

Sister Wagner also established regular visits to over twenty cattle stations. With encouragement and support, many white women would ensure adequate clean food for infants and supervise the preparation of extra milk. Seriously underweight babies could not be admitted to the overcrowded situation in Alice Springs Hospital, hence it was impossible to start to rehabilitate them before they became acutely ill; they then spent months in hospital overcoming chronic malnutrition. During a three year period (1966-69) the work of Sister Wagner and other Survey Sisters who worked with her brought a dramatic decrease in infant mortality. Sister Wagner developed her own health teaching techniques and pictures to impart knowledge to Aboriginal mothers.

Dr D Kerry Kirke, the first doctor to specialise in paediatrics in Central Australia, commented that in 1964 one in four Aboriginal babies in that area died before the age of one year and a further one in three died in the second year of life. In 1966 at Papunya there were 42 births and 14 deaths under two years of age(22). During the same year at Yuendumu the mortality was 290 per 1000 live births(23). Areayonga settlement which had a smaller population had the highest mortality rate of all. There was a good drought breaking rainfall in 1966 after eight years or more without much rain. Dr Kirke commented that since 1966 there has been considerable improvement in the infant and toddler death rates, but this has been due to the efforts of a few individuals rather than a change in policy by any Government Department(24). Sister Helen Wagner was one of those individuals who served with dedication and distinction.

Late in 1969 there were financial cuts. Dr Gordon E White, who had been the Medical Superintendent for some time, was promoted to the new position of Regional Director for Central Australia. He was directed to cut costs and the first area reduced was the infant health service for Aboriginal babies. No cuts were made in the equivalent services to mothers in the major towns. Where cattle station owners protested, the service was restored but the supervisory and supportive visits to Welfare settlements were curtailed. When Sister Wagner protested she was transferred to the town clinics in Darwin and resigned a few months later. The infant mortality rose steeply and more nursing staff had to be appointed. Dr Kerry Kirke, who had completed further studies in paediatrics, transferred from the hospital to field work in a determined bid to reduce the morbidity and mortality among infants.

The establishment of the Alice Springs Child Health Unit in 1972 is recorded in Chapter 22. From this unit flowed initiatives in health education. However there were still massive problems in staffing the health services in the outback. The Welfare Branch employed progressively more unqualified women in health work; they were employed on their husband's qualifications. For example, in April 1969 the Aerial Medical Service doctor was asked to provide written authority for a nursing assistant at Alice Springs Hospital to be employed as 'matron' at the new Docker River settlement. Her husband was a motor mechanic. This request was passed to the Matron of Alice Springs Hospital who stated in writing that the woman concerned had been at the hospital about four months and had no qualifications or relevant skills. The Nurses Ordinance for the Australian Capital Territory stated that no unqualified person could work as a nurse except under the direct supervision of a Registered Nurse. Dr Langford, as Chairman of the Nurses Board in the Northern Territory, declared that the ruling did not exist in the Northern Territory Nurses Ordinance, an Ordinance that had not been reviewed or revised since it first introduced in 1933. As a result an unskilled woman at Docker River was the first contact that unsophisticated desert Aborigines had with western health services.
The wheels of change had begun to turn. On 8 December 1968 Sister Kettle presented a submission to Dr Langsford in Darwin for the takeover of those health services provided by the Welfare Branch and the subsidised positions on missions and cattle stations. The submission also showed a breakdown of the whole Northern Territory into health regions for administrative purposes and how Survey Sisters (Rural Health Sisters) could provide a regular service by road. By 1970 much of this proposal had been implemented. In July 1972 the Minister for Health agreed with Sir William Refshauge for the Department of Health to take over from the Welfare Branch on 1 January 1973. However, by then some outback hospitals had in fact already been staffed by the Department of Health a few months earlier.

Endnotes

1 CRS A431, item 50/1020 Part 2, AA, Canberra.
2 S Linder, Lutheran Herald, 27 Mar 1948.
5 JC Hargrave, Medical survey of the Hermannsburg Mission, May-June 1956, Dept Health File 60/654, Darwin.
8 M Phillips, District Medical Officer's Report, Hermannsburg, Dept Health, Darwin.
9 RRA Brock, Medical survey of Haasts Bluff native settlement, Sept 1952, Dept Health, Darwin.
10 JC Hargrave, Medical survey of the Haasts Bluff native settlement, Dec 1956, Dept Health File 60/639, Darwin.
13 JC Hargrave, Medical survey of the nomadic natives in the Lake Mackay area of the Northern Territory, 1957, Dept Health File 60/639, Darwin.
20 H Wagner, Aboriginal infant mortality, The Lamp (NSW Nurses Association), September 1981, 6-16.
23 Wagner.
24 Kirke, 22.
Betty Brock (doctor's wife) and Sister Saleen Lindner at Haasts Bluff in September 1952 (photo: R Brock)

The dairy at Little Flower Mission, Arltunga in 1952. Goats' milk was widely used in the outback (photo: R Brock)
Yuendumu in 1952. L-R: Ellen Kettle, Betty Ashworth, Rev Tom Fleming and wife Pat, Ada Griffiths (teacher) and Adrian Fleming outside the mission house (photo: American visitor)

Sister E Kettle outside the Sister's house, Yuendumu 1953. It was rent free in exchange for no complaints (photo: E Ashworth)
L-R: Dr Richard Brock, Betty Brock, Ellen Kettle, Dave Smith of Mt Allen station and Jack Newham (driver) during a medical survey of Aborigines on cattle stations, July 1952 (photo: R Brock)
Three infants, Cameron, Angeline and Barbara outside the hospital, Yuendumu in 1953 (photo: E Kettle)

Mrs Pat Fleming’s preschool group, Yuendumu 1958. Many Wailbri children have blonde hair (photo: E Kettle)
The new Hermannsburg hospital nearing completion in November 1955. A separate unit was added for tuberculosis (photo: E Kettle)

Sister Grace Jarrick at the dispensary, Hermannsburg in 1955. Donkeys were widely used by centralian Aborigines (photo: E Kettle)
Pintubi people as they were in the Lake Mackay area, June-July 1957. Many later migrated to Papunya to obtain food (photo: J Hargrave)

A very mobile amputee near Lake Mackay, July 1957. No information was obtained on how and why he lost a leg. The shirt was a gift as the Pintubi had no clothes (photo: J Hargrave)

Dr John Hargrave accompanied the Lake Mackay Expedition in June-July 1957. It was desolate country, the people living on lizards and small rodents (photo: EC Evans)

Patrol Officer EC 'Ted' Evans who led the Lake Mackay Expedition to assess the number and needs of Pintubi people still living in the desert in 1957 (photo: LW Alderman)
CHAPTER TWENTY-TWO

ALICE SPRINGS HOSPITAL - 1950-1970

The original Alice Springs Hospital opened in March 1939 and was little more than a cottage hospital to which had been added an X-ray unit. In 1952 the few nursing staff resided in the house on Stuart Terrace known locally as 'Flying Doctor House' due to its proximity to the Royal Flying Doctor Service base station and house. Matron Jean Woolmington lived in a small flat near the Mens Ward and almost directly behind the Medical Superintendent's house. The main hospital comprised two wards of eight beds each for men and women and included four single rooms. Immediately behind the Sisters Home there was a Maternity Ward connected to the Womens Ward by a covered walkway. Any sick children were nursed on the verandah of the Womens Ward. There was a separate ward for Aborigines and the tuberculosis patients were nursed on the verandahs of this ward. As Aboriginal mothers were usually admitted with their sick infants, they further congested the limited space. When Dr Bryan Mathieson from Canberra relieved as Director of Health in March 1953, he was most concerned at the proximity of other patients to those with tuberculosis.

The mortuary was too close to the Maternity Ward for comfort. When the police brought in bodies found in the outback, the stench was overwhelming. A more adequate mortuary was built in 1959 immediately behind the hospital and beside the track leading to the new Sisters Home; it had the same disadvantage as the first. The original mortuary, renamed the 'Humpy', then served for several years as a radio medical room.

The original administrative block facing on to Stuart Terrace housed the dispensary and the X-ray unit as well as providing for outpatients. When it became congested, a small temporary office was built for the Medical Superintendent between the administrative block and the hospital. Unfortunately temporary buildings tend to become permanent and successive Medical Superintendents had to tolerate the same office for many years. In 1969 the office was used by the hospital Matron and any staff with problems waited their turn on a stool under a lemon tree just outside the door.

In April 1950 a twenty-one year old male clerk was appointed and Dr FB McCann in the Adelaide office promptly moved to have him designated as a Collector of Public Moneys so that hospital and dental accounts could be settled locally instead of being sent to Adelaide. People who did not pay immediately often disappeared leaving the health service with a stack of unpaid accounts; all told, it was a clumsy arrangement. All salaries were paid from Adelaide until Mr Desmond H Hyde was sent from Perth early in 1953 as the first hospital secretary. His appointment relieved Dr Welton of the non-medical aspects of hospital management. Des Hyde spent over thirty years with the Department of Health and filled several key positions in his later years.

The public was aware of the hospital's shortcomings and were vocal on the matter. Mr Jim Bowditch, as secretary of the Progress Association, along with members of the Country Womens Association, wrote direct to the Minister for Health requesting a separate Childrens Ward. A local anthropologist, Miss Olive Pink, wrote many letters protesting about the lack of space for Aboriginal patients and that tuberculous patients were housed in close proximity to women and babies. Furthermore, Sister Olive O'Keefe was the only trained nurse and although a Sister would visit from the main hospital to take
temperatures and give medications, the ward was frequently supervised by untrained Aboriginal staff.

Dr Welton asked for more nursing staff and was told there was no point in increasing the staff until a new Sisters home was built. A new two storey home, known locally as 'The Palace' was opened by the Minister for Health, Dr Donald A Cameron, on 27 May 1958. In the meantime the twelve bedroom unit built for domestic staff and known as 'Poor House', was utilised for nursing staff. As the name would suggest 'Poor House' was a humble building but it was used for staff and visitors until a second three storey block was added to the Sisters Home in June 1964. Twelve bedrooms in this new block were airconditioned for the use of night duty staff.

Sister Joan Hordacre, who had been on the hospital staff since 1949, replaced Matron Jean Woolmington on 26 January 1955. Matron Hordacre was a gardener and when she occupied the new flat attached to the Sisters home in May 1958, she planted citrus trees to provide fresh fruit for the staff. Oranges, lemons and grapefruit were also planted around the hospital and her personal garden was famous for its roses, violets and jasmine.

Alice Springs Hospital had unique problems with staff turnover. Although a few Sisters stayed two or three years, most came in April and left again before Christmas when the weather became very hot. Chronic staff shortages meant only one day off each week and sometimes even that one day was forfeited to meet patient requirements. The new Sisters home was attractive but it lacked overhead fans in the bedrooms or any form of heating during the cold months when the temperatures dropped below freezing point. These discomforts were remedied at a later date. All recruitment of nursing staff was done through headquarters in Darwin who would not advertise a position until it was actually vacated. This caused a delay of up to three months and a staffing establishment that was never filled. The workload imposed on the remaining staff led to further resignations. This problem continued until recruitment of nursing staff was delegated to the hospital matron in 1967.

As recorded in the previous chapter, gastroenteritis in infants became an increasing problem from the mid-1950s onwards. However, it was not until 1964 that a paediatric consultant was asked to give advice. By that time one in five Aboriginal infants was dying under two years of age. The emerging crisis in the outback crowded the inadequate hospital with very sick infants at a time when there was no paediatric ward, no paediatrician and very few nursing staff.

During his eight years in Alice Springs, Dr Bert Welton made tuberculosis control his special project. The small house type prewar unit built near the Aboriginal Ward for tuberculosis was converted to a house for doctors or other single men. This tin house, known as the 'Wurlie', was certainly humble. For many years there was an acute shortage of outside accommodation for staff. It was impossible to buy or rent houses. Government owned hostels were built in both Alice Springs and Darwin to accommodate single employees. Dr Welton lived in the house built for the Medical Superintendent but his office was intolerably small. It was a sad day in Alice Springs when Dr Welton left for Sydney to educate his children. As a parting gift he was presented with a beautiful Albert Namatjira painting.

Dr RC Webb was transferred from Tennant Creek in January 1956 to replace Dr Welton. After the rigours of Tennant Creek they enjoyed their stay of four months in Alice Springs before transferring to Darwin where Dr Webb was appointed as the first Medical Officer of Health - a role that covered everything but the hospital. Dr Stephen Wattsford, previously Director of Health, had been in Sydney undertaking a Diploma in Public
Health and he wished to return. He was given the positions of Medical Superintendent and surgeon at Alice Springs. Dr Watsford differed with Dr Metcalfe over Department of Health responsibility for the Health services to Aborigines. The story may have been very different had he remained as Director and been given support in the development of the health services.

Dr Watsford remained at Alice Springs until June 1957. He was replaced as Medical Superintendent by Dr Geoffrey M Ireland. He in turn was replaced by Dr James R Evans who did not hesitate to say that Alice Springs needed a whole new hospital instead of bits and pieces being added here and there. Dr Evans put his thoughts in writing on the lack of bed space and the overcrowding that had become a risk to both patients and staff at a time when hepatitis was rife in the town. In 1957 there were thirty-three cases of infective hepatitis and no isolation ward; several of the staff developed the infection.

In July 1958 the Aboriginal ward was crowded with seventy patients in fifty-eight beds or on the floor. The safe capacity of the unit was about thirty inpatients. The staff to care for this number comprised five Sisters and two unskilled wardsmen(1). Aboriginal staff did the cleaning but required strict supervision as they did not understand cross-infection. A staff of five Sisters allowed one on duty for seventeen eight hour shifts and two on duty for four day shifts per week. Sister Mavis Paech had been working with Sister O'Keefe since 1954 but other staff did not remain long due to the excessive workload.

The following month Dr Rene Manning was sent to Alice Springs to supervise the health of Aborigines in the outback and in particular the children. A few months later he was replaced by Dr George HK Tippett who had joined the hospital staff in April 1958. It was Dr Tippett who took over the original morgue and turned it into a radio and operational room for the health team he helped to build up. Dr Tippett called the room his 'humpy'.

At the time Dr WA Langsford was appointed to Alice Springs as Medical Superintendent (6 April 1959), the hospital was overcrowded by infants with shigella dysentery. He promptly cleared the original Matron's flat and on 23 April all the victims of shigella were transferred there(2). This ward was staffed with married Sisters resident in Alice Springs, a move that ensured greater continuity of staff and did not embarrass the nursing staff accommodation. The Public Service Board on the other hand did not encourage the employment of married women there, a policy which slowly changed over the years ahead.

In 1954 a decision was taken to build a new ward for the Aboriginal patients, but it took time to draw up the plan, have it costed and to let contracts. Construction was started in 1958 but shortly before it was completed Dr AJ Metcalfe visited Alice Springs and announced the new ward would be for the white community and the original hospital for the Aborigines. This building was long and a little unwieldy as it had originally been intended to have general patients at one end and tuberculous patients isolated at the other end.

By the time the new General Ward was occupied on 9 February 1961, Dr Langsford had become Deputy Director in Darwin and Dr Peter Dawes, who had arrived early in 1960, was the Medical Superintendent. The main ward accommodated forty adult beds. Another room near the Mens Ward became a three bed intensive care unit, the first such facility in Alice Springs and a small one bed room behind the ward office was kept for sick staff. This ward had its own kitchen and a separate consulting room for use by the doctors. Although there was space to include Aboriginal surgical patients, they were not integrated into this ward until April 1969.
At this time the shigella ward (previous Matron's flat) was refurbished to provide a Childrens Ward for all but Aborigines. No more infectious patients were admitted. A separate milk room was arranged within this unit for a Sister to prepare feedings on a daily basis for infants in both this and the Aboriginal ward. This ensured milk preparations were not contaminated.

The original hospital, designed to accommodate sixteen adult beds in the two wards and four private rooms, became the Aboriginal hospital. Ward dimensions were 28 feet by 20 feet (8.5 metres x 6.1 metres) with verandahs ten feet wide (3 metres). The verandahs had been enclosed with louvered windows. The operating theatre attached to this ward block continued and one of the private rooms was set aside as a surgical recovery room. Tuberculous Aboriginal patients remained in the previous Aboriginal Ward while men and women with other conditions occupied the verandah space at either end of the original hospital. Non-infectious paediatric patients occupied the ward at the women's end of the unit while those with gastroenteritis were cared for in the ward in the men's section. Although shigella became the most frequent cause of gastroenteritis, it was not the only cause. Attempts were made to keep shigella patients on one side of the ward and others not proven to have shigella on the other side. It was well nigh impossible to keep the mothers from mixing freely. When the ward was congested the infants with complications such as pneumonia were nursed in cots in the middle of the ward. Although communication between the Aborigines and staff was difficult, there was also a language problem between Aborigines from different tribes. However mothers realised the significance of their infants being in the middle of the ward and given oxygen; some panicked and wailed while an occasional mother grabbed her sick infant and fied.

During the war Alice Springs enjoyed a pathology service provided by the army hospital. With no such service after the war, the staff of the Animal Industry Branch of Northern Territory Administration permitted their veterinary section to do much of the hospital's pathology work. Specimens had to be delivered by hand but the results could be phoned back. The hospital opened a limited pathology service in December 1956 when a laboratory technician was appointed. In April 1959 Miss Arthur was appointed and Dr John Crotty in Darwin wrote a job description for the position. The small laboratory was situated next to the X-ray section in the Administration block. It was limited in its work and all bacteriology and histology continued to be sent to the Animal Industry Branch laboratory until 1973. Mr Les Strinovich became the senior technician in 1964. The following year Miss Francis Morey was appointed to the Animal Industry Branch where she did most of the hospital pathology; she transferred to Alice Springs Hospital in 1973. When the new maternity ward was opened in 1965, the laboratory took over the previous maternity ward and remained there until the new hospital was opened in 1977. The many infants being admitted to the hospital with diarrhoea greatly increased the work in this section.

When Dr Ian Byrne became Director of Health in Darwin in March 1961, Dr Langsford transferred to Darwin as his deputy. Dr Peter A Dawes, who had been on the staff for the past year, became Medical Superintendent at Alice Springs Hospital. His wife, Dr Joan Dawes, worked part-time as the anaesthetist. Other changes occurred among the nursing staff. Matron Joan Hordacre went to England in mid-1961 on long service leave and suffered a severe stroke. Dr Dick Webb was in London and he eventually arranged her return home but she was never able to resume work. Sister Francis Freeman acted as Matron until the deputy from Darwin Hospital, Matron AL Brennan, was appointed to Alice Springs Hospital on 27 February 1962 and remained until April 1965 when she returned to Darwin Hospital as Matron there.
Matron Florence M Petersen, Principal Matron with the Commonwealth Department of Health in Canberra, had long been asked to comment on nursing submissions from the Northern Territory. She had developed a staffing policy for Canberra Hospital in 1955, but it was 1960 before she was sent to the north to look at the situation first hand. She found overworked nursing staff doing extraneous tasks such as counting dirty linen before it went to the laundry and counting it again on return to the wards. Over the weekends, when the laundries were closed to cut costs, the nursing staff were washing napkins. They were also attending the hospital switchboard at night. In 1960 Alice Springs Hospital had a daily average of ninety-five inpatients, many of them seriously ill infants. Matron Petersen recommended the staffing be increased from thirty-eight trained nurses to forty-two and the Nurse Assistants (untrained) from six to ten(3). Hospital nursing staff had always been called upon for ambulance trips either by road or by air and the hospital Matron would have to find an off duty staff member in the Sisters Home each time an emergency arose. This excessive workload inevitably led to a high turnover of staff.

When the new General Ward was opened in January 1961, more nursing staff were allocated. In 1964 Sister Olive O’Keefe who had been the mainstay in the Aboriginal Ward since 1949, transferred to Katherine Hospital as her husband had retired to a cottage on the banks of the Katherine River.

Dr Ian Byrne was most concerned over the mortality among Aboriginal infants admitted to Alice Springs Hospital. From November 1961 onwards every death had to be reported to him in detail. Dr LA Cock, who was then caring for these children, reported that many deaths were due to gastroenteritis in already malnourished infants. Post-mortems did not always reveal a cause of death unless it was due to dehydration. Pneumonia was frequently the terminal condition. The greatest tragedies were the healthy infants who came to hospital as boarders with their sick mothers and contracted diarrhoea or pneumonia or both and died. Premature babies sent to the hospital from outside were at grave risk. Likewise, doctors hesitated to admit infants suffering from malnutrition as they could not be adequately protected from infection within the hospital.

The health services needed the guidance of a paediatrician familiar with problems in under developed communities. There was no shortage of food yet infants were undernourished. In 1960 Sister Kettle put forward a proposal for a mothercraft home in Darwin initially, to be followed by a similar home in Alice Springs. It was envisaged as a support centre for very young mothers, those between 12-16 years of age who did not have adequate breast milk to rear a baby, and other women whose babies were not thriving normally. Failure to thrive was not a diagnosis but a symptom of lack of food. Educated Aboriginal girls could have undertaken a mothercraft nursing course. For ten years Dr Langford quietly but firmly resisted the proposal. He agreed in principle to include it in future planning but rated it so low that it was never built. For several years a large medical store had top priority and the Welfare Branch could not take over the project as it had been rated a Department of Health responsibility. Infants continued to die as there was no place in any of the hospitals for the seriously undernourished; they had to be ill to be admitted and by then it was usually too late.

Infant deaths led to strained relationships between the Welfare Branch and the Department of Health. Dr Ian Byrne reported the deaths in hospital and the diagnosis commonly included malnutrition as a predisposing factor. Mr Harry Giese reported the deaths out bush with the occasional comment that the infants should have been evacuated to hospital earlier. Deaths among infants on church missions was markedly less than on Welfare settlements. Many Sisters on the missions gave a lifetime of service at one centre and learned the local language whereas the Welfare Branch had a policy of regularly moving staff and no one learned the language. Continuity of staff undoubtedly contributed to
more effective health counselling and earlier recognition of factors contributing to epidemics of diarrhoea.

Several extensions were added to Alice Springs Hospital during 1964 but none of these provided more room for sick Aborigines. A new operating theatre and central sterilising department came into use on 25 August 1964. The physiotherapy section then moved into the previous theatre at a time when the whole of the original hospital should have been made available to Aborigines. Overcrowding continued as a major factor contributing to cross-infection.

During the fiscal year 1958-59, 167 infants were admitted with diarrhoea. Shigella was the organism most frequently isolated but some did have salmonella. In many, where no specific organisms were found, the infections could have been viral. The number of admissions increased annually; in 1962-63 there were 205 and in 1968-69 there were 275(4). For the same three periods in the Darwin region there were 111, 52 and 43 respectively in spite of there being twice as many babies born in the north. Living conditions in Central Australia were harsher than in the north and the Aboriginal people were slower to accept hygienic practices than their northern counterparts.

Sir William Refshauge, the Director General of Health in Canberra, was most concerned over the child health situation which was also causing political repercussions. He visited Professor George Maxwell, Professor of Child Health from Adelaide University, and invited him to investigate and advise on the infant morbidity and mortality in Central Australia(5). Professor Maxwell came for six days initially (15-25 August 1964); it was the beginning of a long and meaningful association. Visits to Papunya and Yuendumu were included in his itinerary and on a subsequent visit he spent a few hours at Warrabri.

Professor Maxwell was shocked by the primitive old hospital in which Aborigines were accommodated. There could be no effective isolation of infectious diarrhoea as adult patients from the verandahs, along with the mothers of sick infants, wandered through the wards at will. There was only one handbasin in each of the two old wards and just one handbasin in the white paediatric unit. To isolate the infectious conditions more effectively he recommended that those infants be cared for in the recently vacated old midwifery ward. This was not done as there were other plans for the old ward; the pathology section moved there from the administrative block. There was no one among the current doctors and nursing staff with background experience in a paediatric hospital and all admitted that the existing situation frightened them.

In advising on the treatment of severe diarrhoea when the greatest danger was dehydration, Professor Maxwell recommended that 'the principle of treatment by intravenous fluid therapy and minimal antibiotic cover should be applied. The prognosis is related to effective early treatment ... and the prevention of cross-infection'(6). Intravenous rehydration of infants was crucial to overcome vomiting. However, it required much skill to insert a needle into the collapsed veins of a dehydrated infant. He considered that malnutrition was a Welfare responsibility but it had to be dealt with in infants admitted to hospital. The underfed infants spent twice as long in hospital but most did respond to adequate clean food. The answer was not that simple though as mothers had to be convinced their babies needed food. Many nursing staff in the outback reported that small cans of baby food, given to mothers for food for the weekend, were opened, immediately tasted and thrown away and were not offered to the babies.

In July 1965 Professor Maxwell undertook a medical survey of infant health at Papunya (see Chapter 21). Earlier that same year Dr D Kerry Kirke, a recent graduate from Adelaide University, had joined the staff of Alice Springs Hospital and been given
responsibility for the paediatric wards. Dr Kirke worked in close conjunction with Professor Maxwell to document facts so that these could be evaluated later. Aboriginal births and deaths were recorded by the Survey Sisters but with changes in staff he considered the figures were not accurate and endeavoured to ensure all births and deaths were recorded. The Welfare Branch registered births and deaths but this information was not readily available to the Department of Health and it did not reveal the trouble spots.

It was Dr Kirke who first used intraperitoneal drips to rehydrate infants with gastroenteritis late in 1965. Someone had told Dr Hargrave of the successful use of this method in Nairobi, Kenya, and he obtained a copy of the relevant material and sent it to Dr Kirke(7). An intraperitoneal infusion is given into the abdominal cavity with the needle inserted above the umbilicus. When the abdomen is flat from dehydration it is easy to pick up the loose folds of skin and insert the needle without risk of penetrating any organs. The infusion can be run in much more rapidly than into a vein. In most patients the rate of absorption is good and it has become a lifesaving technique in the treatment of dehydration. Shortly afterwards, in September 1967, when Dr Alan Walker was appointed to Darwin as the first paediatric specialist, he too used this technique and taught it to the Sisters in the outback.

The continuing numbers of sick Aboriginal babies placed a heavy and demanding workload on the staff. Many of the infants cured of diarrhoea returned home to the same environmental conditions and were promptly reinfected. It was heart breaking for the staff to see infants whom they had spent months in rehabilitating returned to hospital within weeks of being discharged. Morale was low and many Sisters stayed only a few months before leaving to work where there was more satisfaction in a job well done.

Miss Lorraine Jarrett, Executive Secretary with the Royal Australian Nursing Federation, visited Alice Springs in July 1967. Alice Springs Hospital had 149 bed capacity but only 96 inpatients. There had been widespread heavy rain the previous year that led to a temporary respite in the incidence of infantile diarrhoea. The Aboriginal Ward, then Ward 5, comprised 49 beds and cots crowded into a space meant for half that number, whereas the General Ward, used for non-Aboriginal people, was underutilised. The staffing comprised positions for 62 Sisters, 8 nursing assistants, 8 doctors, 13 clerical, and 72 ancillary personnel(8). Very seldom were all the nursing positions filled as the personnel section in Darwin would not advertise a position until it was actually vacant. Many applicants were told there were no vacancies and they did not apply again. Matron Lois Johnson asked for delegated authority for Alice Springs Hospital to do its own recruiting. This transformed the situation as she could anticipate resignations. A waiting list of applicants was kept, many of whom were prepared to accept a position with one months notice. Matron Johnson was better equipped than the clerical staff to assess the qualifications of applicants.

The fall in paediatric admissions did not last long. In February 1969, when Sister Kettle was appointed as Matron of Alice Springs Hospital for a few months prior to going to Papua New Guinea in June that year, the Aboriginal wards were crowded with sick babies. There was much political pressure from outside and in April 1969 Dr Bert Welton returned for a few days to assess the situation. He was shocked at the dangerous level of overcrowding.

The Ministers Fraternal, a group of concerned church men in Alice Springs, had long been urging the government to provide better facilities. The Reverend Jim Downing who had established the Institute for Aboriginal Development in Alice Springs, was feeling the strain of explaining to the people why their babies had died in hospital. Dr Langsford visited Alice Springs to placate these men but they were not to be diverted in their
determination to see change. A few days later there were questions in Parliament over the under-utilisation of General Ward and Dr Langsford phoned the Medical Superintendent, Dr SJ Ivil, at 10 am on 11 March 1969 with a directive that the hospital be fully integrated by 3 pm that day(9). It was done. With the exception of the tuberculous patients, most adult Aborigines were transferred into the General Ward. This was achieved by equipping the half dozen, six bed wards with eight beds each. General Ward increased to fifty-eight and was divided into two separate wards for the purpose of administration. The hospital was still inadequate so, on 2 May 1969, the previous staff quarters known as the 'Wurli' was converted to a sixteen bed female medical ward. This brought the available hospital beds to one hundred and eighty three. On 15 May approval was granted for twenty-five more Sisters and six Nurse Aides (Enrolled Nurses). Two private homes were rented in Alice Springs to help accommodate the extra staff. At this time Mr EC Milgate was the hospital secretary, a position he held for several years.

The catering at Alice Springs Hospital was good. The cooks enjoyed their job and there were no complaints until the Director, Dr Langsford, and the Senior Administrative Officer from Darwin visited. The first item slashed was the hot scones served for morning tea. These were replaced by a cheap line of bought biscuits. There was immediate resentment as the action was not economical. Shortly afterwards the hospital menus from Darwin were sent to Alice Springs Hospital with a directive that identical meals be served in Alice Springs and on the same days. This destroyed all initiative by the cooks who had enjoyed varying the meals. The overworked staff saw these actions as punishment for having complained about conditions and the level of resentment steadily rose. In February 1970, twenty-one Sisters resigned in eleven days(10) and Matron Lois Johnson was struggling to maintain the service. On 2 June 1970 most of the hospital nursing staff marched through the streets of Alice Springs in protest over the existing conditions.

Sir William Refshauge in Canberra and the Minister for Health, Sir Kenneth Anderson, were concerned about the overcrowding in the hospital and by January 1970 there were two demountable wards on the way along with temporary accommodation for a further twenty nursing staff. These buildings took time to arrive. In the meantime anger and resentment festered among the nursing staff.

When Dr Ivil went overseas as an immigration doctor early in 1970, Dr John Hawkins, the hospital surgeon since 1961, acted for a while as Medical Superintendent. During this time, in November 1970, Dr Hawkins prepared a submission to upgrade the hospital's medical staff. The number of doctors was half that in Darwin Hospital and there was no pathologist or radiologist. He recommended an upgrading of the Medical Superintendent's position to attract better qualified doctors instead of men whose medicine was out of date. There was one Paediatric Registrar for a hundred inpatients whereas in Adelaide Children's Hospital there were four Registrars and four Resident Medical Officers for a similar number of inpatients(11). He foresaw the proposed new hospital achieving recognition by the Medical Colleges but much needed to be upgraded before then. Dr John G Hawkins was later honoured for his service to the hospital and his sudden death on 10 September 1979 after eighteen years service was a great loss.

During Dr Hawkins's time as Acting Medical Superintendent, the Federal Government reversed some of the financial stringencies imposed on the health service and began planning major developments including a new hospital for Alice Springs. Negotiations were under way for the Department of Health to take over the hospitals on Welfare settlements and major developments were on the planning board. A contract for the new hospital was let on 26 October 1972 in anticipation that it would take three years to build.
In the meantime, cross-infection continued as a problem. When Lorraine Jarrett visited again on 20 February 1970 she saw several cots with two children in each(12). There was a small parliamentary inquiry early in 1971 when members of the Ministers Fraternal pointed out that most of the hospital's pathology work was still undertaken by the Animal Industries Branch. Then in August 1971 an outbreak of measles in the hospital caused the deaths of seven convalescent babies(13). In quick response to accusations of neglect the Minister for Health, Senator Sir Kenneth Anderson, announced the purchase of Mt Gillen Motel in Alice Springs for conversion to a Child Health Unit. This new unit would be administered as a separate institution but would take convalescent infants from the hospital as well as admitting needy babies direct from the outback. Dr Langsford, ever sensitive to possible criticism, quickly added that it was for all races and would take children up to thirteen years of age. That policy would have been self-defeating; the Child Health Unit was for infants.

Adjustments were needed before the Alice Springs Child Health Unit could open as such. Sir Kenneth Anderson officiated at the opening on 5 February 1972 several days after the first patients had been admitted. Dr Kerry Kirke was officially in charge of the new unit with Sister E Hildebrandt in charge of nursing(14). The nursing staff were accommodated in the bedroom units. As Dr Kirke was often out bush on field work, Dr A Vorbach from the hospital kept a clinical watch on the inpatients. Where practical, mothers were encouraged to live in so they could be taught child care and nutrition.

The Child Health Unit met with administrative problems due largely to conflicting opinions on how it should function. Hospital staff saw it as an extension of the hospital and they did not approve of Dr Kirke admitting malnourished infants direct to the Unit from the bush. There were hundreds of infants in the outback in need of special care; for too long they had been recorded as failure to thrive, a symptom and not a disease. Lives could be saved if these infants were kept away from infections until their mothers were taught how to feed them. The main cause of failure to thrive was an inadequate supply of breastmilk. Dr Kirke wanted to keep these infants out of hospital whereas the hospital doctors considered they should first be processed through the hospital but the risk of infection within the hospital itself was considerable.

Dr Langsford recommended to Sir William Refshauge that the Child Health Unit be run as an annexe of the hospital and Sir William concurred. On 2 October 1972 Dr Langsford gave a directive that the Unit would function as an annexe of the hospital. Six weeks later Dr Langsford transferred to Canberra and was replaced by Dr Desmond B Travers.

The Medical Superintendent, Dr WE Laufer from South Africa, promptly stopped all health education in the Child Health Unit saying the ward Sisters would teach hygiene and infant feeding. A couple of months later the new Sister in charge complained that the mothers were uncooperative. By this time the Minister for Aboriginal Affairs in the new Labor Government took an active interest in the Child Health Unit and recommended to the Minister for Health, Dr Doug Everingham, that the Unit be autonomous. A working party met in Alice Springs on 16 May 1973. Dr Kerry Kirke had firm ideas on how the Unit should function: pressure on the hospital would be relieved by taking convalescent infants who were free from infections and by admitting direct from the outback debilitated infants who had not yet succumbed to infection. Several people had their own ideas but no real concept of the educational role of the Unit. Eventually the Child Health Unit did become autonomous again with the hospital providing facilities such as the laundry. Buildings were extended and staff appointed as tutors to expand the role of teaching.
In 1980 some of the demountable accommodation units from Alice Springs Hospital were moved on to vacant land adjoining the Child Health Unit to provide a training school for Aboriginal Health Workers.

**Nurse Aide - Enrolled Nurse Training**

Nurse Aide training at Alice Springs Hospital had been recommended to the Nurses Board by Matron MOM Downer in 1965 to replace the several untrained Nursing Assistants. Ellen Kettle recommended this again in April 1969 during the time she was Matron of the hospital. A training school was commenced on 12 August 1976 in one of the demountable buildings. Sister Sally Spiers was the first tutor. The course was most successful and has continued, taking trainees from centres throughout the Territory.

The new and modern hospital was opened by the Minister for Health, Mr Ralph Hunt, in January 1977. The grey brick Maternity Ward then became an isolation unit for infections such as gastroenteritis. The first hospital, built in 1939, fell before a bulldozer, but at the time of writing the original administrative block, with extensions, still faces onto Stuart Terrace and is used by the Aerial Medical Service.

**Old Timers Home**

Another important development in Alice Springs was the Old Timers Nursing Home. For many years after the war, Adelaide House, the original Australian Inland Mission hospital in Todd Street, functioned as a hostel for outback mothers and children. Pregnant women stayed there pending the birth of their babies. The hostel also accommodated nurses working in the outback with missions and with the Welfare Branch. The Australian Inland Mission moved to meet the needs of homeless old men and started the Old Timers village. A nursing home with six geriatric beds was added in 1964. The mission asked for recognition of the Nursing Home as required under the *National Health Act*. Dr WA Langsford inspected the Nursing Home on 25 May 1965 and recommended it. Sir William Refshauge gave his approval on 14 July 1965(15). Sister Melita Gannon was the first nurse appointed to the Home. Geriatric patients were then removed from Alice Springs Hospital to the Home, which was the beginning of an excellent service for the care of the elderly.

From 1 January 1973 all the hospitals on Aboriginal Settlements became the responsibility of the Department of Health. The new Alice Springs Hospital was opened in January 1977.

**Endnotes**

2. Alice Springs Hospital, 23 April 1959, Dept Health File 59/365, Darwin.
3. Visits by Matron Petersen, 1960, Dept Health File 60/1284, Darwin.
5. Dept Health File 69/506, Darwin.
11 JG Hawkins, Submission for increase in medical establishment, 6 Nov 1970, Alice Springs Hospital Library.
12 *Centralian Advocate*, 20 Feb 1970.
15 Old Timers Home Alice Springs, Dept Health File 65/655, Darwin.
Sister Joan Hardacre with Dorothy Alderman and son at
Alice Springs 1949. She was Matron of the hospital
January 1955-1961 when she met with a mishap while on
leave in England (photo: LW alderman)

Sister Olive O'Keefe who looked after Native Ward for
years (photo: RC Webb)

Dr Bertram Welton, Medical Superintendent, Alice
Springs Hospital 1948-1955. He had served with the
British Army in the Normandy Invasion in 1944. He did
much to control tuberculosis in central Australia
(photo: R Brock)

Matron Joan Woolmington at Alice Springs 1946-1955
when she married George Connon from RFDS. She was
there during the poliomyelitis epidemic in 1952
(courtesy: J Connon)
Alice Springs Hospital in 1955 facing on to Stuart Terrace. From left, dental clinic, doctor’s house (behind trees), office block with main hospital behind, Sisters Home and maternity ward behind it. RFDS Base (Dept of Health)

Alice Springs Hospital opened 21 January 1977. Some early buildings still remain (lower right) (photo: P Nice)
The first small Sisters Home at Alice Springs opened in 1939. In the 1960s it became an office for the Aerial Medical Service and other community health services (photo: J Ellis)

Matron Lois Johnston came to Alice Springs Hospital in 1963. She became Acting Matron in 1967 and confirmed in 1969. In November 1981 she transferred to Royal Darwin Hospital (courtesy L Johnston)

By 1964 Alice Springs Hospital had expanded. The upper central building is General Ward opened January 1961 and to the right is the Sisters Home opened 1958 (photo: J Ellis)
CHAPTER TWENTY-THREE

COMMUNITY HEALTH SERVICES - ALICE SPRINGS

Aerial Medical Services

After the cessation of hostilities following the Second World War, the Aerial Medical Service in the Alice Springs area continued to function under the prewar arrangement whereby the Royal Flying Doctor Service provided a radio base station and chartered Mr Eddie Connellan’s aeroplanes for emergency flights. The Department of Health provided the doctor for the service and a nursing Sister to accompany patients. Until 1959 the doctor was the Medical Superintendent of Alice Springs Hospital and the Sister was someone off duty at the hospital. It was not a satisfactory arrangement as there was no one to maintain records or keep the emergency flying kit replenished and up to date.

Year after year Dr Bert Welton put forward submissions for a full-time Sister for the Aerial Medical Service. There were many radio calls such as enquiries about patients in hospital that a Sister could handle and save the time of an overworked doctor. Anxious relatives wanted news. There were also the individual records of Aborigines compiled during medical surveys; unless these records were well maintained, they ceased to be of value, as Dr Watsford found during his time in Alice Springs. Aborigines changed their names and eventually had several records each.

Routine medical work by air was restricted. There was enough work to justify an aircraft at Alice Springs but Eddie Connellan had the contract for emergency flights and this reduced the load. From time to time aircraft were sent from Darwin for a limited amount of field work. On 31 October 1949 Captain Jack Slade with Sister Meryl Nichol flew to Tennant Creek where they picked up Dr Patrick Reilly for a visit to Lake Nash. They were immunising Aborigines ahead of a threatened whooping cough epidemic. At the same time Captain Harry Moss was flying the dentist Mr Syd Turnbull around the outback stations(1). No Aborigines and very few white people had received dental attention since the war and even during the war the army dentists had been restricted to the troops. The large government settlements had never previously been visited by a dentist. As happened in the ‘top end’ in that era, there were many extractions and few fillings done. Harry Moss helped the dentist and compiled his records for him. He also helped reassure nervous patients. The survey covered all stations with airstrips from the South Australian border to Borroloola near the Gulf of Carpentaria. Two weeks were spent at Yuendumu where more than a thousand teeth were extracted. One man with aching teeth had been most reluctant to seek treatment due to an abnormal mouth with an opening about two centimetres wide. He cut his food into small pieces and inserted it with his fingers. Harry Moss has recorded this as a birth defect but his lips could have grown together following the sores of yaws. He was taken to Alice Springs where Dr Welton and the dentist operated to give him a more normal mouth and attended to his teeth at the same time(2).

During March 1950 Harry Moss flew Dr Tom A Nowell from Tennant Creek on a routine visit to the Barkly Tablelands cattle stations. The people of Tennant Creek were never happy when their doctor was out of town but the doctors enjoyed the opportunity to see a little more of the country. During October 1950 Harry Moss recorded Matron Jean Woolmington doing the aerial medical work when no doctor was available. At that time Sister Saleen Lindner was at Hermannsburg, Sister Ida Wurst at Haasts Bluff and Sister
Dorothy Hall at Yuendumu. Matron Woolmington did not hesitate in taking sick people to hospital.

Early in 1952 Dr Stephen Watsford decided one aeroplane and pilot should be based at Alice Springs. As Harry Moss was both a mechanic and pilot he was the one best equipped for this role. This move was timely and took place just before the poliomyelitis epidemic that started in April 1952 (Chapter 19). With his mechanical knowledge Harry Moss maintained the respirators in the hospital.

In 1955 the Public Service Board refused a position for an Aerial Medical Service Sister in Alice Springs. They insisted on statistics to prove that work had increased when there was no one to even start the work. During his time as Medical Superintendent in 1956-57, Dr Watsford put forward another submission for a Sister to do the flying, maintain records and arrange reviews of people on domiciliary treatment for tuberculosis. Dr Watsford stated many tuberculous patients had disappeared and no one knew whether they were having any treatment at all. There were also other persons needing review but no one to do the necessary work. A Sister was needed to coordinate the immunisation program and ensure all children were adequately protected. The Public Service Board again refused; they were satisfied to have off duty Sisters doing the flying as overtime; the maintenance of records was not considered important. It was heartbreaking for men like Dr Watsford who knew what needed to be done but were not allowed to do it.

In February 1959 Dr RC Webb as Director of Health put the submission more boldly and asked for three more Sisters, two Survey Sisters, one for Alice Springs and a second for Darwin, as well as an Aerial Medical Sister for Alice Springs. He wanted Sisters doing annual Mantoux tests throughout the outback along with other work. Mr Tim Jones, a Public Service Inspector, came to the Northern Territory and following his visit in June 1959 three positions were approved but the Board wanted them classified at the lowest level on the scale, namely Sister (not Senior Sister). A Sister received £644 per annum. All nursing staff were temporary public servants until this began to change in 1963 following action by the Royal Australian Nursing Federation. When advertising for nursing staff all advertisements read Temporary Position giving a false impression to persons not familiar with the Public Service.

During 1959 an attempt was made at Alice Springs to have the same Sister doing all the flying while still a member of the hospital staff. Sister Shirley Mann filled this role until she married Mr Jim Manley, a Connellan Airways pilot. Sister Marie Heaney did the flying during 1960 followed by Sister Keady.

Captain Harry Moss who had been flying the Department of Health Drover aircraft spent most of 1957 with the Royal Flying Doctor Service operating from Cloncurry in Queensland. He returned to Darwin in 1958 and a few months later he was back in Alice Springs. Harry Moss flew the last of the Drovers to Brisbane early in December 1961 and then took delivery of the new Dove aircraft, VH-DHK, in Sydney on 13 December 1961. Time catches up with everyone and on 21 March 1962, aged fifty-five, he handed over to a replacement pilot, Keith Goedheer(3).

Sister Joyce Ellis was the first nurse appointed full-time to the Aerial Medical Service in Alice Springs. She transferred from Darwin on 27 December 1961 and was promptly delegated the task of locating all the Aborigines who were on domiciliary treatment for tuberculosis. In the hospital Mrs Jean Bail had established a Register of patients and Sister Ellis became the liaison officer between the hospital and the outback, to find the patients and organise transport to hospital for review. The Aerial Medical Service Dove was used to transport all who could not readily be brought in by road. Eddie Connellan

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was under contract to fly emergency cases but the tuberculosis patients were not in that category. Dr Edgar Emmerson had replaced Dr George Tippett as the Aerial Medical Service doctor and he used the Dove for routine medical visits to missions, settlements and cattle stations. The Dove was also used for inter hospital transfers. There were times when the larger Dove, equipped as a medical aircraft, would have been more suitable for emergencies but on other occasions small aircraft could land on airstrips not licensed for the Dove.

Sister Ellis logged all her flights and has recorded both the excitement and anxiety of travel in small aircraft under less than desirable weather conditions. On 2 March 1962 there was an emergency call from Ernabella, south of the border. The weather should have been hot but there was heavy cloud with scattered showers of rain and the temperature had fallen dramatically. A mail plane headed for Teiyon had taken off just before the medical flight and the pilot heard on the radio that due to poor visibility it had turned back and was following the road. To avoid the risk of a collision the medical plane followed the railway; it meant low flying, mostly below 1000 feet, to keep the railway in view. As the aircraft passed over the Hugh River the wide river bed was seen to be full of swirling muddy water; Sister Ellis quickly looked out the other side and was astounded to find it still dry. When there are sudden storms with heavy rainfall the water can come down almost as a wall and this was what was happening. Many an unwary traveller has been caught in a river bed when he stopped for refreshments under the shady trees. In spite of the weather that day the aircraft reached Ernabella safely and on the return flight they flew low and followed the railway which was a sure guide.

Serious accidents occurred irrespective of the day. Sister Ellis had just sat down to breakfast on Sunday 4 November 1962 when George Brown from the Royal Flying Doctor Service called to say, 'Stan Brown on Annitowa Station has been caught in the windmill pumpjack. His leg has been mangled'. Breakfast was abandoned and she raced to the Aerial Medical Service office where the phone was ringing. It was George Brown again, advising, 'He is pretty bad, you'll need a doctor'. People in a state of shock did not always give a clear report and had to be coaxed for more details; Stan Brown's mates were frantic.

Annitowa lay almost 400 kilometres northwest by air. The veteran pilot George Taylor quickly prepared a twin engined Beech 18 aircraft for the flight and accompanied by Dr Stuart Hampton, a young Scottish doctor on his first emergency trip, they were soon airborne. Dr Peter Dawes had put together intravenous infusion apparatus together with an emergency supply of Serum Albumin and Dextrose-Saline. Splints, aspirator and oxygen came with the Aerial Medical Service kit. On arrival at Annitowa, all the driver of the waiting vehicle could say was, 'He's bad'. The patient lay on a rough bed under an iron roof watched over by a stockman who chased the flies from a leg almost stripped of all flesh. The patient lay exsanguinated and the doctor thought he was dead but Sister Ellis noted that his eyelids moved. The pilot, George Taylor, reached for the blood serum and Sister Ellis made the connections while Dr Hampton found a usable vein. The first bottle flowed in followed by the second and as the patient's condition improved, his femoral blood vessels reopened and the fluid flowed out. Dr Hampton applied pressure with his fist and although a pressure pad was inserted there was barely sufficient left of the leg on which to apply a tourniquet. At the rate they were using the intravenous fluid they would soon run out. Sister Ellis went to the radio and asked for more serum to be sent in another aircraft to Ammaroo Station and confirmed that they would meet it there; she stressed Ammaroo, which was 265 kilometres from Alice Springs. While Dr Hampton retained pressure on the femoral blood vessels, Sister Ellis put a temporary dressing on the remains of the leg and with the help of George Taylor the patient was taken two kilometres to the aircraft. They had great difficulty in getting the stretcher into the aeroplane and with all
the movement the patient became restless and vomited. Sister Ellis grabbed the aspirator and cleared his throat and as she did so Stan Brown whispered, 'I'm done'. Sister Ellis replied, 'No you are not; doctor is here and we'll get you to hospital'.

The aircraft shook as they gathered speed for take off and then bounced around in the natural turbulence as the last bottle of fluid dripped slowly away. George Taylor kept them posted on the minutes prior to landing at Ammaroo and as they began to descend there was the relief aircraft coming in behind. The timing was perfect; the fresh supplies were handed over and as soon as they were airborne the new bottle was attached. The patient was restless so Sister Ellis used one foot to restrain his arm against the fuselage, one hand for the aspirator and the other to steady the flask of serum. Dr Hampton did not let up the pressure on the severed blood vessels. Three times the patient stopped breathing and each time Sister Ellis reached for the oxygen. George Taylor put the aircraft down gently in Alice Springs. It took a further nine pints of blood before the surgeon, John Hawkins, considered his patient fit for an amputation. Three days later when Sister Ellis saw Stan Brown again she was horrified at all the bruises, but he was alive and out of danger. Stan Brown was then seventy-one years of age; he died in Alice Springs twenty-four years later in his ninety sixth year(5).

Late in November 1962 there was a diversion from normal and routine work. On 23 November Sister Ellis had been out on an early morning emergency flight and returned to her office at 11 am. The Director of Health, Dr Ian Byrne, was there and greeted her with the instruction, 'Sister, your plane for Maryvale leaves in half an hour'(6). Someone from Maryvale Station, south of Alice Springs, had gone to Adelaide for medical treatment and had been found to be a carrier of typhoid. Sister Ellis barely had time to collect her personal kit for overnight emergencies before she was on her way by air to Maryvale. With the Sister out of the Aerial Medical Service office no one thought to advise Maryvale Station of the action being taken.

Dr Byrne's orders were that Sister Ellis was to take temperatures and report any that were elevated. Having nursed typhoid patients in the era prior to the advent of Chloramphenicol, Sister Ellis was familiar with the symptoms. A few people did have raised temperatures due to chest infections but no one had a severe headache or the accompanying slow pulse rate that typifies typhoid. Back in Alice Springs Dr Byrne established an office to personally control the anticipated outbreak and he directed the entire public to report to the hospital for immunisations. Sister Tim Murray in the outpatients section was overwhelmed by people long before she received supplies of vaccine from Melbourne. After several days it became obvious that there was no typhoid at Maryvale, nor anywhere else, and firstly the Press and then the public became angry. Dr Byrne insisted he had acted in the best interests of the community and had avoided a major outbreak(7).

In the meantime Sister Ellis was still at Maryvale where she made the most of the opportunity to check the health of the fifty or more Aborigines. She found a four year old boy with both ears full of pus and dead flies which, when removed, revealed that both drums were perforated. The child was deaf. This was not unusual as there had been an exceptionally high incidence of middle ear disease in Aborigines. On the sixth day Sister 'Billy' Kemp from the Survey Sisters section arrived to replace her and Sister Ellis returned to her own job in the Aerial Medical Service.

Another terrible accident with a different ending occurred at Kings Canyon on 13 August 1964. About 3 pm George Brown phoned to say there had been an accident at Kings Canyon where a girl had fallen from the cliffs into the canyon. Sister Ellis had been there earlier and had walked over much of the area. The radio reception was poor with much
static so she went to the Royal Flying Doctor Service base station next door in an attempt to obtain more details. It was a mystery where the message had come from as there was no radio at the canyon. With the help of other stations she discovered the message was from a tourist chalet 60 miles (97 kilometres) from Kings Canyon and already hours had passed since the woman had slipped and fallen and was unconscious with apparent fractures to arms and legs. The victim was Sister Nalda Dugmore from Alice Springs Hospital. Sister Louise Stansfield had taken the Land Rover and driven for help while two other companions were attempting to climb down into the canyon. Sister Ellis dared not think of the lateness of the hour; her one thought was to get there before dark. She phoned the hospital for a doctor and the surgeon John Hawkins promptly volunteered, while the kitchen staff made sandwiches and filled flasks with hot coffee. It would be an overnight exercise and the weather was freezing cold. Years earlier Sister Ellis had undertaken military air sea rescue and survival training and this knowledge proved invaluable. Alice Springs did not have an emergency organisation so she phoned the police and asked for ropes - they did not have any so she suggested they commandeered some and get them to the Royal Flying Doctor Service base at once.

Two Connellan Airways aircraft stood ready at the townsite airstrip; only small aircraft could land on the strip six miles (9.6 kilometres) from the mouth of Kings Canyon. The first aircraft, a Cessna flown by Roger Connellan, took off with George Brown (RFDS) and Rod Brideoak, a tourist guide who knew the area, accompanied by a police officer and ropes for climbing or lifting. Sister Ellis had rushed to her bedroom for warm slacks and climbing shoes and as she reached the town airstrip, Dr John Hawkins was close behind with a camera and the emergency food and hot coffee. The second aircraft, the twin engined Beechcraft Baron flown by George Taylor, took the rest of the party for the flight of 150 miles (241 kilometres) to the makeshift airstrip where Ansett Tours kept an old Land Rover to carry their guests to the canyon mouth. On arrival, the first group of men had already been to the canyon and found Sisters Methven and Hilton there; Nalda Dugmore was dead and her two friends had made a bid to get out of the canyon before dark. These two were flown back to Alice Springs in the Cessna while the rest of the party made a vain bid to reach the scene of the tragedy. Darkness closed in rapidly and the rocks were too treacherous to risk more lives.

In the meantime three men from a wildlife survey, who had heard the emergency call, turned up in a Land Rover. They were experienced bushmen who had their own camping gear and organised the campfire and boiled a billy. The hospital sandwiches were eaten for supper and the survey men provided baked beans for an early breakfast.

The medical party with a couple of helpers entered along the floor of the canyon while others climbed the plateau to where the fall had occurred. The survey men approached by a different route and were the first to reach the body. The medical party arrived on the other side of a deep pool and had to find a way around it as there was a camera and medical kit to protect. About the same time the third party with the ropes and stretcher arrived on the cliffs above. The first to be pulled up was the body on the stretcher. Sister Ellis was next as she knew how to climb with a rope and to keep herself off the rocks with her feet. The others followed. The whole operation took six hours and the body was then flown to Alice Springs with the medical team(8).

Much of the emergency flying was dramatic. Many calls for help came late in the day and in spite of fading light every attempt was made to reach the patient before darkness closed in and the landmarks disappeared in the gloom. Mr Leo Murphy from Idracowra station south of Alice Springs was one such emergency. Late in the afternoon of 23 July 1965 he killed a bullock for meat. Station meat was always slaughtered late when there were fewer flies and the meat could hang and set in the cool night air. It was usually butchered
before sunrise next morning. Leo Murphy was skinning the beast when the butcher's knife slipped and struck him on the inner aspect of his thigh above the knee. Blood spurted freely from a severed artery. Aboriginal stockmen carried him to the homestead and his wife rushed to the radio. By that time it was already after 5 pm.

Sister Ellis took the call and advised them to raise the leg and apply pressure with thumbs; she and a doctor would be there soon. One glance at the clock showed there was not a minute to spare if they were to reach their destination before dark. A phone call to the hospital located Dr Donald B Reid, a recently appointed Registrar in Obstetrics; with one hundred air miles (160 kilometres) to go and daylight rapidly fading there was no time to search for someone else. It was Dr Reid's first emergency flight but Sister Ellis had the medical kit and overnight bags always standing ready. It was almost dark as the homestead roof came into view but the airstrip was not visible. The pilot flashed his navigation lights and this brought a response from truck headlights indicating the airstrip. Once the strip was located, the white markers were clear but the strip was nine miles (14 kilometres) from the homestead on the other side of the Palmer River and that in itself was a precarious and boneshaking journey. The Aboriginal driver confessed he had not driven that truck before. At the homestead another young Aboriginal man had both thumbs on the severed artery; it was two hours since the accident and the patient was feeling faint. Once the bleeding was controlled, intravenous fluids were given and Leo Murphy was made comfortable near a log fire. The doctor and pilot slept while Sister Ellis cared for the patient and planned how to transport him over that rugged road back to the aircraft next morning. It was perishingly cold. At daylight everyone was organised and the patient was in Alice Springs hospital by 9 am.

By mid-1964 the Public Service Board had agreed to the appointment of a second Sister in the Aerial Medical Service and Sister Julie Nathan commenced on 12 June 1964. This allowed one Sister to be on duty for calls while the other was flying, but all too often both were out flying. On 27 July that year the Aerial Medical Service started shuttle flights to bring patients for review by specialist doctors; the biggest single group were those on domiciliary treatment for tuberculosis. On top of that the Barkly Tablelands had been confirmed as the responsibility of the Alice Springs based service so the routine medical flights and emergency flights both increased.

Some Aerial Medical flights became complicated along the way. On 14 April 1966 Sister Ellis was returning in a Connellan's Travelair plane from Ringwood Station east of Alice Springs when she received instructions to go to New Crown, south of Finke, for a truck driver with a fractured leg. A towbar had fallen on him. The call was made from a radio in a semitrailer on the unsealed highway. The heavy transport had become bogged in sand and when the driver, who was alone, tried to disconnect the prime mover from the trailer the towbar slipped and shattered his leg. He had then to get back into his truck to operate his radio. He estimated he was 15 miles (24 kilometres) from New Crown. As the New Crown airstrip was not licensed they could not take the Travelair plane there. They landed at the main airstrip in Alice Springs and sent the two Ringwood patients by road to hospital while a Cessna was flown over the MacDonnell Ranges to the main airstrip to replace the Travelair.

Other stations had heard the call for help and Mr Max Clarke from Andado Station, several kilometres further northeast, set out in a Land Rover to help the victim. He was the first there and laid the patient on a folded tarpaulin in the back of his vehicle and drove steadily towards New Crown. In the meantime the Cessna landed at New Crown where the strip was beside the homestead. Mr Bardy Smith and his daughter Robyn had heard the message and as soon as Sister Ellis arrived they set off along the red and dusty road towards Andado; they met the other vehicle on the way. The patient was given morphia
and his leg splinted before the flight to Alice Springs. A sequel to this flight was a note from Connellan Airways stating, 'please do not bring unlisted passengers back in the aircraft'. A spinifex snake had been found in the Cessna which had been left open in the hot sun(9).

All interhospital transfers were made in the Department of Health Dove and when, on Saturday 18 February 1967, Tennant Creek Hospital advised that they had an Aboriginal woman with a possible placenta praevia which could obstruct labour or lead to a severe haemorrhage, there was no alternative but to take the patient to where there was a surgeon. With pilot Neil McDougall at the controls and Dr Brian Moore in charge of the case all care was ensured. The weather was hot and turbulent and when they landed at Tennant Creek at 4.30 pm the ambulance was waiting and the local doctor said the woman had gone out of labour. Sister Ellis placed one hand on the woman's abdomen and decided labour was very much on. An intravenous drip was running and as the patient was settled into the aircraft she announced 'baby come!' The intravenous flask was handed to the pilot and in the next few seconds the baby was delivered. Sister Ellis handed the baby to Dr Moore while she found the clamps and ties. The baby cried lustily and was then placed in a basket and put in the shade on the airstrip while the mother was dealt with. In the meantime someone shouted that a DC6 was due in any minute and they were in the way; the airport was crowded and the onlookers were intrigued. The ambulance was called back to return the mother and baby, and Dr Moore and Sister Ellis went to the hospital too for a clean up before heading back to Alice Springs(10).

The stories of drama are endless, but there was also the routine work. Monday, 3 April 1967 was on which the ear specialist was reviewing patients and a full load had to be brought from Ernabella in the Dove. Neil McDougall in the Dove DHK gave 6 am as his take off time. Sister Ellis was there with patients for repatriation and breakfast for herself and the pilot. A missed breakfast meant that there may not be time for another meal so breakfast of toasted egg sandwiches was generally eaten in flight. The scenery this morning was magnificent as earlier there had been heavy rain in the area and even the red sandhills were carpeted in green. Just as they were about to land at Ernabella, with the mission truck at the far end of the strip, the pilot retracted the undercarriage and roared upwards again - there were donkeys on the strip and as they circled they saw some camels too. It took another circle and a low swoop before the mission staff realised something was wrong and drove their truck down the strip to chase the offenders. Within minutes the Dove was loaded with patients and on its way back to Alice Springs. A few hours should have been available to write up records and prepare for the rest of the week but the telephone was ringing. There was an emergency at Finke - an Aboriginal child with acute osteomyelitis and in great pain. One of Connellan Airways' smaller aircraft was required for Finke as half of that airstrip had been washed away in a recent flood. During the flight south the aircraft passed over the new railway bridge that had recently been destroyed; the bridge had been built to overcome holdups on the railway. Later a completely new line was constructed well away from the areas that flood. The sick child had to be flown at a low altitude as his pulse became rapid and irregular at 8000 feet. During the flight the pilot heard on the radio that Sister Howell was in the air on her way to Papunya for another emergency which meant there was no one in the office.

By the time they reached Alice Springs it was already late for the return flight to Ernabella with the morning's patients. Back in the office the phone was ringing; there were five medical calls and no Doctor to answer them. After dealing with the five calls answered, Sister Ellis raced to the main airport where the Dove and passengers were ready. They were at Ernabella by 4 pm where two other patients were waiting to go to hospital. The mission staff had brought with them refreshments, a cup of tea and something to eat; the last cup of tea had been 6.30 am in the aircraft during the early morning flight. There was
a diversion to pick up another case of osteomyelitis at Musgrave Park before heading back to Alice Springs where they arrived at 6.45 pm. The day's work had involved three flights for Sister Ellis, totalling 1208 miles (1944 kilometres) (11).

With two Sisters in the Aerial Medical Service and later a third Sister, one would always accompany a doctor on, the routine medical visits. The monthly visit to the Barkly Tablelands required three nights away from home as they stayed overnight at various cattle station homesteads.

By 1967 Sister Julie Howell had replaced Sister Nathan, and Sister Margaret New had been appointed as the third Sister. During her first year with the service Sister Ellis never had a day off without being on call for emergencies. In the early years of the Aerial Medical Service in Darwin, Sister Meryl Nichol had to go on holidays to get a day off which made it a very exacting task. Sister Ellis resigned late in 1967 to travel overseas and other Sisters have since continued where she finished off.

Once staff were appointed to the Aerial Medical Service and to medical surveys, there were statistics available to demonstrate to the Public Service Board the need for more staff. Also by this time the child mortality was causing much concern and there were many emergency flights to bring in sick infants.

As the Aerial Medical Service at Alice Springs began to expand, more space was essential for both staff and records. On 16 December 1963, after the completion of the forty bedroom block behind the Sisters Home, the old Flying Doctor House in Stuart Terrace became available (12). This was luxury after the Humpy. The Health Inspectors made their offices by partitioning the verandah on one side of Flying Doctor House.

**Immunisations with Sabin Vaccine**

The work of the Aerial Medical Service steadily increased although the Royal Flying Doctor Service continued to use Connellan Airways for emergencies. The extensive heavy rains in 1966 frequently caused flooding of the highway and although the hospital had two road ambulances, twenty-one flights were made to transfer 107 patients from Tennant Creek to Alice Springs Hospital. Late in 1967 the extensive campaign to eradicate poliomyelitis, using oral Sabin vaccine, was commenced in the Alice Springs area. Dr Anne Urban, the Schools Medical Officer, was in charge of the Sabin campaign and apart from immunisation of the town's school children, she was diverted for most of the year to the organisation and supervision of the Sabin. The Sabin vaccine was supposed to be dropped on cubes of sugar immediately before ingestion but enthusiastic staff could have the vaccine ready up to twenty minutes in advance of the children. Supervision was essential to ensure the vaccine did not lose its potency through over exposure. At the same time all recipients were recorded by school teachers and others who knew the children's names.

Sister Julie Howell was the Senior Sister in the Aerial Medical Service and in 1968 she requested an extra Sister to help give and record the immunisations. In use at that time were Triple Antigen, Tetanus Toxoid, Sabin, Measles vaccine, BCG for all infants and once a year, Rubella vaccine.

Pilots with Trans Australia Airlines continued to fly the Aerial Medical Service aircraft. These younger men did not elect to make this their careers, but most enjoyed their time with the medical service.
Royal Flying Doctor Service

In 1965 the Royal Flying Doctor Service purchased its own aircraft, a Travelair and a Cessna 182, and was no longer dependent on Connellan Airways. These two aeroplanes were replaced by two Beechcraft Baron aircraft in 1974 and later a Piper Navajo aircraft was added. In 1981 the two Nomad aircraft owned by the Department of Health were withdrawn from Alice Springs leaving the Royal Flying Doctor Service to provide the aircraft and pilots for the entire service. Department of Health doctors and nursing staff have continued in the service but in 1985 the Royal Flying Doctor Service appointed a doctor to handle radio medical calls and to do some of the emergency flying thus fulfilling Reverend John Flynn’s mantle of safety which has now far exceeded his most ambitious dreams.

Survey Sisters - Rural Health

It was late 1959 before the first Survey Sister was appointed to work in the Alice Springs area. The work of Medical Survey doctors has been recorded in Chapter 21. While at Warrabri (Ali Curung) in 1957, Dr Hargrave commented on the amount of treatable ill health in the community but lack of personnel to treat it.

Sister Kettle had visited the Alice Springs area in 1955 and again in 1958 when she introduced the infant health clinics with standardised graphs and records. In 1956 she had also visited the cattle stations on the Barkly Tablelands but was never able to return to that area. At the beginning of April 1959, when Sister Kettle was first given the use of the economy model Land Rover, she visited all the cattle properties near the Stuart Highway as the country was too wet to venture far from the bitumen road. She reached Alice Springs at 8.15 pm on 2 May and was given accommodation in the Poor House. A few days later she met Sister Llorabel Reynolds who had just arrived to work in the hospital. In September that year when a position was approved for a Survey Sister at Alice Springs, Sister Reynolds was appointed.

Dr George Tippett arrived at Alice Springs Hospital in April 1958. In May 1959 he became the Survey Medical Officer for the Southern Region; he did not approve of a Survey Sister working independently. The first work delegated to Sister Reynolds was Mantoux testing at some settlements and missions in advance of the first mobile Xray survey by the Anti-Tuberculosis Association of New South Wales. Following the survey there was much work to be done in finding those people who required further investigation and to bring them to Alice Springs Hospital.

Sister Reynolds enjoyed working with Dr Tippett and preferred flying to road work. However, she was frequently sent to the larger welfare settlements to investigate the background factors leading to deaths of infants.

Only one written report has been found and it was compiled in response to a specific request from the Director of Health, Dr Ian Byrne. Late in 1961, after two years in field work, Sister Reynolds applied for the vacant position of Assistant Matron in Darwin Hospital. As she said at the time, there was no promotion to be had in medical survey work. There were in fact no senior positions created for another decade.

On 20 September 1962 Sister Dwillis E'Billy' Kemp was transferred from the staff of Katherine Hospital to the position vacated by Sister Reynolds. Over the previous twelve months since her appointment to the Northern Territory she had spent time in each of three hospitals, namely Darwin, Katherine and Tennant Creek and was keen to move into more adventurous work. The following year, from 27 May to 30 June, she formed a team with
Sister Ngaire Stichbury from the Northern Region to visit the properties on the Barkly Tablelands. All Aborigines were checked for leprosy, immunisations were brought up to date and the infants were assessed for their nutritional status. On completion of the Barkly Tableland stations, Sister Stichbury drove through to Borroloola on a precarious stretch of road. The Toyota was too long for one steep but narrow creek crossing and the back wheels were suspended when the rear bumper bar came to rest on the bank. After much heavy digging the vehicle rolled on.

The Royal Flying Doctor Service operating from Cloncurry still had a monopoly for emergency medical calls and occasionally evacuated patients to hospital in Queensland. This arrangement was no longer satisfactory. On an earlier occasion three adult Aborigines from Brunette Downs had been taken to hospital in Cloncurry and when they did not return, the manager of Brunette Downs wrote to Mr Giese of the Welfare Branch. The missing people had taken a stroll through Cloncurry where they were arrested by the local police and sent to Palm Island off the North Queensland coast. The Department of Health records were used to prove the Aborigines belonged to the Northern Territory and they were eventually returned to their home. The situation was still difficult in 1963 and patients continued to return from Cloncurry without a history of their medical condition. The State borders existed on paper and this created many difficulties. Finally, a couple of years later the Alice Springs Royal Flying Doctor Service base station assumed full responsibility for the emergency medical calls and for all evacuation of patients from the Barkly Tablelands.

Late in 1963 Sister Billy Kemp went south on leave and on her return Dr Langsford sent her to Katherine as the Acting Matron. There were others nursing within the hospitals, one of whom could have filled this position. Sister Brenda Divine replaced her at Alice Springs but a few weeks later she was herself in hospital with hepatitis.

Sister Divine carried out the next health survey of the Barkly Tablelands accompanied by a new appointee, Sister Monica Cannon. This trip took ten weeks from 6 May to 25 July 1965 and included the stations near the Gulf of Carpentaria. Although new highways were under construction, they took a direct route and it was necessary to divert from the main highways and travel on rough bush tracks to reach the cattle stations. The tracks, described by Sister Divine as terrible, soon revealed numerous shortcomings or weaknesses in her Toyota.

Early in July Sister Cannon flew back to Alice Springs as the work was proving too heavy. Dr Noel Vawser then joined Sister Divine to complete the survey. No sooner was this task completed than Dr Langsford directed Sister Divine to relieve for three months as Matron of Alice Springs Hospital. All planned work had to be cancelled. This type of disruption was quite unnecessary as the hospital had a good team of competent nursing staff, one of whom could have adequately filled the role.

After a few weeks back in Darwin, Sister Divine drove down the Stuart Highway once more to induct a new staff member, Sister Helen Wagner. They travelled in a new vehicle made available for survey work, but for the first few months Dr John Wilmot, the Medical Superintendent, would not let Sister Wagner go out on the roads alone as he did not believe in women driving themselves around the outback. That type of policy should not have been the prerogative of the current occupant of a particular position, but responsibility had been delegated to the region. A few days later, on 17 January 1966, both Sister Wagner and Sister Divine were flown to Yuendumu to give measles vaccine in advance of an epidemic.
Sister Divine returned to Darwin and in March she married Mr Nicholson Wilson, a surveyor and the brother in law of Dr Pauline Wilson. She was then employed as a laboratory technician at East Arm Leprosy Hospital until the birth of her son in 1969.

Measles Vaccine

Measles had broken out at Port Keats in the north on 13 October 1965 and swept through the large settlements and missions (see Chapter 18). An attempt was made to check the spread in the south by the use of vaccine. The Wailbri people at Hooker Creek (Lajamanu) had been immunised on 8 October 1965 but it was January before there was sufficient vaccine for the Alice Springs area. As mentioned earlier measles vaccine was given at Yuendumu on 17 January 1966. Sister Wagner then went on to Papunya a few days later. As the supply of vaccine was still limited it was given to 186 of the smallest children. It was almost too late as some people had already been in contact with measles and 19 of those vaccinated, along with 105 others, developed measles, but the size of the problem was reduced.

The order prohibiting Sister Wagner from travelling alone by road remained in force until measles broke out at Ti Tree station, 80 miles (128 kilometres) north of Alice Springs on 3 June 1966. It was then rescinded and she was sent to help, with instructions not to bring any measles patients to the hospital. It was a small station and the seven ill children were nursed in the homestead laundry where Sister Wagner and Mrs Heffernan could keep a close watch on them.

The only other place in Central Australia with a major epidemic of measles was Warrabri with 185 cases. The Department of Health was better organised than in 1949 when there were no Survey Sisters nor Aerial Medical Service Sisters at Alice Springs. No deaths were recorded, which was a triumph as this was the first use of measles vaccine in the Northern Territory.

Over the next few years Sister Wagner concentrated on lowering the Aboriginal infant mortality on the Welfare settlements and on the cattle stations (see Chapter 21). As she pointed out later, Aboriginal babies did not suffer from any unknown diseases, the main causes of death being diarrhoea, chest infections and malnutrition. Unlike their earlier life in desert areas, there was no lack of food on the settlements. Infant mortality in the European community had been greatly reduced following the introduction of Infant Health Centres with nursing staff who had time to teach the mothers. Aborigines needed the same type of service in their own communities if they were to reach the same high standards of hygiene and infant nutrition.

Sister Elfrieda Wallent, who had earlier been at Hermannsburg, worked for a time in the Survey Sisters team. Sister June McMillan was also one of the group until her marriage; she then spent several years as the Infant Health Sister in Alice Springs. Dr Langsford renamed the field staff as the Rural Health team and in Central Australia the paediatrician, Dr Kerry Kirke, became the leader. As recorded in Chapter 21, Sister Wagner did outstanding work in reducing the infant mortality and in teaching mothers. When financial cuts were called for it was the infant health service to Aborigines that was slashed. Sister Wagner strongly protested and was transferred to Darwin. The infant mortality rose steeply once again and it was Dr Kirke who re-established the work done by Sister Wagner.

With the increase in nursing staff approved in the early 1970s, Sister Barbara Tynan from the hospital transferred into rural health work where she made a significant contribution to leprosy control in the southern region. Leprosy cases had been found as far south as
Warrabri and Yuendumu among men who had earlier worked as stockmen on the Barkly Tablelands.

From 1 January 1973 the Health Centres on the Welfare settlements were handed over to the Department of Health and nursing supervision was established. Not all problems were solved but the situation has steadily improved until, by 1984, the infant mortality among Aborigines had been reduced to 23.2 per 1000 live births(13). Better housing with safe and adequate water supplies has contributed to the improvement, but basic hygiene has still not reached the necessary desired standards for safety so there can be no shortfall in vigilance.

With the employment of more adequately trained Aboriginal Health Workers, it is envisaged that the health service will be seen as belonging to the people rather than something imposed by outsiders. Although young people, educated during the 1950s, now largely comprise the Health Worker teams, they ask for continuing support as their own countrymen tend to impose on them and demand medications they do not require. The health pattern has also changed due to an unlimited range of food in the stores and to the abuse of alcohol which has led to the widespread incidence of obesity, hypertension, diabetes and many other problems. Many Aboriginal councils, however, are endeavouring to deal with these new situations on their own ground.

Schools Medical Service - Alice Springs

Early in 1966 Dr Anne Urban (nee Evans) was appointed as the first Schools Medical Officer for Central Australia. Prior to this, Dr Helen Phillipps from Darwin had visited Alice Springs when she could spare the time to examine the children in the town schools. Education of children was under divided control. The South Australian Department of Education supervised the schools for white and mixed race children and the Welfare Branch was in charge of education for Aborigines. Dr Phillipps visited Alice Springs to induct Dr Urban and ensure she was not sidetracked into the hospital service.

The same scope of work as that covered by Dr Phillipps in Darwin was delegated to Dr Urban in Alice Springs. This included the medical examination of school children, immunisations, the infant health clinic, home nursing, audiometric screening, counselling the parents of children with problems, and providing special clinics for visiting specialists from the Commonwealth Acoustics Laboratory. Dr Urban could have become bogged down with work in the Alice Springs town area, and with the schools in Tennant Creek, but she soon realised that what she was doing in town was being carried out by the Survey Sisters in the outback.

Dr Urban was given overall responsibility for administration of the Sabin vaccine campaign in 1967 and into 1968 and this proved time consuming. However, in 1968 Dr Urban and Mr Jim Gallagher, the Inspector of Aboriginal Schools, in company with a Supervisor of Deaf Education from South Australia, visited the schools on the settlements and missions in Central Australia. Many school children had both sight and hearing problems which stemmed from chronic infections. From discussions with teachers she soon realised the urgent need to expand her work to the bush. She used her own initiative. To make time available she reduced the medical examinations being undertaken in the town schools to three times in each child's life, namely on commencing school, then at age nine and lastly thirteen. Nursing staff attached to the Schools Medical Service were able to do the immunisations, Mantoux tests and BCG vaccinations as long as the doctor had overall supervision. Dr Urban worked in Central Australia for fifteen years and it was she who started a school's medical service for Aboriginal school children, the first in the Northern Territory. There was a massive backlog of sight and hearing defects stemming
from both current and earlier infections. It took several years for Dr Kerry Kirke's work among infants to become manifest among the school children. When infants suffer no major setbacks during their first five years, it follows that there will be many less problems to be dealt with during their school life.

Dr E Mary Punitham joined the Schools Medical Service in January 1970 and late in 1974 Dr Lorraine O'Brien was added to the team. These women did much of the field work and released Dr Urban to provide clinic support for the Sisters in the District Nursing Service. She also became more involved in the care of handicapped children and those with learning problems. She did much research into the development of Aboriginal babies but did not find time to prepare her findings for a publication. When the Commonwealth Acoustics Laboratory became the National Acoustics laboratory and set up an office in Darwin, this aspect of the work was largely handed over to them. On her retirement Dr Anne Urban, MBE, was honoured for her services to the community.

Infant Health Clinic

During the latter years of the war, an army Sister provided an infant health clinic at the hospital in Alice Springs and also broadcast advice to outback mothers over the Royal Flying Doctor Service radio. After the war a weekly clinic continued in the hospital but the advice by radio was not continued.

In 1950 Matron Jean Woolmington was providing a clinic one afternoon each week in the outpatient's section of the hospital. This lapsed for a time during the poliomyelitis epidemic in 1952, but the public and the local Member of the Legislative Council, Mr Frank Johnson, were urging the establishment of a clinic in the heart of town and separate from the hospital. The problem was to find a suitable building in Alice Springs where accommodation was scarce.

To celebrate the Coronation of Queen Elizabeth II, on 2 June 1953, the Federal Government announced a special Government grant for the establishment of Infant Health Clinics. Alice Springs was nominated for a grant but to achieve this the local people had to raise half the cost. The Appeal was launched in competition with a public appeal for funds for the building of the John Flynn Memorial church. The latter appeal was Australia wide. Local business men gave generously to the Infant Health Clinic and hopes became reality.

Sister Beatrice Bourke (nee McQualter), who arrived late in 1956, was the first Sister to work in the new clinic. She recorded 232 infants under one year of age attending the clinic. As this was not a heavy workload she was delegated responsibility for immunisation of school children including those at St Marys Hostel south of The Gap. She gave the Salk immunisations. Added to this was District Nursing and visiting patients at home for treatments and injections. The latter steadily increased as she was asked to treat chronic ear infections in children to reduce overcrowding at the hospital outpatient clinic. However, the Department of Health in Darwin was not convinced that she had sufficient work and demanded a written account of every person receiving treatment at home which was a time consuming and wasteful exercise.

From April 1967 onwards District Nursing became a separate service. Sister June McMillan, who had been appointed as a Rural Health Sister from 11 December 1966, married and transferred to the Infant Health Clinic where, as Sister Foley, she served for many years. She worked in close conjunction with Dr Anne Urban in the assessment of infants with possible handicaps. Sister Joyce Bowden joined this service and contributed greatly to a most effective team.
The Infant Health Clinic extended its work to other areas with the clinic in Gregory Terrace as the main centre. Clinics were opened in the Ida Standley and Gillen preschools once each week so busy mothers would not have so far to travel or so long to wait. When a third Sister was appointed, one of them assisted in the antenatal clinic at the hospital and in mothercraft classes for less well educated groups. Every effort was made to meet the needs of all sections of the community.

District Nursing Service

Despite its early problems and lack of recognition, a District Nursing Service did eventuate. With the appointment of Sister Elsie M Brown on 20 April 1967, the work rapidly developed and expanded. A second Sister was appointed soon afterwards and on 19 March 1969 a third Sister joined the team.

In 1967 and for the next eight years the original Sisters Home, known as Flying Doctor House, was used for offices for Dr Urban, Dr Gordon White, the Regional Director, the Health Inspector and then the District Nursing Service. The verandah surrounding the building was all partitioned and included an office for the Aerial Medical Service. It was very overcrowded with no privacy for anyone and it was also cold and draughty. The luxurious Community Health Centre in Flynn Drive was occupied early in May 1975 and officially opened by Dr Douglas Everingham, Minister for Health, on 11 August 1975. This new Health Centre was comprehensive and catered for all community health staff except the Aerial Medical Service, which was later housed in the administrative block of the original Alice Springs Hospital.

On 14 June 1967 Sister Brown was asked to add a daily visit to the gaol to her program to attend inmates in need of dressings and medications.

Many Aborigines moved into Alice Springs and preferred to live in fringe camps and in the sandy bed of the Todd River than reside at Amoonguna. As many of the men were drinking heavily, there was much family abuse and the subsequent neglect of children. As the nursing staff recorded at the time, approximately 60 per cent of their work was treating infected ears and eyes and 35 per cent was dressings. During 1972 the staff was increased to five Sisters and between them they provided 47,750 individual treatments for the year. Schools were visited on a regular basis and attention given in school clinics to reduce absenteeism and lessen time otherwise spent at the outpatients department in the hospital. The immense load of medical care needed left little time for preventive work, but the Sisters did teach mothers to participate in the care of their children. Dr Urban was in charge overall but greatly appreciated the support of Dr E Mary Punitham as there was much sickness to be treated in the community.

Most of the Sisters used their own private vehicles, but, as they frequently brought women and children to see a doctor, they asked for more government owned vehicles since some of the tracks into camps were too rough for small cars.

Nowadays all community health services have been fully integrated to meet the needs of all groups of people, including retired people living in their own homes; the exception is the nursing home in the Old Timers Village which is a separate service.
Ambulance Service

Road ambulances were quite separate from aerial ambulances. Although St Johns Ambulance Brigade had offered to conduct this service in and from Alice Springs, the Department of Health was reluctant to hand over responsibility. A branch of St Johns Ambulance Brigade was formed in Alice Springs in December 1952 to provide training courses and to have men in attendance at all sporting functions(14). The branch struggled for many years due to the lack of a clear role in the community. In the meantime an ambulance service operated from the hospital. Mr Des Kelly was the mainstay of this service for many years. Many of the emergency calls received after sundown were answered by the road ambulance. On the long straight stretches of the Stuart Highway numerous accidents occurred when the drivers of vehicles went to sleep behind the wheel. After dark there were often cattle, horses and kangaroos on the highway. Accidents occurred in loose sand and gravel well off the bitumen highway and a long way from airstrips. One of the off duty nursing staff would be called and as well as picking up the medical kit she would make coffee and prepare sandwiches as they were often on the road for hours. Each day the kitchen staff left fresh bread and meat available in a refrigerator; it was a standing order. Mr Des Kelly was an invaluable officer; Katherine had Jack Roney and Alice Springs had Des Kelly but the other hospitals were not so fortunate.

In March 1970 the St Johns Ambulance Brigade undertook all ambulance services at night 6 pm to 6 am plus a full 24 hour service at the weekends. This allowed a reduction of five orderly positions from the hospital(15). The previous year the two Dodge ambulances attached to the hospital had carried 601 patients and travelled 24,701 miles (39,549 kilometres) and on 30 June 1979 the whole responsibility for an ambulance service was handed over to St Johns Ambulance Brigade(16).

By 1970 community health services to both the urban and rural areas were well established. However, it had been a long hard struggle to convince an isolated Public Service Board in Canberra that there was work to be done and of the need for qualified staff to do it.

Endnotes

1 Dept Health File 60/621, 180/1/3, Darwin.
2 H Moss, Ten thousand hours, unpublished manuscript, in possession of author, Melbourne.
3 ...  
5 ...  
7 Centralian Advocate, 7 Dec 1962.
8 Ellis, 1987.
9 ...  
10 ...  
11 ...  
14 Centralian Advocate, 12 Dec 1952.
Captain Harry Moss with a patient in a 'Dragon' aircraft in 1952 (photo: R Brock)
Dr Barry Whittenbury and Sister Joyce Ellis answer medical calls, Alice Springs, December 1965 (photo: Tony Wilson)

Dr Kerry Kirke and Sister J Ellis attend a patient at Brunette Downs race meeting, June 1966. Dr Kirke did much to improve child health in central Australia (courtesy: J Ellis)

Sister Helen Wagner was with the Rural Health Service at Alice Springs from January 1966-1972 did much to improve the health of Aboriginal babies (photo: E Jones)
CHAPTER TWENTY-FOUR

DARWIN HOSPITAL

The early postwar days in Darwin Hospital have been recorded in Chapter 15. By 1953, when the first Annual Report was compiled, some of the early turmoil had ceased or at least settled down. More government houses had been built near the hospital some of which were made available for doctors. With decent housing, wives were happier and doctors stayed longer. The new Sisters Home, known as Lambell House, in Lambell Terrace which was completed in 1952, provided pleasant accommodation for the trained nursing staff. The large airy lounge room permitted social functions and a Social Club was formed to promote a more congenial social life. There were few single women in Darwin so the lounge room in the Sisters home was popular.

Darwin Medical Society

To help overcome some of the professional isolation in Darwin, Dr Stephen Watsford, as Director of Health, urged the establishment of a professional organisation to keep doctors up to date. The Darwin Medical Society came into being in 1954 and elected a secretary. Monthly meetings were held in private homes where the women later served supper. This proved a valuable venue for the hospital and field staff to get together informally. Occasionally there were key visitors who were invited to address the meeting. This group was not a part of the Australian (then British) Medical Association and did not discuss industrial matters. Most Australian doctors retained their State affiliations elsewhere while newcomers from Britain were encouraged to join the South Australian Branch of the Australian Medical Association.

Accommodation

Single doctors and dentists lived in the Brown House near the Pathology Laboratory, but it had been built as a private home and did not have facilities for so many occupants. While the dental unit still occupied the street end of Ward 1, some dental staff actually lived in the Ward. The 'Barn', a rambling old home on the hospital end of Mylilly Point, was acquired for the medical staff. Prior to the opening of Lambell House, some of the Sisters lived in the Medical Superintendent's house, popularly known as 'White House' and situated between the hospital and the 'Barn'. There was much juggling of the limited accommodation. Male clerical officers and others lived in the second, or foreshore, unit originally meant for student nurses. There were two accommodation units connected to the hospital by a covered way. These were airy units of ten rooms each with polished wooden floors and surrounded by closed in verandahs. With the verandahs partitioned, there were two staff to each room.

Like most other houses in that era, the Brown House was raised high off the ground with a hedge of aralias to provide privacy for open air living underneath. In 1955 Dr Tarlton Rayment ordered a couple of tons of Magnesium Sulphate to be used in the eradication of hookworm. By 1956 the policy had changed and 'salts' were no longer used before and after a dose of tetrachlorethylene. The fifty pound (27 kilogram) bags of Magnesium Sulphate were already on the way and as there was no room in the medical store these

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were stacked under the Brown House. Some magnesium sulphate was used as fertiliser for gardenias and some was mixed with glycerine to make a popular drawing agent for boils. The remainder became an embarrassment and when it disappeared no one asked any questions.

All of the hospital accommodation was within a short walk of Mindil Beach. The 'Barn' was the nearest to the beach and that was an advantage. Although it was a rambling building, it was spacious and when Dr Hargrave took up residence in 1957 he soon airconditioned a room for himself. He was the first member of the staff to attend to his own comfort and to protect his valuable library from the ravages of mould and cockroaches. Other doctors followed suit after blocking the many cracks. A new twelve bedroom unit was designed for the doctors near the kitchen of the Sisters Home. As this unit, officially named the Annexe, was being built, the doctors observed the very small bedrooms and said they would not live in it. They were wise, as not only were the bedrooms minute but the building was situated where it caught no sea breezes. There were no overhead fans so the limited floor space was further restricted by the need for a stool and a fan. When opened in 1960 it was used to house the several nursing staff who were not hospital staff, namely Survey, Aerial Medical and Infant Health Sisters. They were joined by the dietitian Margaret Corden, the first social worker, Mary Keller, and the occasional female pharmacist or radiographer. These people had been sharing rooms in the original Nurses Home, which then became available for student nurses. During 1960 two young women doctors, Sophie Reid and Ann Jones, shared the upper floor of the Annexe.

The male doctors had to wait until July 1965 for a block of eight bedsitter units. These units had a magnificent view over the outer harbour and also had the first airconditioning provided for staff. Short term doctors considered them as luxury while the long-term staff complained about the communal cooking facilities and eight men sharing one refrigerator. In time each doctor bought his own refrigerator and arranged pantry facilities in his unit. There was no private accommodation anywhere in Darwin to be bought or rented. Other single public servants lived in the Mess between Mitchell Street and the Esplanade and formed an Association to protest the lack of flats for single officers. The first of the government flats in Smith Street were built in the middle to late 1960s and there was always a long waiting list. It was not until the early 1970s that single officers began buying blocks of land to build their own homes.

**Ward One**

In December 1953 the street end of Ward 1 was vacated by the dental section which moved to a new clinic in the city end of Smith Street. That section of Ward 1 was then refurbished for use as a physiotherapy department staffed by Miss Dorothy Giderson. The earlier physiotherapy room then became the fracture and plaster clinic. Ward 1 saw many changes and within a few years it had all changed again. Officially Ward 1 was the Mens Medical Ward but besides physiotherapy it housed the blood transfusion service. From 1959 to 1961 Sister Joyce Ellis was the Sister in charge of blood donors. A Red Cross representative would call in the required donor, Mr Laurie Gray in Pathology would type the blood and Sister Ellis would do the bleeding. The refrigerator for storing blood was kept in Ward 1.

From 1955 onwards for several years Sister Audrey McShane was in charge of Ward 1. It needed her warm personality to cope with the many difficult male patients. Early in 1960 Dr Doug Mounsey found somewhere else for the physiotherapy section and cleared much of the ward to allow the transfer in of the male medical patients from Ward 2, the surgical ward. There was then a section for tuberculosis and another for the treatment of
alcoholism. The disturbed patients were also cared for in Ward 1 and a maximum security unit was added for violent patients until they could be sent to Adelaide. There was no psychiatrist. An inexperienced young doctor, appointed as a Registrar in psychiatry in January 1964, was himself a problem and eventually ran off with a female patient; he was later killed in an accident.

The first qualified, and very experienced psychiatrist, Dr GO Pat Cowdy, arrived from England on 9 May 1966. In a short time he had endeared himself to both staff and patients and also to the people in the outback. Dr Cowdy took a special interest in the Aboriginal patients and visited the missions and settlements to begin to understand their unique background. There were between sixty and seventy psychiatric Aboriginal patients in Adelaide and when sent home, within days these people would usually be uncontrollable once more. There was no liaison between the Adelaide psychiatrist and nursing staff in the outback and certainly no liaison with family and relatives. Dr Cowdy soon modified the whole situation by taking time to talk with the patient's family and with community leaders to obtain their understanding and cooperation in caring for patients. He loved the Australian outback and made many recordings of the early morning songs of the birds. The 26 August 1973 was a sad day when he was found dead in his flat having suffered a heart attack. Dr Don Eastwell, who had been appointed on 14 October 1969 as a second psychiatrist, continued to visit Aboriginal patients at home and where possible to keep them out of hospital. Unfortunately his own family would not live in Darwin after Cyclone Tracy in 1974. Dr John Cawte from Prince Henry's Hospital in Sydney, who had earlier cared for many Northern Territory patients in Adelaide, did much research into psychiatric problems amongst Aborigines and he gave sound advice. His main centres of interest and research were Yuendumu, Elcho Island and Groote Eylandt.

Some of the men in Ward 1 with tuberculosis also had an alcohol problem. Most afternoons one or more of these men would slip out of the ward and find a cruising taxi to take them to town. They would drink in a bar until someone telephoned the hospital and complained, then the ambulance would be sent for them. It was a racket. On top of that their outside mates would smuggle in alcohol. In 1963 Dr Geoffrey Wilson, in charge of tuberculosis control, got together with the Medical Superintendent, Dr Peter White, and arranges a small lounge at the street end of Ward 1 where the patients could have a drink and play cards. This did help to keep these men out of the public bars.

In the mid-1960s, when hepatitis was a considerable problem, a section of Ward 1 was set apart for infectious diseases. No other ward in the hospital underwent so many adaptations. The walls were painted yellow and the bed linen was green - a terrible combination for anyone experiencing nausea. Yellow was chosen as it was the colour for international quarantine.

For many years Darwin Hospital had segregated wards. While persons of mixed race or Asian descent shared the same wards with Europeans, all the tribal Aborigines were in separate wards. The one area in which all patients should have been integrated was Ward 5, the Obstetric end of Ward 4, the Womens Ward. Very few Aboriginal mothers would attend hospital for delivery so the few emergencies brought in from the outback could have been delivered in the established and equipped labour ward. As it was they were delivered on a screened bed next to the Sisters desk in Ward 3. The screens were never adequate and the shy mothers were not happy in the midst of so many others, so at a later date a separate small labour ward was built on to Ward 3.

Ward 5 was also restricted for space as the prewar planners in Canberra did not foresee that Darwin would one day become a city of young families. There was only one office and facilities for the two wards. It was not long before an extension, at right angles to the
ward, was added on the foreshore end to accommodate mothers and babies. Even so the few Aboriginal mothers being delivered in hospital were not in that section.

On Christmas Eve 1952 one of the wives from Larrekeyah gave birth to a baby premature by two months. Dr WA Langsford was one of the first two resident doctors appointed to Darwin. He delivered the baby but had no spare humidicrib in which to nurse it. As a new (1952) graduate from Sydney, Dr Langsford was keen to have the best. Darwin's first humidicrib had arrived by air a few days earlier and was already in use for another infant. About 7 pm Dr Langsford contacted Mr Kevin Hodder, a clerk in the hospital store, to obtain more fittings for a wooden humidicrib that the hospital carpenter, Mr Tas Graham, was constructing. They needed light globes and a thermostat and the latter could only be obtained from Mr Alf Pearce, a refrigeration mechanic who had his own business in town. Late in the evening Dr Langsford was called from his bed in the Brown House where the single doctors lived and by 3 am Christmas morning the humidicrib was functional.(1) The humidicrib was humble but effective, the handiwork of resourceful men; the baby's life was saved. Many premature babies have been reared using hot water bottles to maintain their warmth but the climate in Darwin at Christmas is hot and humid and there is no marked fall in temperature at night.

The medical store comprised three Sydney Williams iron framed huts shown as E, F and G on the 1942 floor plan. To these was added another small store with a roof and open sides in which explosive gases were stored. Building G was the bulk pharmacy where the Chief Pharmacist, Mr Alan Carson, despatched orders to the inland hospitals and packed the medical supplies for all the outback medical kits. There were three categories of medical kits: A for settlements and missions employing Registered Nurses, B for smaller places without a Sister and C for the mining camps and small cattle stations where there was no one to supervise or maintain a kit. Sister Nichol with the Aerial Medical Service kept the staff of the medical Store informed on population numbers and other relevant matters; the two worked in close conjunction as the Aerial Medical Service frequently delivered the medical supplies. The hospital pharmacist, Mr Bob Gershwindner, worked in a small pharmacy near the Outpatients Department on the ground floor of the Administrative Block.

Sydney Williams hut F was the food store for the hospital and also dispatched supplies each week to Channel Island Leprosarium and after 1955, to East Arm Hospital. The meals provided at Darwin Hospital for both the staff and patients were always of good quality in spite of the difficulties experienced in obtaining adequate fresh fruit and vegetables. These perishables were purchased locally when available but, due to climatic difficulties, the local producers could not guarantee regular supplies. Everything came by ship from Western Australia and any delays in unloading spelled ruin for the fruit and vegetables. During the 1950s the local hotels, also dependent on shipping, were often out of beer. Shipping companies overcame holdups on the wharf by stowing the beer on the bottom of the cargo. Bananas and pawpaws were grown around the hospital wards and while the staff was small, this extra fruit was a bonus. In 1953 when Miss Denise Radford was appointed as the first dietitian, she provided valuable guidance for both the cooks and purchasing officer. Although Miss Radford was attached to the Department of Health staff and visited the Aboriginal settlements, she found time to advise all the hospitals on catering needs. A catering officer was appointed to Darwin Hospital about 1960.

The one remaining Sydney Williams shed or hut G housed furniture and items for repairs. These stores continued in the hospital grounds until transferred to a leased building in Bishop Street, Stuart Park, in the early 1960s. For many years Mr Jim McBride was the officer in charge of the Department of Health stores.
One of the most valued members of the hospital staff was Mr Jim Goodwin who was appointed as the electrician in 1957. He had a flair for the maintenance of medical equipment. As his exceptional skill was recognised, he was in demand in the other Northern Territory hospitals and worked long hours to oblige everyone. Jim Goodwin was one of the first maintenance men on the job after Cyclone Tracy in 1974. His untimely death from a heart attack in January 1982 robbed the hospital of a hard working and skilful officer.

The original hospital design allowed for floor level openings around the wards so the bare cement floors could be hosed and the water swept through the openings into outside drains. In the early 1950s the hospital was overrun with cats which entered the wards through the openings. Nowhere was safe from the cats and the men in the Medical Store designed box type traps into which the cats were enticed with food. These unfortunate creatures were then destroyed and sent to the incinerator. In the Women's Ward one mixed race girl from a cattle station protested at the waste as, in her words, cats were 'good tucker'. Once the cats were eradicated, all the portals of entry were blocked with concrete and the era of cleaning floors with a bucket and mop came into vogue.

The top floor of the two storey Administrative Block in the front of the hospital remained the centre of administration while the ground floor was used for outpatients, casualty and the storage of records all filed under individual patients' surnames. Until the opening of the first chemist's shop in late 1953, the town's populace obtained all medical supplies from the Pharmacy on the ground floor.

In April 1953 Dr LW Alderman was replaced as Medical Superintendent by Dr John Quinn. Matron Evelyn Lee Steere, originally the Home Sister, was appointed as Matron. She was well liked both socially and in the work situation but she had no real interest in the training of student nurses. As Home Sister she had been both Assistant Matron and tutor for the students; this multiplicity of roles was common practice in most of the smaller Australian hospitals at that time. Mr John Cobb, the Hospital Secretary, was also the Registrar of the Nurses Board, the Medical Board and the Dental Board and without adequate clerical assistance, things such as certificates were sometimes mislaid.

Towards the end of 1955 Dr John Quinn resigned for the first time and travelled overland with a film making unit. In June 1956 he attended the Brunette Downs race meeting as the flying doctor with the Royal Flying Doctor Service at Cloncurry. He joined the staff of Alice Springs Hospital when it was short of a surgeon. A few months later he was back in Darwin Hospital where he remained for a further two years.

The isolation unit nearest to Kahlin Beach was renamed Ward 6 and housed all sick infants other than Aborigines. In the 1953-54 fiscal year there were forty-eight local admissions with infantile diarrhoea. The cause may have been partly due to flies as they were a problem, but most people were of the opinion that the water from Manton Dam was contaminated by dead birds and animals. Covers were later built over the concrete tanks at the 17 mile and for a time the water supply was spoiled by heavy chlorination. At that time no Aboriginal infants in the Top End were being sent to hospital with gastroenteritis but this picture changed markedly a few years later.

Ward 7 was created in 1958 when the second isolation unit was converted to become an Aboriginal Mens Ward. This ward had been used to accommodate some of the domestic staff. Then, under pressure from the North Australian Workers Union, it became for a while a recreation centre for domestic and industrial staff. Early in the 1950s a section of it was used as a veterinary surgery where Dr Langsford spayed or castrated the town's cats and dogs. Nursing staff provided the sterile trays and assisted in the surgery. With no
veterinary surgeon in town, all sick or injured pets were taken to the casualty section of the hospital and when necessary they were X-rayed. Fractures were set and plastered. The first veterinary officer in private practice was a migrant from Europe and not registered in Australia but business soon went his way.

Sister Joy Fenwick, who commenced work in Ward 3 on 5 March 1958, became the Sister in Charge of the new Ward 7 when it opened on 7 July that year with nine occupied beds. Sister AK Lorraine Brennan, who had transferred from Concord Hospital in November 1956, was then the Sister in Charge of Ward 3. This was the most overcrowded ward in the hospital until the men were transferred to Ward 7. At the same time the Aboriginal patients in the tuberculosis annexe near Ward 3 were transferred to the care of Ward 7.

Surveys for tuberculosis soon caused Ward 7 to overflow and when the medical store was shifted to Bishop Street, two of the Sydney Williams huts between Ward 4 and Ward 7 were converted into eighteen bed wards for Aborigines with tuberculosis. Their proximity to Kahlil Beach allowed the patients to go walking or fishing. Kahlil was not developed as a residential area until the 1970s. The number of beds in the Ward 7 complex expanded to fifty-six. Sister Kathleen (Katie) Ryan was transferred from Ward 3 to handle the clerical aspect of the ward work and to assist with the follow up of tuberculous patients. Ward 7 catered for medical, surgical, tuberculous and other infectious conditions.

Between 1957 and 1975, twenty-six cases of the exotic disease Cryptococcus (Torulosis) were diagnosed in the Northern Territory. All but one of these was Aboriginal. They came from widely scattered rural areas. There were sixteen men and ten women, two of the latter being pregnant at the time. One case had earlier been reported in an army hospital during the war and the patient had died. The first case in 1957 was an inmate of Alice Springs Gaol and he died in hospital. Two of the patients were diagnosed at East Arm Hospital after presenting with cerebral symptoms. Most of the male patients were treated in Ward 7. It was a distressing condition due to the almost intolerable headache suffered by the sufferers.

Sister Fenwick was in charge of Ward 7 until March 1966 when she was asked to take over the District Nursing Service and to develop it to meet expanding needs. At that time the service operated from the Peel Street Clinic in the city area. More is recorded of this work in Chapter 28.

Ward 2 was the Mens Surgical Ward where Sister Honey Hayes was in charge from 1949 until her retirement. The hospital ambulances were housed under the verandahs and the nursing staff handled the incoming phone calls and found a doctor to authorise the use of an ambulance. In most cases unskilled orderlies manned the ambulances. The service drew much criticism from both the community and from staff of the Aerial Medical Service who required an ambulance to meet the aerial ambulance on its arrival at Darwin Airport with patients. A unit of the St John Ambulance Service was begun in Darwin in 1953, but it struggled for years as the Department of Health clung tenaciously to the right to provide an ambulance service. In the late 1960s the night work and weekend calls were given to the St John Ambulance team, but it was not until 1976 that autonomy was achieved for the St John Ambulance Association. It was Dr Charles Gurd who, as Director of Health in 1976, took positive action to hand over full responsibility for the ambulance service.

Dr TOR Yates, who followed Dr John Quinn as Medical Superintendent, resigned on 30 November 1956. Dr Helen Phillippis, the Schools Medical Officer, relieved in the hospital until the arrival of Dr FJA Bateman on 24 January 1957. The new year started badly with the resignation of the surgeon specialist, Dr Peter J Blaxland, without a ready replacement.
Dr John Quinn returned to Darwin where he relieved as surgeon until the arrival of Dr Desmond A Cooper in September 1957. After only one year with the hospital, Dr Cooper became the first surgeon in private practice. During that one year he made two mercy flights to Alice Springs, one to save the life of a young Aboriginal woman from Yuendumu who had been speared in the chest.

The single operating theatre in the hospital was never adequate. The one autoclave could not cope with the requests from the various wards for sterile dressing trays. All instruments were boiled in a steam heated steriliser. There was no Central Sterilising Department as such. Sister Beresford and then Sister Stutridge did their best but there were marked limitations. Dr Stephen Watsford, who had to do much of the surgery in 1952-53, ordered more equipment including electric suckers and an electric bone saw. Sister Rae Keiller, who came in February 1952 and worked in the Casualty and Outpatients section, recalls being on call at weekends for emergencies in the operating theatre when the Theatre Sister was off duty.

Sister Grace Hodge, who joined the hospital staff in March 1954, became the Theatre Sister, a role she filled for several years. In the latter half of 1956 she undertook a course in Theatre Management and Teaching conducted by the College of Nursing (Australia) in Melbourne. Miss Patricia Chomley, the Director of the College of Nursing, suggested to Matron Lee Steere how she could get Sister Hodge sponsored by the Department of Health. Dr Metcalfe in Canberra did approve the training course but insisted that Sister Hodge be bonded for two years further service or completion of the course.

Later when Sister Hodge married she worked for a time with the District Nursing Service. Sister Margaret A Lyons from Darwin completed General Nurse training in Sydney in April 1957 and joined the staff in Darwin in August; she worked for a time as Theatre Sister before transferring to the Aerial Medical Service.

A surgeon, Dr Alan F Bromwich, with his wife Rosemary, a Registered Nurse, came from England in January 1959 and made their home in Darwin. Shortly after their arrival this family met with a tragedy when one son rode a push bike in front of an approaching taxi outside Coleman's shop in Mitchell Street, a short distance from the hospital. When the emergency bell rang in Casualty, Dr Bromwich was the first to answer it and found the victim was his own son. With a couple of breaks for study leave, Dr John Quinn worked as Assistant Surgeon to Dr Bromwich for many years.

A new operating theatre block was built immediately behind the original theatre. This comprised two suites, each with its attached anaesthetics room. Gone were the days of wheeling in oxygen or other gas cylinders; these gases were piped in from external sources. This new complex, which included a Central Sterilising Department, was officially opened by the Minister for Health, Senator Harrie Wade, on 17 November 1962(3). A diesel driven emergency generator could take over the supply of electricity within seconds should the need arise. Sister Lila McIntosh, a quiet unassuming woman who had joined the hospital staff in May 1958, set up the Central Sterilising Department and did an excellent job. As well as supplying the theatre and wards, she was most helpful with the needs of the Aerial Medical Service. Sister Hildegard Hamilton, who arrived in March 1963, became the dominant personality in the operating theatre scene until her retirement in December 1984. The X-ray department expanded into the original operating theatre under the direction of Mr Michael South, the senior radiographer.

The Pathology Laboratory continued in the original building erected in 1934. This low cement brick building was one of the few buildings at the hospital destroyed in Cyclone Tracy, 25 December 1974. Mr Ian White, a biochemist appointed in the late 1940s, spent
many years in this section. Mr Laurie Gray was also there in the latter half of the 1950s. Dr Thomas A Nowell from England was at Tennant Creek Hospital for a year in 1949 before specialising in pathology. He was replaced late in 1955 by Dr John M Crotty who set out to investigate the causes of morbidity and mortality among Aborigines. In the era prior to computers he established a punch card system that would show the age at death along with the cause. Autopsies were conducted on those who died in hospital but many causes of death, notified from the outback, could not be used for the study. 'No suspicious circumstances' was not a diagnosis. There were three epidemics of influenza during the period of Dr Crotty's study; Type A in late 1956 to early 1957; Asian virus in July-August 1957 and the third between September to November 1958. Twelve deaths were related to influenza, all of the victims being over thirty years of age(4). Dr Crotty's work was of great assistance to the community health services as well as the hospital; he also made an unsuccessful attempt to isolate and grow the trachoma virus.

Dr John Crotty diagnosed by autopsy an infant who died from Tetanus Neonatorum. Tetanus has been rare in the Northern Territory and the question arises as to whether it was introduced with horses and cattle in the late 19th century. In 1957 few Aboriginal mothers had received immunisation against tetanus. There was never a specific program to immunise women of child bearing age as was done in many other countries where tetanus was a common problem. Most of the Aboriginal population in the Northern Territory was eventually protected against tetanus but it was done steadily as staff and supplies permitted. From 1954 onwards Triple Antigen was given to all children. The autopsy findings still remain, but the hospital record cannot be recovered due to inadequate identification of the infant. The baby, a boy, was born at Elcho Island on 2 March 1957 and flown to Darwin on Saturday 16th as a medical emergency. As is common practice, the parents did not name the baby at birth in case it died but the father gave the name of his tribal group 'Waramiri' as a name and that was on the admission form. At the hospital a staff member ignored the admission form and asked the mother for a name to which she replied 'yarka' (or Yaka), which means 'nothing' or 'no name'. To this was added the prefix Pic being short for the negro word picaninny commonly used by the hospital staff. The infant died next day and the name was still 'Yarka' when the autopsy was carried out(5). This baby was buried as 'Pikyarka' as the Welfare Branch was not using the letter 'c' in spelling Aboriginal names. Pikyarka means 'baby, no name'. It is not surprising the records could not later be found. As the infant was admitted late on Saturday and died on Sunday it is not likely that the pathologist saw it prior to the autopsy. The mother of the infant had another baby the following year which lived only one hour. She herself died from a carcinoma in 1965. Elcho Island had never had horses and the cattle herd was recent and very small at the time of infection.

During the fiscal year to 30 June 1954, Darwin Hospital had a daily average of one hundred and eleven inpatients. Of these, forty eight were white infants from Darwin classified as having infantile diarrhoea. No mention is made of Aboriginal infants with diarrhoeal infections, a situation that changed dramatically over the next few years.

For many years, staffing of the hospital was precarious but as better housing became available the situation began to improve. During the fiscal year 1956-57, doctors with the field staff were repeatedly diverted from their work in the community to staff the hospital. The Department of Health advertised for doctors from Britain and the first group to be appointed under this scheme arrived by air during July and August 1957. Among these were doctors who stayed many years, namely Dr Michael Ryan who later worked with the Aerial Medical Service, Dr James R Evans who was for a time the Medical Superintendent at Alice Springs, Dr IH Wallington and Dr CE Alan Mason. The latter became an anaesthetist while his wife, Sister Jenny Mason, worked for many years with the.
ophthalmologist in a small clinic shown on the 1942 floor plan as the main switch board room.

Dr J Douglas Mounsey, who came from Melbourne in April 1957, was appointed as Medical Superintendent, a position he held until 1961. There was harmony in the hospital during the time of this gentle mannered man. He specialised in obstetrics and later went into private practice in Darwin. Dr Ronald HC Wells, who replaced Dr Mounsey in April 1961, was by far the best qualified Medical Superintendent the hospital had ever enjoyed. He was a physician specialist and did much to upgrade the standards of medicine practised in the hospital. Dr Wells was British and had been working in Singapore before coming to Darwin. He revised the whole records system and although it meant a few hectic days for Sister Gwen Phillipps and Mrs Pos Bunce who had to make the change over to numbering of records, it was done. The numerical registration of 13,000 different patient records was started on 23 October 1961 and continued at the rate of about thirty new patients per day. Alice Springs Hospital followed the pattern and Mrs Jean Bail helped establish the register there. Dr Wells was aggressive but constructively so. However, when called upon to answer a few radio medical calls over the weekend he was far too impatient for that role. He was also impatient when he saw a brilliant scientist whom he knew, locked in the yard of the padded cell adjoining Ward 1; he obtained the key, opened the door and went in without an escort - an orderly found him being choked with his own necktie. Dr Wells was promoted to a senior administrative post in Canberra and was replaced by Dr Peter W White, a physician who had joined the staff in January 1963. Dr White lived in a house directly above the steps leading down to Mindil Beach and like all the homes on Myilly Point the view was superb. Early in 1965 when Dr White decided to resume full-time medical practice, Dr Arthur H Dunnett, the doctor at Katherine, was promoted as Medical Superintendent.

In 1954 there were 32 Registered Nurses on the staff or one Sister per 3.5 patients. Although the hospital had permission to train 26 student nurses, it was not possible to retain more than 19 plus four nurse assistants. A disruptive aspect of staffing arose when the untrained nurse assistants received the same pay as the student nurses.

School of Nursing

Matron Lee Steere was not interested in the nurses training school. There were major problems but instead of seeking remedies in November 1955 she recommended that no further applicants be accepted(6). Of the sixty-six prospective students recruited over the previous five years only eleven remained. All recruiting was done by the Personnel Section of the Department of Health in Canberra and most applicants were not interviewed for their suitability or motivation. This was only one aspect of the problem. On arrival in Darwin the new recruits were promptly rostered to wards where busy Ward Sisters endeavoured to find time for some instruction. After one month most found themselves rostered for night duty and in change of a Ward under the Supervision of a Night Sister who visited them two or three times during the night. The first PABX (Private Automatic Branch Exchange) telephone system was installed in 1958 and allowed staff to call another ward direct(7); prior to that a Sister in Ward 2, the Mens Surgical Ward, had to man a switch board. Student nurses were reluctant to make too many calls. The degree of responsibility was frightening.

The Director General of Health, Dr Metcalfe, and the Principal Matron, Miss F Peterson, in Canberra were most concerned and when they received an application from Sister Margaret (Peg) OM Downer, who was a postgraduate student at the College of Nursing (Australia) in Melbourne, they determined the training school would continue. Sister Peg Downer, a British nurse, had been teaching African nurses in Johannesburg and had left
that country because of the apartheid policy. She was appointed to Darwin in December 1957 on completion of the Diploma in Nursing Education course. Dr Doug Mounsey was then Medical Superintendent. Four nurses, one of them Sister Patsy Chalmers, had completed training on 23 August 1957 and this left only ten trainees. Sister Downer found there was no position for a full-time tutor; she was the Assistant Matron, Home Sister and tutor as she could manage it.

From its inception in 1929, the training school had always followed the Queensland syllabus. In 1952 Principal Matron FM Peterson, in Canberra, recommended that the course be upgraded in line with changes introduced in nursing in New South Wales, Victoria had changed to a three year nursing course prior to the war but both Queensland and New South Wales still had four year courses. Having completed the Diploma in Nursing Education course in Melbourne during 1957, Sister Downer was familiar with nursing policies in Australia and she favoured the syllabus used in New South Wales. Sister Downer established a School of Nursing and set about revising the inadequate syllabus. Dr Mounsey made a section of Ward 1 available as a classroom. Prior to that most of the lectures had been given in the Matron's office or the Medical Superintendent's office. Later, when the trained staff moved into the Sisters Annexe and the original nurses home became available for student nurses, a room in that building was set aside as a classroom. It was all most inadequate but remained that way until November 1967 when the hospital extensions were completed.

Student nurses had always been seen as a part of the workforce but Sister Downer insisted on a preliminary school of two weeks. Later, a half day per week was also granted for study. Lectures were given as and when lecturers were available but Sister Downer did much of the teaching herself in the evenings so that less time was lost in service in the wards. She submitted a recommendation to the Nurses Board to change to the New South Wales nursing syllabus. This was done and in June 1962 the first class started on the new syllabus. In May 1964 the first examinations were undertaken(8). It was still a four year course.

Sister Downer envisaged a School of Nursing for one hundred and twenty students and as they increased, the nursing assistants and the Nurse Aides would be phased out. In June 1959 a position was created for a full-time tutor as distinct from being Home Sister and Assistant Matron. By September 1961, when the student body had increased to forty-six, a second tutor was appointed. Sister Lily Warne had been teaching student nurses in Fiji and applied for a position with the Welfare Branch to teach Aboriginal nurses (more detail in Chapter 28). Shortly after her appointment the Public Service Board transferred the position from the Welfare Branch to Darwin Hospital and the hospital agreed to provide training for Aborigines. That position ultimately disappeared into the School of Nursing and its origin was soon forgotten.

When Matron Lee Steere resigned in January 1959, she was replaced by Matron Peg Downer and this left the School of Nursing without a qualified tutor. Sister Lily Warne was accepted by the College of Nursing in Melbourne to study for a Diploma in Nursing Education in 1963 and she asked the Department of Health to sponsor her. She was refused sponsorship; Dr Langsford did not regard advanced education essential for nursing staff. Sister Warne passed the course with eight distinctions in nine subjects and was invited to join the staff of the College of Nursing. Matron Downer did much to encourage the nursing staff to undertake further study. Three people - Sisters Audrey McShane, Ellen Kettle and Lorabel Reynolds - applied to undertake the Diploma in Nursing Administration course at the New South Wales College of Nursing in Sydney during 1964 and Matron Lorraine Brennan applied to do a similar course in Melbourne. Nursing staff had been granted permanent appointments with the Public Service for the first time in

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1963 so this was no longer one of the criteria on which to refuse sponsorship; it had been previously. None the less Dr Langsford stalled, saying it was the Canberra hierarchy who would not commit themselves. The Minister for Health, Senator Harry Wade, and Sir William Refshauge visited Darwin and Matron Downer, as chairman of the Northern Territory branch of College of Nursing (Australia) invited them to afternoon tea to meet the nursing staff. The visitors promised to investigate the request for sponsorship and all four applicants were eventually sponsored.

In 1962 Matron Downer prepared a submission for a Midwifery School in Darwin Hospital. This was strongly supported by Dr Peter White. There were 782 births in the hospital during that year and the number of births was increasing. The course was approved and a tutor recruited from Scotland but then the date for commencement was postponed. Dr Langsford became Director in 1964 and Chairman of the Nurses Board. The necessary legislation for the training course was held in abeyance and then delayed for a further nine years. The Northern Territory should have been training midwives instead of depending on recruitment from other States. Most student nurses who completed General Nursing had to go interstate to qualify as midwives and they seldom returned.

In the meantime the School of Nursing continued with Sister Moira White, the wife of Dr Peter White, in charge and assisted by Sister Margaret Ness. Neither had a Diploma in Nursing Education. By 1964 there were eighty-one students and by early 1965 the school peaked at eighty-seven.

Sister Brennan, involved in a staffing dispute late in 1960, was promoted to Assistant Matron in Darwin Hospital in January 1961. Late in 1960 strong willed Sister Brennan, who was in charge of Ward 3, demanded that a certain male orderly be removed from her Ward. When this did not happen promptly she walked off duty; other nursing staff refused to go with her. After a few hours she reconsidered her action and worked the evening shift instead. The Medical Superintendent Dr Mounsey would have dismissed her but Matron Downer asked that she be sent to Bagot Hospital for a time. When Dr Langsford became Assistant Director of Health he exonerated Sister Brennan and promoted her to Assistant Matron in Darwin Hospital in January 1961. Late in 1960 strong willed Sister Brennan, who was in charge of Ward 3, demanded that a certain male orderly be removed from her Ward. When this did not happen promptly she walked off duty; other nursing staff refused to go with her. After a few hours she reconsidered her action and worked the evening shift instead. The Medical Superintendent Dr Mounsey would have dismissed her but Matron Downer asked that she be sent to Bagot Hospital for a time. When Dr Langsford became Assistant Director of Health he exonerated Sister Brennan and promoted her to Assistant Matron in Darwin Hospital in January 1961. Later, on 27 February 1962 after Matron Hordacre retired on medical grounds, Sister Brennan was sent to Alice Springs as the Matron there; she had not applied for the position and she did not hesitate to say she hated life in Alice Springs. At this time Sister Llorabel Reynolds, the Survey Sister at Alice Springs, applied for the vacancy at Darwin Hospital and became Assistant Matron in September 1962. As already mentioned both of these women undertook the Diploma in Nursing Administration course during 1964, Matron Brennan in Melbourne and Sister Reynolds in Sydney.

Matron Peg Downer was the motivating force behind the establishment of the Northern Territory branch of the RANF (Royal Australian Nursing Federation). This move received a considerable boost in 1961 when the International Council of Nurses held their Congress in Melbourne. Most of the European and Asian nurses coming into Australia by air arrived in Darwin in the very early hours of the morning. Matron Downer called for volunteers to meet these aircraft and to welcome the overseas nurses, an action greatly

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appreciated by the visitors. A local body calling themselves the Northern Territory Trained Nurses Association was developed during 1961. In 1962 the organisation received affiliation with the Royal Australian Nursing Federation and on 25 June 1962 it officially became the Northern Territory branch of RANF with Sister L Reynolds as President and Sister Gwen Phillips as Secretary. Matron Downer had spelled out to the nursing staff the advantages of being permanent public servants, but both the Department of Health and the Public Service Board did not treat the request seriously until the formation of a RANF branch.

The first twenty positions for permanent nursing staff were granted on 23 October 1963. Some of the permanent appointments were back dated to accommodate long serving staff. Married women could not become permanent officers and this kept them from promotion. Policies were steadily modified and more permanent positions were made available.

Dr Langsford had a full-time position created for a Registrar of the Nurses Board and other professional Boards. Matron Downer was moved sideways into that position and Matron Brennan was appointed as the new Matron of Darwin Hospital as from 22 April 1965. Applications for the position were not called for and late in 1968 Matron Brennan was confirmed in the post. The School of Nursing was shaken. Sister Moira White went overseas with her husband; Sister Ness resigned and Sister Marion Graydon was put in charge with no previous experience and no one to guide her. Matron Brennan always spoke her mind. Many found this a little hard to take and within six months the number of student nurses had fallen to about fifty. The figure seldom rose above sixty again but Matron Brennan believed she was achieving quality, not quantity.

The School of Nursing was without a qualified tutor until the arrival of Mrs Jacqueline O'Brien (nee Seale) in August 1965. Sister Seale, a born and bred Territorian, had worked in Darwin Hospital during 1950. She was a tutor in the School of Nursing in Concord Repatriation General Hospital in Sydney until her marriage to Mr Vernon O'Brien from the Department of Lands. Mrs O'Brien worked part-time but then did as much work again at home in preparing teaching materials. The one room tutorial school was a shock after the modern facilities at Concord and added to this was the appalling noise of bulldozers and jackhammers as workmen prepared the sites for new buildings.

Most of the construction noise was over when Sister Gwen Mahaffey joined the School of Nursing as a tutor in 1967. She had come to the Northern Territory in August 1965 as a Survey Sister but found the physical work too strenuous. After a time in the hospital she transferred into the School of Nursing and undertook the Diploma in Nursing Education in Sydney during 1969. Sister Mahaffey was a gracious woman and most popular; it was a tragedy when she died during an asthmatic attack on 10 May 1975.

Specialist Medical Staff

The specialist medical staff steadily increased. Some doctors made Darwin their home and this greatly added to the stability of the service. Dr S Thomas James and his wife arrived from Britain in June 1960. Dr James became the first gynaecologist on the staff and his wife Dr Margaret James went into private practice. They spent twenty-five years in Darwin. It seemed particularly difficult to recruit and retain the services of a physician. Apart from Drs Ronald Wells and Peter White, both of whom filled the role of Medical Superintendent, the hospital seldom had a specialist in this area. Dr Anthony JP Proust, a chest physician from Canberra, helped for a time in 1965 but it was not until February 1967 that Dr David Lo filled the role of physician, a position which he still holds. Dr Lo came to Australia from Hong Kong as a child and arrived by ship on 5 December 1941. His father, a Methodist Minister, had been sent to minister to the Chinese community. A
few weeks later the family was evacuated to Townsville and then to Sydney for the duration of the war.

The number of Aboriginal infants admitted to Darwin Hospital suffering from gastroenteritis was only about half the number admitted to Alice Springs Hospital. In 1954 there were no admissions of Aboriginal infants with diarrhoea. In 1957-58 there were fifty-one admissions and in 1962-63, ninety-six were admitted (9). On top of this Sister Ellen Kettle had reported a high prevalence of serious malnutrition in some areas in the outback. The Northern Territory did not have a paediatrician; several more years passed before Dr Alan C Walker was appointed to Darwin Hospital in September 1967 as the first qualified paediatrician in that hospital.

Dr Walker did manage some field visits and the nursing staff in the outback greatly appreciated his advice; he taught them how to give intraperitoneal fluids as a lifesaving measure to counteract dehydration in infants with gastroenteritis. However the hospital demanded his service there so his visits with the Aerial Medical Service were restricted. It was another ten years before the appointment of a second paediatrician, Dr Paul Fullerton, in 1978.

Ophthalmologists were few in spite of many attempts to recruit doctors with this qualification. For several years postwar, Fr Frank Flynn did any urgent eye surgery in Darwin. He was also able to undertake surveys for trachoma but his church required him in the role of a priest and his medical work steadily decreased. However, he continued to take an active interest in the Darwin Medical Society and provided teaching and guidance for other doctors.

Dr Allan Alexander Tye, an experienced ophthalmologist, spent some time in the Northern Territory during late 1957. Dr Charles McLean, a British ophthalmologist with a special interest in trachoma, arrived in July 1958. Dr McLean had worked in North Africa where trachoma was a considerable problem. No one challenged his work until he found much early trachoma in the white community in Darwin. The Town Hall was acquired for a special survey and some of the people started on treatment later consulted ophthalmologists elsewhere in Australia who did not agree with the diagnosis (more is recorded in the section on trachoma in Chapter 19). Dr McLean resigned and went to Canada and the Northern Territory was once more without a specialist. Dr William HC Hughes came in February 1963 as the next ophthalmologist. As well as visiting the other hospitals Dr Hughes made many visits with the Aerial Medical Service and he was most interested in trachoma. He established an eye clinic at the hospital assisted by Sister Jenny Mason. Dr Hughes was most popular but he only stayed two years. Dr Kenneth Moo, the medical officer at Katherine for several years, studied ophthalmology and although he did not obtain this qualification he did have experience. He took charge of the eye clinic in Darwin Hospital, a role he filled until his untimely death on 26 July 1980. Dr Moo did not become actively involved in work with trachoma.

There was no full-time specialist in ear, nose and throat conditions to care for the high incidence of middle ear disease in Aboriginal children until the appointment of Dr ABN Rao from Hyderabad in India in January 1974. However, specialists did visit from interstate and this is recorded in Chapter 31.

**The Nurses Board**

In 1967 Matron Downer proposed that the Nurses Board, chaired by Dr Langsford, be enlarged to allow more nursing representation. A submission was also prepared by Matron Downer for the introduction of Nurse Aide training; she also outlined a syllabus in
line with that being undertaken by hospitals in Melbourne. No action was taken by the Nurses Board at that time. Nurse Aide training (Enrolled Nurses) was eventually introduced in Alice Springs Hospital on 12 August 1976.

Quite apart from the work done on nursing education by Matron Downer, Sister J O'Brien rewrote the nursing course in detail and submitted a request for increased hours of teaching. Medicine was advancing and changing and nurses required more advanced education to keep abreast of the changes. When discussed with Dr Langford he seemed most understanding and keen for change but none of Sister O'Brien's submissions were ever put before the Nurses Board.

After Dr Langford's transfer in November 1972, action was taken to amend the nursing legislation to allow two more nursing representatives on the Nurses Board. This amendment was passed by the Legislative Assembly in 1976 and Sister O'Brien was one of the new members appointed. Action was then taken to provide 1600 hours of lectures and study in the three year General Nursing course that had been introduced on 5 September 1967(10).

Prior to self government in the Northern Territory in 1978, the senior clerical officer in each hospital was known as the Hospital Secretary. They were key men and ensured the smooth conduct of the non-medical aspects of the hospital. Mention has already been made of the first postwar secretary, Mr John Cobb, who also filled the role of secretary and registrar of the Medical Board and Nurses Board. When he transferred to Canberra, Mr Reg County filled the position, then Mr Doug Kerrison before the appointment of Mr Brian Bolton. Brian Bolton was the first secretary to undertake a Diploma in Hospital Administration course of the University of New South Wales during 1962. While away he was relieved by Mr Des A Hyde from Alice Springs Hospital who undertook the same course the following year. In the meantime Mr Denis Spain, the son of Darwin's only hairdresser, relieved at Alice Springs. He also did the course in Sydney. When Brian Bolton transferred to Perth on 7 December 1965 he was replaced in Darwin by Des Hyde. When Des Hyde was appointed as the Assistant to the Director of Administration, Mr Hunter C Harrison, at headquarters on the Esplanade, he was replaced as secretary by Denis Spain. Des Hyde retired in October 1981 but died prematurely two years later.

City Expansion and Hospital Development

The Northern Territory population steadily increased. In 1947, there were 10,868 Europeans in the Northern Territory and by 1966 there were 37,000 of whom 19,000 resided in Darwin. In the outback the Aboriginal population also increased from 16,868 fullblood Aborigines in 1958 to 19,000 in 1966(11). In 1954 the daily average inpatients in Darwin Hospital was 111; by 1960 it had risen to 187 from where the bed occupancy steadily increased to 295 in 1970. The city of Darwin grew rapidly. The first stage of the Trower Road bridge over Rapid Creek was opened in 1968 and development of the northern suburbs began. By 1974 the population of Darwin had reached forty-five thousand.

Planning for expansion of Darwin Hospital began in 1965 when Dr Langford announced the proposed closure of a section of Mitchell Street (previously Mackay Street) to allow an extension of the administrative section of the hospital across the street. Some senior public servants objected to the closure of the street and declared they would stop it but were not successful. In addition there was to be an airconditioned home for the student nurses (Temiria House) and a three level ward unit near the foreshore. The next two years were a nightmare for both staff and inpatients as jackhammers tore into rock and dust blew everywhere. Staff on night duty could not sleep during the day but it was late in the
construction program before a house was acquired on Myilly Point well away from the noise.

A swimming pool adjacent to Temira House was included in the new development and it was opened on 31 March 1967. Temira House comprised two wings and the northern wing (three floors) was occupied by student nurses on 5 July 1967(12). Tutorial staff and several of the Sisters occupied the southern wing a few weeks later. The new tutorial suite was on the upper floor of the Administrative Block built across Mitchell Street and it later suffered severe damage from water during Cyclone Tracy. Nurses across Australia donated textbooks and magazines to refurbish the School of Nursing library.

The new three story ward block known as Kahlin Ward Block, situated near the foreshore, was scheduled for occupancy on 14 August 1967. The increase of ninety more beds in this block brought the total available beds to three hundred and seventeen. One corner of the top floor of this building was later seriously damaged during Cyclone Tracy in 1974. The Administrative Block, opened in two stages, housed the Casualty and Outpatients sections along with consulting rooms for specialists. The extension across the street required much excavation as the hospital side of the street was much lower than the land near the Pathology Laboratory. The Minister for Health, AJ Forbes, officially opened all the new buildings and extensions in November 1967(13).

Other changes followed. Once Kahlin Ward Block had been completed, two original wards could be completely refurbished and airconditioned as a Maternity Ward. The labour ward and nursery were situated at the foreshore end of the ward. Later, during Cyclone Tracy in 1974, a baby was delivered at the height of the storm and the mother and baby were moved shortly before that section was damaged. An anxious father nursed the newborn infant for the duration of the storm.

From 1970 onwards Darwin expanded rapidly and the hospital acquired many temporary prefabricated wards to cope with the increase in inpatients. In 1970 there were 359 equipped beds with a daily average of 317 inpatients. Births in the hospital totalled 1,424 for the year, almost four per day(14).

The Hospital Advisory Board, comprising representatives of the community, was concerned that demand for hospital beds would outstrip the existing facilities and they were right. Mr Eddie Quong, as Chairman of the Board, made their concern known to the politicians in Canberra. By 1970 it had been conceded that a second hospital was needed. Dr Langsford selected the site at Casuarina; it was spacious and he thought it would allow for later expansion but it was isolated by a creek that required bridges. It could not be approached from all sides and was several kilometres from the nearest planned shopping centre. Work on this hospital commenced in June 1973 and was interrupted by Cyclone Tracy in December 1974. The laundry was commissioned in April 1978 followed by the gradual occupation of the staff residential accommodation. The Pathology Laboratory became operational in April 1980 followed by the wards. The first patients (Obstetrics, Gynaecology and Paediatrics) were transferred in on 6 May followed by the rest of the acute patients on 19 May. It was fully functional on 20 May 1980 and was officially opened by the Prime Minister, the Right Hon J Malcom Fraser on 19 September 1980(15). This hospital became the Royal Darwin Hospital.

Endnotes

3 Health, Mar 1963.
5. JM Crotty, pers comm., 1987.
Darwin city about 1962 with the hospital lower left corner. The site of the first hospital near Doctor's Gully is bare (middle right) (photo: unknown)
Darwin Hospital about 1962, showing all the original buildings. Extensive redevelopment began in 1966 and included the closure of Mitchell Street and extension across the street of the administrative block, opened in November 1967 (photo: unknown)

Visitors in Ward 3, Darwin Hospital in 1957. L-R: Dr RC Webb, Hon Paul Hasluck, Minister for Territories, Matron E Lee Steere and unknown politician (Dept of Health)

Sister Joy Fenwick with a nursing assistant and a student nurse, in Ward 7 of Darwin Hospital about 1965 (Dept of Health)
L-R: Sisters Lily Warne (tutor), Audrey McShane and Llorabel Reynolds, near Sisters Home January 1963 (photo: E Kettle)

L-R: Dr AH Dunnett, Matron L Brennan and Secretary Dennis Spain, inspect the site of a new ward block in 1966. The doctors quarters behind them replaced the 'Barn' (left) in July 1965 (Dept of Health)

Above: Nurses graduation July 1965. L-R: Marguerite R White, Grace Samuels, Margaret Bakon and Margaret Eldridge (courtesy: M Eldridge)

Left: Matron MOM 'Peg' Downer came as the first qualified tutor in December 1957. Shown here pinning a hospital badge on Sister Margaret Eldridge in July 1965 (courtesy: M Eldridge)
As a child, Dr David Lo left Hong Kong with his parents on the last ship out before the Japanese occupation in December 1941. He was appointed as physician specialist, Darwin Hospital February 1967 (Dept of Health)

Dr Helen M Phillipps MBE, came to Darwin October 1954 as the first Schools Medical Officer. She did much for handicapped children. Died 14 May 1973 (Dept of Health)

Dr Alan C Walker was appointed as the first paediatrician in Darwin Hospital in September 1967. The need was long overdue (courtesy: A Walker)

Dr William A 'Spike' Langsford, one of the first two Residents in Darwin Hospital 1952. He was Director of Health 1964-1972 then transferred to Canberra (Dept of Health)
The Administrative Block of Darwin Hospital was extended across Mitchell Street in 1967. It included the School of Nursing (Dept of Health).

Darwin Mayor Harry Chan speaking at the opening of the extension across Mitchell Street 18 November 1967. To the right the Administrator Roger Dean and wife, Sir William Refshauge and Sam Calder MHR (Dept of Health)
CHAPTER TWENTY-FIVE

KATHERINE HOSPITAL

Chapter 15 records the first five postwar years of Katherine Hospital. During that period the hospital was frequently without a doctor and doctors were flown down from Darwin for a weekly clinic. Nursing staff ran the hospital. Dr Geoffrey Ey was there for several months from late 1951 to early 1952 prior to helping at Alice Springs during the outbreak of poliomyelitis. At that time he was also responsible for providing an aerial medical service with Captain Harry Moss who brought an aeroplane from Darwin. Early in 1952, during a widespread outbreak of influenza, when the country was too wet for landings Dr Ey used his initiative and made up secure parcels of sulphadiazine tablets and dropped them by homemade parachutes to the various cattle stations.

The Survey Medical Officers were frequently diverted from field work to staff the hospitals. Dr Richard Brock relieved at Katherine and later Dr Langsford helped out. There was also a high turnover of nursing staff, mostly due to marriage. Some Sisters married locally and spent the rest of their lives in Katherine and remained on the staff of the hospital. In 1954 Dr Kenneth L Wise was the Medical Officer until replaced by Dr Laurie Mocatto on 23 September 1954. By this time all the aerial medical service was being provided from Darwin and the doctor at Katherine conducted medical clinics at Mataranka, Larrimah, Daly Waters and Bamyili settlement. These were alternated each fortnight with visits north to Pine Creek and the new mining centres at Moline and El Sherana. A four wheel drive Land Rover was provided for the service and a Sister always accompanied the doctor.

Sister Jessie M Lingard, known to everyone as Jackie Lingard, was Matron in 1954 with a staff of six trained nurses. She later married Police Constable John Gordon and was stationed at Timber Creek for several years. Also on the staff were Sister Mavis Paech who married Constable Dennis Connigan and Sister Margaret McLaughlin who married Dr Mocatto in Katherine in May 1955. Sister McLaughlin recalled the day early in 1955 when she accompanied Dr Mocatto to Moline which was about thirty miles (48 kilometres) from Pine Creek. The road was gravel and well formed but there were no bridges. There had been heavy rain but the road was reported to be open. They were met at a flooded creek as the people at Moline were determined to have their medical clinic. A rope was thrown across and the medical equipment and supplies were winched over. The doctor and Sister stripped to their underwear and swam across and then redressed on the other side in very wet clothes. As the medical service was free most of the mining township attended; it was seen as a social diversion in an otherwise restricted community. Dr Mocatto and his wife transferred to Darwin in July 1955 where he was in charge of the hospital for leprosy and worked with the Aerial Medical Service until he left to do a one year course in dermatology in Sydney in 1962. He returned to Darwin as the town's first dermatologist but was tragically lost at sea in a new fishing launch on 1 April 1967. Sister Margaret Giles, who had been reared at Elsey Station, was also at Katherine in 1954 and she married the dentist Mr Don Voller.

Dr Joe Robinson of 'Vegemite' fame was the next doctor. He advocated Vegeemite for just about everything. Some heavy drinkers later maintained that ulcers on their legs were healed by an external application of Vegeemite. At that time it was difficult to buy Vegeemite outside Darwin so those who liked it just attended the medical clinic. One wag
nailed a sign to the bridge over the King River stating 'You are now in Vegemite country'(1). Dr Robinson was transferred to Tennant Creek to replace Dr RC Webb and was himself replaced by Dr John Schlink in July 1956.

As elsewhere in the Northern Territory, Katherine Hospital had a few key staff who spent most of their working lives doing that bit extra. There was Mrs Daisy Angus the head cook, born and bred in Katherine, who cooked for both staff and patients until her retirement in 1981. Mr Jack Roney, a Territorian, whose mother Mrs Ruby Roney was a niece of Paddy Cahill of Oenpelli fame, joined the staff in Katherine in 1953. Jack Roney had been on the staff of Darwin Hospital where he received instruction in taking and developing X-rays; he also became proficient in setting and plastering uncomplicated fractures. When he took X-rays he collected the ice from the refrigerators to cool the developer. He lived in a small cottage in the hospital grounds and was always available for ambulance call out and, in the absence of other tradesmen, he mended equipment as the necessity arose. Every small hospital needed, but rarely had, a Jack Roney on the staff.

Dr Kenneth Moo, who was born and reared in the Northern Territory, graduated in medicine in Brisbane in 1955 and returned to Darwin in January 1957. A few weeks later he was in charge of Katherine Hospital when Sister Ruth Fisher was then the Matron. This was the year of the big flood. As the outflow of the Daly River was obstructed by high seas all the tributaries of the river rose. The hospital was cut off from Katherine, with water over five feet (1.5 metres) deep in places. About 11 March when the Katherine River overflowed and started to inundate the grounds of the hospital, Dr Moo acted quickly to transfer all of the patients from the hospital to the doctor's house where the piers allowed two metres more of safety. The flood rose to the floor boards of the hospital but did not intrude. However, the patients spent four days in the doctor's house until the water began to slowly recede. Just as the flood was rising, Mrs Moira Ronan from Springvale Homestead on the northern side of the river came into labour. She was brought across the river on a 'flying fox' (a chair on a wire cable) and reached hospital safely. Sister Betty Barnard, who later married Mr Paul Vandeleur of Camfield Station, was on the staff at the time.

Sister Marie Carty took over as Matron at Katherine in August 1957, a position she held until her marriage to the local butcher, Mr Jack Grimmett, in May 1959. Sister Vona Stephenson came to Darwin in May 1957 and a couple of months later she transferred to Katherine Hospital. It was a happy period with a doctor who was most popular and Matron Carty whom they all loved. Conditions were crowded but it did not seem to matter. Nursing staff bedrooms still lacked doors and the curtains which screened sleeping staff flew in the breeze so everyone had to sleep under a sheet even when it was far too hot. Bedroom doors were fitted in 1960 and the Sisters quarters were extended. Visitors, usually staff passing through, were often bedded down in the lounge that adjoined the bedrooms. Most entertaining was done in the small lounge attached to the dining room to allow some privacy for staff in the sleeping quarters. Sister Kettle often made an overnight stop at Katherine during survey work and usually occupied the bed vacated by the Sister on night duty. There was nowhere else suitable to stay in Katherine.

Dr Ken Moo undertook the Diploma in Tropical Medicine and Hygiene in Sydney during 1959 and was away six months. During that time Dr Tom Acheson relieved but he thought the Sisters had too much power and were running the place. Some aspects of the work at the hospital were expanded as the Department of Health required chest X-rays on all adult Aborigines who came to the hospital as part of the drive to eradicate tuberculosis. Dr Moo had asked for airconditioning in the X-ray unit to obtain better pictures but this was slow in coming. Dr Acheson asked for a full-time Infant Health Sister as the hospital
was required to ensure all Aborigines in the area were immunised and this meant visiting their camps. He invited the Health Inspector Jim Dewey to visit Katherine and had many of the town’s shortcomings corrected. Influenza broke out in the area during June 1959 and the doctor was kept busy visiting Bamyili settlement and the neighbouring cattle stations. Six deaths occurred among the elderly but many others were treated for pneumonia. Dr Acheson repeated the recommendation that Katherine Hospital should be rebuilt nearer to town and suggested that the old hospital be turned into a tuberculosis sanatorium but this proposal went no further.

Sister Vona Stephenson replaced Sister Marie Carty (Mrs Grimmett) as Matron. When Sister Stephenson married Dr Moo, Sister Fay Jones became Matron but after a short time she too married, this time to the local storekeeper Mr Les Cox. Other nursing staff also married including Sisters Winifred Oldfield (Mrs Snodgrass) and Joan Emery (Mrs Mackay) both of whom lived locally and worked on the staff of the hospital for many years. Dr Moo and his wife went to Melbourne for three years (1961-63) where Dr Moo studied ophthalmology. On his return in 1964 he was appointed to a specialist position in ophthalmology at Darwin Hospital, a position he filled until his untimely death.

A new Aboriginal Ward was added in 1959 with a covered walkway from the main building. There was still no maternity unit so newborn infants were kept in the Labour Ward during the day and in the kitchen at night for extra warmth. The hospital was urgently in need of better facilities as more sick people, in particular Aborigines, were being sent to hospital on Connellan Airways mail planes that landed at Katherine. There were fifty births during 1959-60 and the daily bed occupancy was twenty-three(2). Medical clinics were conducted at five weekly intervals at Pine Creek, Moline, Mataranka, Larrimah, Daly Waters and Bamyili. Dr Moo was asked to provide clinics or conduct regular surveys of the Aboriginal people at Manbulloo where Sister Kettle had found six undetected cases of leprosy. One man who had been in Katherine Hospital was remembered by all for his excessively long earlobes; the Aborigines said he had ears like a donkey; he in fact had lepromatous leprosy. A few years later another case of infectious leprosy, this time in an elderly white man, was misdiagnosed; the Matron suggested leprosy but the doctor ignored her so she called in a passing Survey Sister. Two days later a car was sent from Darwin to transfer the old man to East Arm Hospital. Control of leprosy was greatly enhanced once the nursing staff had been taught how to recognise it. Prior to that, cases of leprosy often passed through the hospitals without being recognised.

Dr GA Rundle was at Katherine for a time during 1963 until Dr Arthur H Dunnett took over in August 1963. Hospital Matrons changed frequently, mostly due to marriage. Sister Ellie McPherson was in charge from January 1961 until she married Brother Hamish Jamieson of the Anglican Bush Brothers. As Brother Hamish went on to be an Anglican bishop, his wife did not nurse again. An English nurse, Sister Wendy Caparn, was then Matron until she married Mr W Clarke but she did continue with the District Nursing Service in Darwin. Sister Joan Fong then relieved as Matron until the appointment of Sister Dwillis 'Billy' Kemp. During this time a new ward was constructed in front of the Sisters Home and dining room and this unit, which contained a new operating theatre, was opened by the Minister for Health, Hon Swartz, mbe, on 22 November 1964. For the first time Katherine had a unit specifically designed as a theatre, but with just one doctor only minor surgery was undertaken.

Dr Brian Purdy was in charge during the latter half of 1965 and many patients asked to be sent to Darwin Hospital. The ambulance from Darwin would meet the ambulance from Katherine half way and transfer the patient. Other very ill people were taken to Darwin by their own families.
In March 1966 Dr Langsford spent some time in Sydney undertaking the Diploma in Public Health and Dr Allen Green was sent to relieve as Director. Dr Green was most concerned about Katherine Hospital and on 21 March 1966 he directed Sister Audrey McShane, who had a Diploma in Nursing Administration, to go there as the Matron. A few weeks later Dr Peter Short was appointed in charge, followed a few months later by Dr Jim Scattini. These two doctors made their homes in Katherine, went into private practice and brought stability to the medical service in the town. Matron McShane reorganised the hospital and it was not long before the local patients were remaining there instead of transferring to Darwin.

The new ward became an integrated ward for children. Matron McShane insisted that all sick children be in the one area and supervised at all times. Elsewhere in the old hospital there were too many doors and children could wander down to the river. There was always a shortage of trained nursing staff so young women of mixed race were put into uniforms and trained as nursing assistants. These young women excelled in comforting sick infants and encouraging them to eat and drink. One Sister was appointed to the theatre with the added role of providing a Central Sterilising Department for the hospital. When the theatre Sister was off duty, Matron McShane was 'on call' for the theatre. A dispensary was introduced for the first time. Prior to that, bulk supplies had been sent to each ward where medications were dispensed rather freely. The Department of Works provided an airconditioning unit for the new dispensary and Matron McShane did the dispensing herself. A pharmacist visited from Darwin to establish guidelines but the hospital was not regarded as sufficiently large for a full-time pharmacist. The surrounding cattle stations and Bamyili settlement had been supplied from Katherine at the same time as obtaining supplies direct from Darwin. Although some long term staff objected to the changes most staff appreciated the security that accompanied the strict guidelines and discipline.

Sister Olive O'Keefe from Alice Springs transferred to Katherine where her husband had retired in a cottage on the bank of the river. The hospital had no pathology section so this job was offered to Sister O'Keefe and a technician came from Darwin to teach her the most commonly used tests.

About this time, development of Tindal airstrip commenced and brought many new families to Katherine. The hospital grew in bits and pieces without an obvious overall plan. It should have been removed from the banks of the river but instead it spread closer to the water. Although there was much open country adjoining the hospital, all the development remained in the original restricted area.

A new Sisters Home was designed and built in 1969. When shown the design, Matron McShane commented that it was not suitable for the climate and it lacked some essential facilities. Although Dr Langsford usually asked nursing staff at headquarters to comment on floor plans for both Health and Welfare hospital designs or staff quarters, their comments were often set aside. The new Sisters Home at Katherine, completed early in 1969, was named 'O'Keefe House'. In 1982, after four long blocks of flats had been built, O'Keefe House became the Katherine Institute for Aboriginal Health, a training school for Aboriginal Health Workers.

By 1969 there were three doctors at Katherine. Dr Tomislav Gavranic was there for a time before he moved into Aboriginal health work and became the Regional Director for East Arnhem Land, based at Nhulunbuy. Sister Olive O'Keefe retired in September 1972.
Community Health Service

As had been the practice in Alice Springs, the hospital Matron provided an Infant Health clinic for the women and babies in Katherine. From 27 April 1967 Sister Denise Hull was appointed as the first Public Health Sister in Katherine. She lived in a caravan parked near the nursing staff’s quarters. Sister Hull had already spent several years at Wave Hill cattle station where she had done excellent work among the large Aboriginal community of over two hundred people. She took over the provision of regular infant health clinics and used the Country Womens Association Hall for this purpose. Her position had been classified as Public Health to ensure she was not diverted into home nursing work, although that aspect also needed to be developed due to progressively more people retiring in the town. Sister Hull sought out the needy families: those with invalids requiring walking aids, wheelchairs, commodes and other facilities which most did not know existed. She took the service into the several Aboriginal camps where she immunised children, examined eyes and ears and encouraged pregnant women to attend the antenatal clinic at the hospital. There followed a marked increase in Aboriginal mothers presenting at the hospital for safe delivery of their infants. Sister Hull followed up on leprosy patients and their families and generally brought about a marked improvement in health care in the Katherine area. She laid the foundations for the excellent community health services that gradually developed as the value of her work was recognised.

Medical Superintendents had long requested the presence of a Health Inspector for the town and surrounding area and early in 1969 Mr Arthur Fox was appointed. The hospital had expanded to fifty-five daily average inpatients and a request was made for a pharmacist as Matron McShane was still doing the work. A pharmacist was appointed about 1969 and was then available to assist Sister Hull by making small packages of tablets for the many illiterate people on regular medication. Sister Hull would deliver the tablets each week and check that they had been taken. Prior to that patients often forgot their medication or did not understand the importance of taking tablets regularly. The SABIN campaign in the Katherine area in 1967 was carried out by Sister Hull(3). A radiographer was appointed for the first time during 1969 to handle the considerable increase in this aspect of the work. Late in 1970 Matron McShane was released to take up an appointment with the World Health Organization in Baghdad but she did return to the Northern Territory a few years later.

The town of Katherine continued to grow. A multipurpose Health Centre was built in the town and opened by Dr Douglas Everingham, Minister for Health, on 19 August 1975. Katherine Hospital was redeveloped on the same site and this work was completed and opened by AE Adermann, Minister for the Northern Territory, on 20 January 1977.

Endnotes

1 M Mocatto, pers comm, 1986.
2 Katherine Hospital Annual Report 1959-60.
Katherine Hospital in 1951 was little more than a cottage hospital without a separate room for clean surgery (photo: R Brock)

Katherine Hospital during floods in March 1957. Dr Moo moved all patients to his elevated house (Katherine Hospital collection)
Above: Dr Kenneth Moo and wife Vona whom he met at Katherine Hospital. He was the ophthalmologist in Darwin from 1965 until his untimely death 26 July 1980 (courtesy: V Moo)

Right: Sister Audrey McShane, Darwin Hospital 1959-1965. Then Matron of Katherine Hospital until she went overseas with the World Health Organization in 1971 (courtesy: A McShane)

In December 1984 Katherine Hospital celebrated 50 years. Women who served as Matrons: L-R: Sister Carole Lacey, Matrons Joan Mackay, Vona Moo, Ann Shepherd, Frances Wickes, Marie Grimmett and Fay Cox (Dept of Health)
CHAPTER TWENTY-SIX

TENNANT CREEK HOSPITAL

In the immediate postwar period, Tennant Creek fared better than Katherine and was never without a resident doctor (see Chapter 15). Dr Peter W Leslie took his discharge from the army in Tennant Creek. At the end of 1946 he was replaced by Dr Victor H Webster who became a most vocal member of the Legislative Council. Everyone was aware of the Member for Tennant Creek during his two years in the area. He used the Legislative Council as a forum to criticise his employers and was eventually dismissed in May 1949. Dr Thomas A Nowell arrived from England in July 1949 and spent a couple of years at Tennant Creek before specialising in pathology. It was at Tennant Creek that he met and married his wife Daphne who was a member of the nursing staff.

When Sister Marie Cahill and her friend Sister Beatrix Ryan arrived by Guinea Airways in August 1947 they were met by Dr Vic Webster. They had applied for Darwin Hospital and at the last minute were diverted to Tennant Creek supposedly for seven weeks. Sister Ryan stayed three years then married Danny Brooks and gave up nursing; Sister Cahill stayed eleven years. Matron Nellie M Jacobs, who had arrived in December 1945, was still there and remained until 1948. The hospital staff was small, there being just two other nursing staff, Sisters Joy Butler and Dorothy Marriott. The latter went to Alice Springs with her husband John Marriott.

Conditions in the hospital were primitive and continued so for many years. It was impossible to sterilise linen for use in the operating theatre and the theatre itself was just a part of a central hallway. Tennant Creek and Katherine Hospitals had been built without separate rooms for clean surgery. In the early 1950s a new midwifery ward was built. It was designed for airconditioning but finance ran out before the airconditioner was installed and it was not completed until January 1959.

Tennant Creek lacked reticulated water until 1963 when it was brought by pipes from a bore in the vicinity of Kelly Well, twelve miles (15 kilometres) south of Tennant Creek. Prior to that Mr Jack Ford had a contract to supply water which he brought by truck from a bore, seven miles (11 kilometres) north of Tennant Creek. The town was hot, dusty and almost treeless. One Aboriginal woman patient in the hospital summed it up when Sister Cahill tried to persuade her to wash, 'Water for drinkin' missus, not for washin'. Aborigines from arid areas had never had water to spare for washing; it was a new concept for most of them.

Doctors came and went. It was the time when many British doctors left their home country to escape the National Health Service. In Britain doctors were poor while dentists were earning big money. Australian dental graduates used Darwin as a place to earn enough money to pay their fares to Britain. One young doctor rolled the Tennant Creek ambulance and destroyed it. Some did good work but were not keen to stay under such primitive conditions. After a few changes in senior nursing staff, Marie Cahill was promoted as Matron in 1950, a position she held until 1958. In the meantime, in 1954 she married Mr Jack Meaney from the Department of Works.

Among the nursing staff in Matron Marie Cahill's time were Sisters Anne Clancy, Betty Spain, Elizabeth and Pauline Yandel, Joy Karmouche, Zelma Green, Betty Kleinig, Clair
Fitzgerald, Rene Carley and her twin sister Monica Carley (who married Eric Nicholson from Helen Springs station), Shiela Carr, Roma Allan, Anne Fenwick, Mrs Marion Meagher and Mrs Hilda Munckden. Sister Pat McDonald was there in Dr Webb's time before transferring to Alice Springs and later to Darwin to be in charge of the Childrens Ward(1).

Dr CB Eccles-Smith was in charge during much of 1952 followed by Dr Jack Sunderman in 1953. Dr Dick Webb arrived on 15 October 1953 and spent over two years there. He was accompanied by his wife Denise and their young family. Dr Webb had a yearning for Arnhem Land. He had heard much of the work of one of his relatives, Rev Theodore T Webb, at Milingimbi. Just a few days before departure from Melbourne by air he was advised that his appointment was Tennant Creek. Travel from Melbourne in a DC3 involved an overnight stop in Adelaide and a 6 am departure next morning. It was 2.30 pm on 15 October when they touched down in Tennant Creek and stepped out into dry heat of 110 degrees F (43.3 degrees C). The doctor's house was not empty so they were accommodated in the local hotel, a place where no one stayed from choice. In the middle of the night they were disturbed by an inebriate demanding 'move over Mary'. In spite of this the people of Tennant Creek made their new doctor most welcome.

As Dr Webb wrote later:

*The majority of buildings in the hospital grounds were of galvanised iron. The original hospital consisted of two 4-bed wards with wide verandahs containing further beds, making 20 beds in all*(2).

A concrete outpatients department, built under the supervision of Mr DD Smith of the Department of Works in Alice Springs in 1942, was the most sound building. The Aboriginal Ward of twelve beds was a wartime Sydney Williams hut. The doctor's residence contained a large lounge and dining room, a main bedroom and a kitchen and a bathroom in one corner of the verandah. The children's beds were scattered around the verandah. In the ceiling of the bedroom was an alarm to summon the doctor for emergencies; it was shattering and in deference to the doctor's family, the nursing staff agreed to walk the short distance and call out. Added to this were many false alarms when a white cockatoo given to the Webb children learned to call out, 'Are you there Dr Webb?'(3).

All lavatories were outside as there was no water for septic tanks. Red back spiders were prolific and had to be constantly removed from the toilet facilities. Large numbers were caught and despatched to the Commonwealth Serum Laboratories in Melbourne where researchers were attempting to develop an antivenin.

There was no laundry attached to the doctor's residence and Mrs Webb had to use the hospital laundry during the hot afternoons after the hospital laundring was completed. On her first venture into this area she found the hospital yardsman asleep on the laundry table, a practice he justified by the fact that he had a second job as a barman each evening.

As Tennant Creek Hospital did not have a pharmacist, radiographer or dentist, these aspects were filled by the doctor. A new X-ray machine had been installed in July 1953 to ensure regular chest X-rays for miners. In spite of the new machine

radiology was a problem ... due to the difficulty in developing films. The darkroom was the smallest and hottest room in the hospital and on some hot days the emulsion was taken right off the film. By developing X-rays in

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the evening and using ice to cool the developer, it was possible to produce readable films(4).

A radiographer was sent from Darwin to advise on ways to overcome the problems. It was during her visit that a message was received from the old Powell Creek repeater station that a well known personality, Wallaby (Waldemar) Holtze, had fallen and could not get up. One of the nursing staff accompanied the ambulance and advised by telephone that the patient appeared to have fractured the neck of his left femur. Dr Webb had already found a Smith-Peterson Pin, Kirschner wire and a drill among the surgical equipment. That day Dr Bert Welton from Alice Springs was visiting the Barkly Tablelands by air with Captain Harry Moss. They were diverted to Tennant Creek. Dr Welton gave the anaesthetic while Harry Moss and Matron Meaney applied traction and rotation to the leg. The operation was successful but 'Wallaby' Holtze, who was already over eighty years of age and had lived at Powell Creek for sixty or more years, retired in Darwin where there was a domiciliary nursing service.

Pharmacy averaged about twenty-four prescriptions per day all of which had to be prepared and dispensed by the doctor and nursing staff. All tinctures and syrups were supplied in glass demijohns and all powders for mixing came in bulk. Dr Webb mixed all his own ointments. A few years later the drug companies began dispensing medications in individual packs and bottles which greatly simplified the work of pharmacists. Bottles with corks were then displaced by plastic ware.

Dental visits were once or twice each year and in the meantime the doctor had to deal with emergencies. As elsewhere in that era, the doctor did veterinary work as requested but there were few dogs and no cats in Tennant Creek then.

The doctor at Tennant Creek was officially in charge of the health of residents on cattle properties on the Barkly Tablelands, but it would mean leaving the town without a doctor while surveys were carried out. Cattle stations along the Stuart Highway were visited occasionally. The main centre of population out of town was the Aboriginal settlement of Phillip Creek (230 people) and this was visited each fortnight. In 1956 the Phillip Creek people were moved to Warrabri (Ali Curung), south of Tennant Creek, where there was a more reliable supply of water. The hospital ambulance was frequently sent to Warrabri for emergency evacuations while less urgent cases were taken to hospital in the Warrabri settlement's truck.

Stations with telephones were in touch with Tennant Creek Hospital but others still relied on transceivers. In February 1955 the small station of Muckaty, eighty miles (129 kilometres) north of Tennant Creek, reported by radio to Alice Springs that several Aborigines had infected throats. Dr Welton answered the call and suspecting diphtheria he telephoned Dr Webb who promptly sent the ambulance to bring the patients to hospital. The diagnosis was confirmed and there followed a crash campaign to immunise the Aboriginal population. Dr Webb immunised the people at Phillip Creek and in 1956 Sister Kettle immunised everyone on the Barkly Tablelands north of the Barkly Highway. Triple Antigen was used to provide immunity to whooping cough and tetanus as well as diphtheria.

During October 1954 Dr Webb carried out a Mantoux survey for tuberculosis and diagnosed eight patients, seven white men and one Aboriginal. Five of the men were engaged in mining and two had associated silicosis. Dr Webb encouraged regular X-rays for all miners, but as there was then no legislation at that time for compulsory X-rays or for medical examinations, men who did not want to lose their jobs avoided the hospital.
The first legislation for silicosis was enacted in 1966 and anyone diagnosed with this condition was debarred from mining.

Dr Webb took a particular interest in trachoma (see Chapter 19 for more detail). He described 'bung eye' which is due to a fly bite and recommended that castor oil be applied to children's eyelids as a deterrent to flies. Once bitten the swelling and inflammation lasted several days. In a period of two and a half years he admitted eleven people with purulent ophthalmia caused by the Koch-weeks bacillus, which is a severe form of mucopurulent conjunctivitis(5).

Dr Webb established the first medical records for all Aborigines at Phillip Creek, for the cattle stations near the highway both north and south of Tennant Creek and for most centres on the Barkly Tablelands. As there were no nursing staff anywhere in the area apart from the hospital, these records were kept at the hospital. Sister Kettle used the records during her work at Phillip Creek from 20 July to 13 September 1955. Dr Webb was transferred to Alice Springs in January 1956 and when, in February 1956 Sister Kettle asked for the medical record cards for the Barkly Tablelands they could not be found. The loss included all records of immunisations. Sister Kettle was advised to make new records for the Tablelands and in November 1956, Dr JC Hargrave made new records for the people at Warrabri who had been transferred from Phillip Creek.

Dr Joe Robinson of Vegemite fame replaced Dr Webb at Tennant Creek and was there just long enough to upset all the mothers over how their babies should be fed. There was no separate clinic for infant health work but Sister Clair Fitzgerald conducted a clinic in the outpatients department each Wednesday afternoon.

From time to time there were interesting people among the domestic and orderly staff. Miss Kit Fisher was the cook for many years in a kitchen with a huge wood fire stove. It was hot enough without the stove but Miss Fisher was an excellent cook who ruled her own little kingdom and banished a union representative who came seeking complaints. Joe and Edna Ziggenbine, the children of a famous droving family, were both on the staff. Edna was a warden and her brother as a warden and yardman. Joe had never been to school but promptly set out to learn to read and write. He completed a St Johns Ambulance course and was for many years the First Aid Officer at Peko mines. A most valued member of the staff was Miss Shirley Gallagher, the hospital secretary for many years. Her patience in handling the many European migrants who had little understanding of English was invaluable and saved the nursing staff much time.

**Devastating Fire In Tennant Creek**

On the evening of 3 December 1956 the small township of Tennant Creek was shattered by fire and explosions. It started in the back of AF Campbell & Co's shop in the main street. The store contained explosives used in mining and some drums of fuel along with everything else needed by the local citizens. A man living in the back of the store plugged in and switched on an electric jug while he went to wash himself. He returned to find the walls and wiring on fire and promptly sounded the alarm. Police Sergeant Jim Mannion was one of the first to reach the scene and he promptly checked inside the building to make sure no one was inside. The store was very close to houses and to the underground fuel tanks of an adjoining garage. As Tennant Creek did not have reticulated water, the few water carriers were brought into action but each in turn had to withdraw to refill at the new dam in Stuart Street. In view of the danger from fuel and explosives it seems astounding that the area was not cleared of people and let burn. Instead, men tried to control the blaze and a bulldozer was brought in to push the walls of the burning building away from adjoining houses(6). There were three large explosions and the cost in terms of
life and injured men was high. All trained nurses living in Tennant Creek volunteered to assist at the hospital where Dr James E Lyttle and the nursing staff were working hard to save lives and to minimise the damage. Several men had been hit by flying debris. There was a shortage of intravenous equipment and emergency blood supplies which made it hard to save lives. Many townspeople came of their own volition to clean the floors, to wash linen and to do anything else within their skills; this help was invaluable.

About half an hour after the fire started a Trans Australia Airlines DC4 landed at the airport. This passenger aircraft was several hours behind schedule. With the passing of time it is not clear whether the aircraft was scheduled to land or whether the pilot was contacted by radio and diverted to Tennant Creek. The passengers were off loaded and all seats removed to make way for stretchers. An RAAF Dakota was later diverted to pick up the seats and remaining passengers. The ten most seriously injured men were loaded aboard accompanied by Dr Lyttle and Sister Clair Fitzgerald. The aircraft crew and hostesses assisted wherever they were required. One patient, with abdominal wounds caused by blast, died during the flight.

On arrival in Darwin at 1.30 am three ambulances were standing by along with other suitable transport. Dr Peter Blaxland and the theatre staff had been forewarned and were prepared. There were abdominal wounds, three fractured legs, a fractured pelvis and multiple hand injuries from blast, fire and lacerations(7). Back in Tennant Creek there were still a further twenty patients with less serious injuries with which the nursing staff had to cope alone. On the morning of 4 December, with no sleep for anyone, the town of Tennant Creek was in a state of shock. Sergeant Jim Mannion was honoured for his service that night.

When Matron Meaney resigned in 1958 to go into business with her husband, she was replaced by a member of the staff, Matron Joy Karmouche. When she resigned on 21 October 1959, Sister Helen Clues, who had been in the Northern Territory about three months, filled the position until replaced by Matron Kelly on 1 September 1960. From there on there were frequent changes and it is difficult to determine why except that the number attending the hospital was increasing without an increase in staff or much improvement in facilities.

Dr John Boyd from Edinburgh, Scotland, was appointed as Medical Superintendent early in 1961 and he spent over five years in Tennant Creek. During this time a new airconditioned twelve bed unit was built and opened by the Director General, Major General WD Refshauge, on 18 November 1962(8). Following the departure of Dr Boyd in 1966 there was a period of great instability among the doctors. Dr Gordon FE White from Canberra was the first to replace him but he soon transferred to Alice Springs. The following year saw eleven different doctors in twelve months and 180 per cent turnover in nursing staff. Some very inexperienced young men rotated as hospital secretary and this did not help. Sister Doris Calderwood from Batchelor clinic went to Tennant Creek as Matron but she did not stay long. Sister Peggy Maher relieved as Matron on several occasions before going to the newly opened clinic at Alyangula. Sister Phyllis Usher, who arrived early in 1966, filled the role of Matron a little longer than most. It was an era of marked discontent and restlessness. Even the local population who had once been strongly independent had become more demanding.

For many years the people at Tennant Creek asked for a full-time dentist but had to make do with biannual visits. As described in Chapter 29 there was no adequate facility in which to work at Tennant Creek and the summer heat in the Australian Inland Mission hall was intolerable. It was not a question of whether the population warranted a dentist

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but how long one would stay there. Mr Graham Whitelaw was there for a month at the end of 1974 until the arrival of Mr John Plummer as the first permanent dentist.

A second doctor was appointed in 1970, but the following year the Medical Superintendent, Mr WE Lauder, wrote that 'the working hours for medical staff are unduly long, one hundred hours (per week) for the Medical Superintendent and about sixty-five hours for the Medical Officer' (9).

Community Health work in the Tennant Creek area was started by Sister W Wright in 1971 when the Infant Health work was taken over from the hospital. Sister Jane Biddulph was there for a while and started mobile clinic work to outlying Aboriginal communities.

Tennant Creek Hospital had always been most inadequate and it became more so as the population increased. A new and modern hospital was completed in 1978 and was opened by Ralph Hunt, Minister for Health, on 28 June 1978. Since then the concrete extension to the original hospital, built in 1942, has become the repository for historical memorabilia. Many people have made Tennant Creek their home and the town now has most modern facilities, a far cry from earlier days.

Endnotes

3 ...
4 ...
6 H Tuxworth, Tennant Creek: yesterday and today, 1978.
7 NT News, 4 Dec 1956.
8 Health 12, no 1, 1962.
9 Tennant Creek Hospital Annual Report 1971-72.
Sister Marie Cahill (Mrs Meaney) arrived in Tennant Creek in 1947 and was hospital Matron 1950-1958 (courtesy: M Meaney)

Tennant Creek Hospital 1954. This front section was added in 1942 (photo: RC Webb)

A rear view of Tennant Creek Hospital in December 1967 shows a large new ward opened in November 1962 and other extensions (Dept of Health)
This new hospital at Tennant Creek was opened by Hon Ralph Hunt, Minister for Health on 28 June 1978 (courtesy: Tennant Creek Hospital)
CHAPTER TWENTY-SEVEN

TRAINING AND EMPLOYMENT OF ABORIGINES

In the postwar period the World Health Organization (WHO) moved forward with plans to eliminate malnutrition and many of the major epidemic diseases. To achieve this it was necessary to train indigenous health workers. Training programs were developed to meet a country's health needs taking into consideration the level of knowledge and basic education available in the community at that time. It was intended that as schooling improved and expanded, the standard of all training courses would be upgraded. Australia was a donor, rather than a recipient country, and apart from the occasional doctor attending a conference overseas there was no participation in any WHO conferences or workshops on the training of people to participate in their own health services. The Northern Territory and most of outback Australia with its Aboriginal communities were untouched by what was happening elsewhere in the world. Australians working in Papua New Guinea were involved and excellent training programs were developed in that country. Nursing staff in Australia working with the church missions heard what their peers were doing in Papua New Guinea and put forward proposals, some of which were considered by the Welfare Branch.

In the Northern Territory all people of mixed race were granted full citizenship in 1953. The Welfare Branch was designed to cater for the needs of all sections of the community hence Aborigines were classified as wards of the State. Mixed race stockmen on cattle stations were paid award wages while the Aborigines were on a lower award. In the hospitals all mixed race people were fully integrated in the wards for Europeans and others. It was policy to employ mixed race people so that immediately postwar, and for a number of years later, most of the domestic staff in the four main hospitals were of mixed race. Some of these people gave a lifetime of service. A few of those with more advanced education became clerical staff. The few whose level of education permitted their acceptance into Registered Nurse courses did their training in either Victoria or South Australia; none were accepted to train in Darwin prior to the 1970s.

Aborigines presented a different situation. With the exception of those on five church missions, Roper River, Bathurst Island, Goulburn Island, Milingimbi and Hermannsburg, very few others had received any education. The war had interrupted the schools when the few women teachers had been evacuated. There were thousands of illiterate people who could not communicate in English.

All four hospitals employed Aboriginal staff up until about 1960. East Arm Hospital employed patients as Health Workers from the time it opened until the day it closed. It is difficult to determine why employment in the other hospitals ceased unless it was due to union pressure for equal pay. The highest rate of pay was for two male orderlies. One was a well educated young man, Davis Daniels, from Roper River. Two women, Shiela and Rita White, classified as Nursing Assistants were next on the pay scale while nine others worked as cleaners, cooks and yardsmen. On 31 October 1958 there were twelve employed jointly between Bagot and Darwin Hospital.

Katherine Hospital and Tennant Creek Hospital each employed five Aborigines as Nursing Assistants, cleaners and yardsmen. The turnover of professional staff at these centres did not inspire Aborigines to long-term service and there were many changes in
the names on the pay list. Alice Springs Hospital usually had about ten Aboriginal staff most of whom worked in the Aboriginal Ward. It was policy to employ Aborigines but as mentioned earlier something changed.

Hygiene Workers

In 1951 Dr Cecil Cook wrote from Canberra recommending the training of Hygiene Workers who would not only be responsible for the maintenance of hygiene on the missions and settlements, but would teach people the reason why they should use lavatories. Dr Cook prepared a four weeks course but it was far too ambitious with lessons on smallpox, typhus, amoebiasis, ectoparasites, epidemiology and housing standards. In May 1954 the Health Inspectors, under the guidance of Mr Lyle M Tivendale produced a much more realistic program covering waste disposal, fly breeding and mosquito control. Most of the first group of fourteen participants could not read or write and their knowledge of English was limited. Dr Cook had forgotten that no schools were started, or mission schools subsidised, during his time as Chief Protector of Aborigines.

The first Hygiene School was conducted at Bagot by the Health Inspectors LM Tivendale and Arthur Marsh during May 1952. In spite of having no separate accommodation or adequate dining facilities to use for demonstration purposes, Mr Tivendale considered the course was successful. He was anxious to ensure that what the men had been taught would be appreciated by the Superintendents on missions and settlements. Practical demonstrations were more readily understood than classroom teaching. Then in 1953 a workshop was conducted for the Superintendents so they could support the Hygiene Workers.

On 15 December 1954 Mr Giese wrote to the Director of Health requesting a school be established in Alice Springs. Dr Bert Welton and Mr EC Evans from the Welfare Branch organised the school at the Bungalow during January 1955. It is not clear who taught this first group as there was no Health Inspector based at Alice Springs until the appointment of Mr CG Rider in 1961. He then conducted regular courses and took his trainees to Warrabri on one occasion and to Papunya on another. Later, in 1963, when Mr RF Humphreys was appointed, he taught most of his classes at Amoonguna.

In 1966 Mr Rider was in charge of training at Alice Springs while Mr Jim Sheppard conducted the courses in Darwin. Mr Rider developed a more advanced course for men who had completed primary school education. It was planned as a one year course that would bring the students to a standard where they could be responsible for the sanitation of their own communities. Dr WA Langsford, as Director of Health, did not allow this course to be introduced. It would have upgraded the Hygiene Workers to a higher salary range in line with that being paid to other Aboriginal staff. The Hygiene Workers were being left behind financially and were losing heart and leaving the work. Their role in the community had no status unless it was broadened and upgraded.

Health Education

Mr Phillip Roberts (Wodjari-Wodjari), who had earlier worked with Drs Langsford and Rayment, was sent to a WHO training school in Noumea on 1 July 1957 for two months. Phillip Roberts had completed six years of basic schooling and his knowledge of English was excellent. The training course was in health education techniques. Immediately on his return he accompanied Dr John Hargrave during the initial medical survey of the
people at Maningrida and was joined by another trainee Aboriginal man, Nabilya, from Groote Eylandt.

To be truly effective a health teacher needs to be seen to be providing care for the people and not just talking. Phillip Roberts, already experienced in some aspects of medical work, was soon taught more by Dr Hargrave. He became skilled in cleaning and dressing the many extensive ulcers of the leprosy patients and he could also operate the transceiver radio, all of which impressed the local people. Although out of his own ancestral country, Phillip Roberts was well accepted and was able to sit with the men around their camp fires and feed information into the community. He had no posters; he drew his pictures on the ground as is customary among Aborigines. Later, he was used in other situations to work among Aboriginal groups and to teach them at the same time. His work was so valuable that he was appointed to a new position in Canberra to advise the Government on the needs of Aborigines. His wife was desperately lonely in Canberra and refused to stay there. Phillip Roberts was not out of his depth in Canberra but he was out of his own social environment and it took a heavy toll on his health.

Aboriginal Nursing Assistants

The training of Aboriginal nursing assistants was started by the Registered Nurses working on the church missions. Sister Marita Scullion, who served at Bathurst Island Mission for fourteen years, realised she could not cope without the help of Aboriginal staff. Several of the women trained on the job by Sister Marita remained on the hospital staff many years. Later, Sister Marita trained other women at Port Keats. There was no set syllabus of training. Each nursing Sister taught and delegated to meet the needs of their own mission. When approached about the needs of the Catholic missions, Bishop JP O'Loughlin stated that the training provided by the Sisters was adequate.

Sister Jessie Smith at Milingimbi started on the job training and some of the Aboriginal women trained by her gave many years of service. Elsewhere, nursing staff had heard from their peers in Papua New Guinea of the courses introduced there, namely, a Maternal and Child Health course, then the Territorial Nurse course for young women with up to six years of basic schooling. The Registered Nurse course was introduced in Papua New Guinea as educational levels were raised. Sister Joy Kendall at Roper River Mission wrote to both the Department of Health and to the Welfare Branch urging the establishment of formal training and Mr Harry Giese was keen to introduce a course that could receive recognition.

A young Malak-Malak woman from Bagot, Shiela White, was recommended for some training in Darwin Hospital. Although she was well received by the staff, Sister BE Cook, the tutor before Sister Peg Downer, expressed the opinion that, 'She obviously cannot be trained to a degree where she could be made responsible in any way for the care of the sick'(1). That was in October 1956. Both Shiela White, her sister Rita and brother John White had been educated at Bagot where Mr Ernest Tambling was the teacher. All three gave many years of service in health work. It was, therefore, demoralising to tell them there was no training course for them.

In February 1958, Freda from Roper River Mission, another well educated young woman, spent time gaining experience in Darwin Hospital. Matron Lee Steere was scathing, but then she did not want a Registered Nurse course either. There was always a degree of resistance from the hospital but the Welfare Branch was most keen to institute training courses.
On 13 May 1958 Mr Giese met with Dr AH Humphry, Dr Dick Webb and Matron Downer from Darwin Hospital to discuss the possibility of a twelve months course based on Darwin Hospital(2). Matron Downer wanted an extra tutor appointed specifically for the job. At that time the one nurse tutor was also Home Sister and Assistant Matron and it took time to convince the Public Service Board of the need for change.

On 16 April 1959 there was a further conference in Darwin in which Dr WFH Crick from Canberra participated. Mr Edwin Milliken represented the Welfare Branch. Dr Crick stressed that any course should be not less than nine to twelve months to be effective. By July 1959 the Welfare Branch had acquired a large old tropical style house near the hospital and established a Central Training Establishment. There were still differing points of view and Matron Downer insisted she needed three nursing tutors, two for the Registered Nurse course and one for the Aboriginal Nursing Assistants. The stumbling block was the Public Service Board who suggested that the Aborigines be classified as hospital staff. This would mean a reduction in student nurse numbers at a time when Matron Downer was building up the School of Nursing. There seemed no alternative but to keep the Aborigines as Welfare Branch trainees who would attend the hospital for experience.

The Welfare Branch was granted a position for a nurse tutor and this was filled by an English woman, Sister Margaret Ray. Tutorials were given separately from the ward experience. By 1962 the Public Service Board had transferred the position of nurse tutor to the Darwin Hospital where Sister Lily Warne did the teaching. Sister Warne had earlier taught student nurses in Fiji and she expected a similar standard from the Aborigines; she was disappointed. When Sister Warne departed for Melbourne in January 1963 to undertake the Diploma in Nursing Education, the tutor's position was absorbed into the School of Nursing and its origin was forgotten.

Mr Giese visited Papua New Guinea and returned with a new burst of enthusiasm for training courses. Australians in that country were determined to have indigenous people trained as doctors and registered nurses and had engaged extra tutorial staff to overcome problems with English and any difficulties encountered in the calculation of drug dosages. Mr Giese recommended extra tuition. Dr Langsford, by then the Acting Director of Health, said to his headquarters staff, 'when Harry educates them we will train them'. When writing to Canberra he added that

it is not agreed that subjects of a general academic nature should be interspersed with nursing training. This office (himself only) considers that the elementary education should be completed prior to induction at the hospital(3).

While in Papua New Guinea Mr Giese had met men classified as Medical Assistants (later named Health Extension Officers). These men had undertaken a course equivalent to Registered Nurse level but with an orientation to diagnostic techniques and to community health. They worked in the many health centres scattered across that country. Keen young Aboriginal men were seeking similar training and Mr Giese put a proposal to the Department of Health and to Mr Paul Hasluck, the relevant Minister. Dr Peter White, the Medical Superintendent of Darwin Hospital, was asked to comment and in consultation with Sister Llorabel Reynolds replied that he saw their role as 'cleaning, running messages, carrying bed pans and lifting patients'. In all fairness these people very likely had no concept of the proposed training. Dr Langsford advised the Director General in Canberra that:
Unfortunately facilities for such training are not available at Darwin Hospital and it does not appear possible to provide them in the immediate future. It is our view therefore that the institution of such a course is at present impracticable(4).

He would review the proposal later. At the same time as this, Dr Langsford was approving the appointment of unqualified white women to work as Nursing Assistants in the hospitals on Welfare Settlements.

Where training was concerned Dr Langsford had his own criteria: standards should not be lowered; all training should be open to all ethnic groups; all training should have reciprocity in other states. This policy effectively ensured no meaningful training for Aborigines. However Mr Giese was urging training and the Director of Health had to be seen to cooperate.

The Welfare Branch continued to bring Aborigines to Darwin in groups of ten or twelve. They lived at the Central Training Establishment and gained experience in the hospital but the courses became shorter and the experience progressively less. Many people wrote much and Matron Brennan was right when, in February 1966, she suggested to Dr Langsford that a conference be held between hospital and field staff to clarify the type of training required. As she stated:

The inadequacies of the present six months course is keenly appreciated and particularly so when Darwin Hospital wards are overcrowded, establishment is below strength and the education of nursing assistants is of necessity diminished. The doubt arises as to whether we are being honest about conducting these courses and whether to do the best that we are able is sufficient(5).

No conference was ever permitted between field staff and hospital staff, nor were the field staff permitted a round table meeting with Welfare Branch staff to clarify the many misunderstandings. Dr Langsford insisted that these were delicate matters of negotiation that required his personal skill in handling them.

There was much frustration among staff who realised that unless the Aborigines could see an achievable goal they would abandon the struggle to study. Mr Phillip Roberts, who had travelled overseas and observed training elsewhere, commented to the Northern Territory News on 17 August 1968 that all that was being done was 'bringing them to Darwin, scraping the dust off them and sending them back to the dust without proper training'. Dr Langsford replied that a qualified Tutor Sister prepared their program(6).

About 1968 an Aboriginal woman, Mercia Roberts, who had done a Maternal and Child Health course in Port Moresby, returned to Darwin. As an infant, Mercia, the only sister of Phillip Roberts, had been sent to Channel Island with her mother. In 1940 when Dr Kirkland removed all healthy children from the island, Mercia was sent to Bathurst Island instead of returning to the care of her father and brothers at Roper River Mission. As she grew up she became a nun and spent twelve years in Papua New Guinea. Mercia developed a great longing to see her family again. During an interview with Dr Langsford she was encouraged to believe she could undertake Registered Nurse training at Darwin Hospital and she left the religious Order with this goal in mind. The Maternal and Child Health certificate could not be registered by the Nurses Board and as her basic education did not meet the required standard for Registered Nurse training she could not attempt that course. At a later date she did the Enrolled Nurse (Nurse Aide) course at Alice Springs, received a certificate and continued to work in various roles at Alice Springs.
In March 1970 there were encouraging changes in the training of Nursing Assistants in Darwin. Essington House on Myilly Point was allocated for the training of Aborigines and sister June Ashbury, who had earlier worked at Angurugu on Groote Eylandt, was appointed as the tutor. The Welfare Branch continued to recruit the participants. The trainees were given one preliminary week of teaching then six months of experience in paediatric, medical and midwifery wards plus visits to several other departments. Their off duty time seems to have been largely without supervision and it was this aspect that led to arguments. All training was officially stopped by Dr Langsford on 9 October 1972, a month before his departure. However, it was Sister June Ashbury who stated that Darwin Hospital was not a suitable place for them to train. She considered the experience they were obtaining was not relevant to their work at home.

Health Worker training evolved next but that is outside the era covered by this history.

Training at East Arm Hospital

The most successful training of Aboriginal health personnel was undertaken by Dr John Hargrave and the Catholic Sisters at East Arm hospital. This is described in Chapter 17. The trainees undertook an initial course of three months but it was too short. Subsequent courses were of ten months in which classroom teaching was closely knit with practical experience. Herein lay the secret of success in teaching people who could not cope with advanced professional courses. Teaching must be put into practice and consolidated before moving on to new areas of experience. The Aborigines who undertook this training course developed a sense of responsibility for the care of leprosy patients in their home areas. They were also taught how to recognise the disease in others and to bring them to the attention of the doctor.

When Health Worker training was started, the specialised training was stopped. This was a grievous mistake. The new training program was idealistic and aimed to train staff on a broad plane in a short time. The lower the standard of basic education, the narrower and more specialised a course needs to be to achieve any degree of proficiency.

From 1961 onwards, throughout the campaign to train Aborigines to staff their own health services, the Welfare Branch, with the approval of Dr Langsford, progressively employed more unqualified white women as nursing assistants on the Welfare Settlements. This was not a solution but the practice continued until the settlement hospitals were taken over by the Department of Health on 1 January 1973.

By the 1980s many Aboriginal Health Workers were providing the health service for their own people supported by Registered Nurses who visit on a weekly basis. Most of the larger townships have a doctor resident, while in others a doctor visits each week. Training courses for Aborigines have continued to be controversial - a practical course versus a more academic course and so it continues.

Endnotes

1 Dept Health File 59/1213, Darwin.
2 Dept Health File 100-2-4, Darwin.
During the 1960s Aboriginal Nursing Assistants gained valuable experience in Darwin Hospital. Janet from Mainoru in October 1966 (photo: J Dewey)
CHAPTER TWENTY-EIGHT

COMMUNITY HEALTH SERVICES IN DARWIN

Schools Medical Service

With the return of families to Darwin in 1946 schools were promptly re-established. Children came from interstate and included the mixed race children who returned from Balaklava, South Australia. It was not long before people were asking for a schools medical service such as existed in other States. For the first few years there were no doctors to spare. When Dr Charles J Simpson, a 1910 graduate, arrived in July 1949, Dr FL Gunson asked him to examine school children. With the help of a Sister from the hospital, Dr Simpson examined over four hundred children at the local public school before his departure in September. Dr AH Humphry then examined the remaining one hundred and forty public school children before examining those at the Catholic Convent School(1). In 1952 Dr Humphry carried out a Mantoux survey among the Darwin school children and found a high incidence of positive reactors among the mixed race children (Chapter 19).

Dr Helen M Phillipps was appointed as the first Schools Medical Officer and arrived early in October 1954. She had graduated from Sydney University in 1942 and then married a ship’s captain, Thomas Milner. At a later date Captain Milner was the Harbour Master in Darwin. Dr Phillipps, who always used her maiden name, came to Darwin from the Gilbert and Ellice Islands (Kiribati and Tuvalu) in October 1954. As her husband was still at sea she lived in a ground level flat under the Sisters Home in Lambell House.

Dr Phillipps had studied school medical services in other States and introduced an identical service here. However, the only schools that she covered were those using the South Australian curriculum; this included the two schools for mixed race children at Garden Point and on Croker Island. Aborigines attending these schools were included but the schools conducted by the Welfare Branch where most Aborigines lived were omitted. In 1955 Dr Humphry asked her to examine the children in the school at Bagot but it is not certain that this was ever done.

Dr Phillipps examined the children in all the so called white schools and preschools in the Northern Territory and these steadily increased in number and students. In the 1950s she was frequently diverted to relieve in the hospital or at headquarters. By the 1960s her work had expanded as she was officially in charge of the infant welfare clinics, immunisation clinics, home nursing in Darwin, and in the provision of special clinics for the Commonwealth Acoustics Laboratory staff who visited three times each year. These extra tasks were time consuming and further restricted her work to the environs of Darwin. It was the Survey Sisters who screened the Aboriginal children and, through an Aerial Medical Service doctor, referred children with hearing loss to the special clinics. Dr Phillipps was then officially responsible for the maintenance of the many hearing aids but nursing staff did the actual follow up work.

When Dr Anne Urban (nee Evans) was appointed as Schools Medical Officer for Alice Springs and the Southern Region in 1966, she took over all aspects of the work there and expanded her activities to the Aboriginal Schools (Chapter 24).
Dr Phillipps became much involved in the welfare of handicapped children and in 1970 she was granted a WHO scholarship to study child development and assessment in London. She helped to develop the Slow Learners Association and was also a member of the Child Welfare Council.

In 1965 Sister Heather Graham transferred from the Survey Sisters team to be the first Schools Sister assisting Dr Phillipps; this was long overdue. Earlier, in 1962, Mr EJ Tonkin from the Commonwealth Acoustics Laboratory visited Darwin and asked for the Survey Sisters to be taught to use audiometers to screen the hearing of Aboriginal children. They were also taught more about eyesight testing as well to ensure all children attending school were not handicapped by either hearing loss or inability to see a blackboard or read a book. These findings were referred to Dr Phillipps. By 1965, with increased responsibilities, Dr Pauline Wilson was asked to help with the school medical work for a time. However, Dr Wilson had nine children of her own and could not leave Darwin for long periods.

During 1967 Dr Phillipps was diverted to organise and supervise the SABIN campaign to eradicate poliomyelitis. Then she was asked to relieve as Medical Superintendent at the hospital over Christmas and New Year. Dr Dolly Roberts from Malaysia was appointed as the second schools doctor in June 1968, but she was interested in community health on a broader plane and did not remain long. Dr Phillipps was then sent to a symposium on noise in industry and was further diverted from her work as the Schools Medical Officer.

For Dr Helen Phillipps, time was running out. An earlier health problem flared up again and she died on 14 May 1973 at the age of 54 years. She was greatly missed in Darwin and is particularly remembered for her leading role in the provision of care and facilities for handicapped or otherwise underprivileged children.

**Infant Health Service**

There was an early demand from young mothers in Darwin for an infant health service in line with that provided in other States. In addition to service wives and other women from interstate, there was a large community of mixed race women residing at Winnellie, Parap and Stuart Park. Dr Stephen Watsford took early action to reactivate the service that had ceased with the evacuation of women and children in December 1941 and Sister Dora Elizabeth Burchill, an ex-army nurse from Victoria, was appointed in 1953.

An old house in Cavenagh Street was adapted as an infant health clinic and served that purpose for several years. Sister Burchill had firm ideas on how babies should be fed and while there were no chemists shops to sell proprietary lines, most mothers had to conform to the exclusive use of Sunshine full cream milk. The first chemist in 1954 was firmly told what was good for babies and what he should stock but he quietly catered for the expressed needs of the mothers. Many women had their babies weighed at the clinic then went to the chemist and his wife for further advice. This continued for close on four years with many verbal complaints to the Director of Health. Sister Churchill had to use a car to attend a clinic at the RAAF base, the QANTAS depot at Berrimah and at Winnellie. She was a nervous driver who always drove with the hand brake on, a practice that strained relations between the transport officer and the mechanics in the Department of Works and Housing who serviced the vehicles.

Sister Barbara J Howells from Perth took over the conduct of the infant health clinic in March 1957 and during her time in Darwin, the service was transformed and greatly expanded. Sister Howells assessed community needs to ensure a weekly clinic in the most needy areas. She sought community involvement in obtaining space in existing buildings.
in which to hold clinics and then put her proposals to the Director of Health who usually concurred. Sister Howells ensured that all mothers understood the need for immunisations and achieved almost one hundred per cent coverage of the infants in the Darwin area. Dr Helen Phillipps was delegated overall responsibility for the oversight of the infant health clinics but these presented few problems for her. Sister Howells remained in Darwin two and a half years before returning home to Perth.

An English nurse, Sister Margaret Edmunds, took over in charge of the infant health work in June 1959. She was joined in February 1960 by another English nurse, Sister Louise Liddell. By 1960 they were providing a service from eight sites, including the RAAF base and once a week at Batchelor and other centres along the way. Bagot was not included at that time but it was added soon afterwards. During 1962-1963 most of the mixed race people from Winnellie were rehoused at Rapid Creek. No one regretted seeing the end of the iron huts at Winnellie where life had been far from ideal for children.

In 1961 Sister Jane C Crozier replaced Sister Liddell and as Mrs Shaw she continued in this work until her untimely death in January 1984. As Darwin lacked adequate public transport, the number of home visits doubled in the early 1960s. This was most necessary to provide teaching and support for the mothers at Rapid Creek who were adjusting to a more adequate home life and housekeeping for the first time. Gastroenteritis was a common health problem among babies and called for more than the usual number of home visits to ensure safe standards of hygiene in the preparation of baby foods.

When Dr Alan Walker was appointed as the first paediatrician in 1967, he conducted a monthly clinic under the auspices of the Infant Health service to examine and advise on infants with special needs. This met a long overdue need. By this time there were four Sisters staffing these clinics and the work had expanded to include health teaching for pregnant women as well as both prenatal and postnatal exercises.

Infant health work was eventually integrated into the broader concept of community health. It has always been and still remains a service much appreciated by mothers and especially so by young mothers isolated from their families interstate.

**District or Home Nursing**

As mentioned earlier in Chapter 15, Sister Rosslyn Gordon was employed as an industrial nurse by the Department of Works and Housing during the early postwar period. She conducted a town clinic to provide dressings, injections and medication as ordered by a doctor. This allowed the men to proceed with their work instead of waiting in a queue at the hospital. She also cared for those off work with minor illnesses. The need for the service gradually diminished and in 1955 the position for a Sister was taken over by the Department of Health. At that time Sister Gordon lived in the Sisters Home and staffed a town clinic in McLachlan Street.

In 1957 the Commonwealth Government undertook to finance District Nursing Services in all States, primarily to reduce the demand for hospital beds. As many people as practical would be cared for in their own homes. The Northern Territory did not have a separate organisation to provide the service and did not receive the extra funding. Principal Matron Florence Peterson in Canberra was responsible for the development of a government run home nursing service in that city and she recommended a similar service in Darwin. It was officially implemented in 1959 but with only one nurse. Sister Gordon worked long hours and did much travelling to provide such care as insulin injections before people had their breakfast. Later, some were taught to administer their own insulin.

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Before coming to Darwin Sister Gordon had acquired a qualification in nursing tuberculosis patients and in 1962 she was transferred to Alice Springs Hospital for a time to supervise the care of a very crowded ward. Later, when she returned to Darwin, she became responsible for the clinic providing medical examinations for prospective government employees and vaccinations against smallpox, yellow fever and typhoid for travellers proceeding overseas. She continued in this role until her retirement in October 1977.

Sister Irene Hobster, previously the Assistant Matron in Darwin Hospital, was asked to develop the Home Nursing Service. She had an English qualification in District Nursing and introduced a broader approach to the work. Patients were referred from both the hospital and the private doctors and by 1964 there were three Sisters all operating from the Peel Street Clinic. Sister Grace Hodge, previously a theatre Sister, had married and she transferred into the home nursing service, a type of work favoured by married women.

By the mid-1960s, with an increasing population in Darwin and pressure for more beds in Darwin Hospital, Principal Matron Isobel Copley in Canberra recommended a further expansion of home nursing that had already proved so successful in Canberra.

On 8 May 1966 Sister Joy Fenwick became the senior Sister in charge of home nursing. There were then four Sisters, two of whom, Sisters Brenda Murtaugh and Myrna Kaiser, remained with the team for several years(2). Dr Helen Phillipps was overall in charge of the Peel Street clinic but she was seldom involved as hospital doctors ordered patient treatment and Sister Fenwick allocated the workload. On top of home nursing duties the Sisters were involved in the expanded immunisation clinics at both Peel Street and, more recently at Nightcliff. At this time also, daily visits to the gaol were added to the service to provide care prescribed by a doctor. On top of that, some leprosy and tuberculosis patients on domiciliary care were found to be in the gaol.

From her earlier work with Aboriginal patients in Ward 7 of Darwin Hospital Sister Fenwick was very much aware of the needs of Aborigines. She asked for and was granted more staff to extend the service as far as the '16 mile' (25 kilometres) camp and to other groups who elected to live away from Bagot. The work undertaken began to develop along the lines of a community health service and was no longer restricted to patients referred by doctors.

In 1970 the Department of Health leased attractive and convenient premises in the Parap area and the staff was expanded to seven Sisters. By 1972, with the development of the Northern suburbs, a privately owned building in Bamboo Street, Nightcliff, was leased as a second base to reduce travelling time for the staff. At this time a charge of fifty cents was introduced for each home visit authorised by a doctor.

On 5 December 1974 the service was reclassified as a Community Health Nursing Service with four clinics at Peel Street, Nightcliff, Dripstone and Berrimah. On Christmas morning 1974, Cyclone Tracy destroyed the Nightcliff clinic but the staff were resourceful and in conjunction with some of the private doctors, they continued to provide an essential service.

It is difficult to measure the impact of the Community Health Nursing Service or its contribution to health teaching. However, it has become obvious that the Royal Darwin Hospital, built at Casuarina as a second hospital, coped for several years as the only hospital in Darwin. Home nursing has permitted the early discharge of patients and has also greatly reduced the need for admission. This service should remain sufficiently flexible to allow both medical and nursing staff to use their initiative to prevent problems
in their infancy and raise the standard of health in the whole community. More people are retiring in Darwin and a well run community health service can help these people to remain independent and away from institutions.

Endnotes

1 Northern Standard, 9 Sept 1949.
Sister Jane Crosier worked with the infant health service in Darwin from 1961 until her death January 1984 (Dept of Health).

Sister Barbara Howells greatly expanded the infant health service in Darwin between March 1957-June 1959 (Dept of Health).

Dr Wendy O'Sullivan, Sister Gail Grimes and Adam Lowe beside Department of Health offices in earlier Court House, Esplanade Darwin in 1969 (Dept of Health).
Department of Health headquarters, Esplanade Darwin 1955-73. It was two home sites distant from BAT (Lyons Cottage). This had been the Judge’s home next to the Law Courts (Dept of Health).

Dr Hargrave’s leprosy clinic. Previously the Judge’s rooms in the Law Courts, Esplanade Darwin (Dept of health).
CHAPTER TWENTY-NINE

THE DENTAL SERVICE

Legislation for the registration of dentists was introduced in 1935 with an annual fee of £1. The few dentists who ventured into the north were all in private practice.

One writer reviewing the dental service has stated that Mr Robert H Bowman was the first dentist in Darwin about 1930 or earlier. He commenced work in his own home but then acquired rooms for a surgery in Smith Street(1). At the time of registration his address was given as Tennant Creek. Mr Frank H Gribble-Dunn opened a second dental surgery late in 1932 but how long these men remained is not certain.

Mr Robert W Boody came to Darwin in August 1936 and Sister Dorothy Black recalls this red headed dentist sailing to Bathurst Island Mission (Nguiu) in the same mission boat as herself in October 1941. He also tended patients on Channel Island. Mr Boody appointed a qualified dental technician but he left after a short time. He then recruited a local lad, Dolphin Cubillo, as an apprentice. Dolphin Cubillo completed his apprenticeship during the war and gave continuous service as a dental technician with the Department of Health.

Once the railway reached Alice Springs in late 1929, the occasional dentist paid a visit. Two dentists were registered late in 1937, Mr John S Holt and Mr Edward A Mummery, but the latter died at Alice Springs in 1939. Mr John Charles Homewood registered in May 1938. He had earlier been practising in Calcutta. During the war he served with the armed forces but he did return to Darwin again. Other names appear in the register but some may have been with the armed services. Like the Medical Register, the Dental Register lapsed during the war.

The only dentists in the Northern Territory during the war were with the armed services. The Army catered for the needs of naval personnel in Darwin but the RAAF, with inland bases, employed its own dentists. The Northern Territory was divided into 7 Military District in the north and 4 Military District in the south, each section with differing policies according to their commanding officer. When Alice Springs Hospital was taken over, one army officer promised to provide a dental service as well as a medical service for the civilians but this did not eventuate. In 1945 Mr CLA Abbott was informed that the army dentist was fully occupied with service personnel. In the north, Brigadier RM Nimmo prepared a recommendation on the postwar needs of the Northern Territory (Chapter 15) and included an account by Lt Col L Harbeck of the dental services provided to civilians from 1 April 1944 to 31 March 1945. This record showed 3494 extractions, 1055 fillings, 663 dentures plus other dental care(2). The care recorded here may have been for men with the Allied Works Council and not for civilians in the outback.

The first dentist registered in the postwar period came in November 1946 and although a pleasant personality, he had become an alcoholic and was down to drinking methylated spirits. He was sent to Katherine, but moving the problem did not overcome it and his services had to be terminated. In the meantime Mr Billie Weir was appointed as the first dental mechanic but without a dentist he had little work to do. However, he was resourceful and after working hours he conducted a small private practice to make and repair dentures for a needy community. In the early days Billie Weir slept on one of the verandahs of the pathology laboratory; Jack Slade used the other.
When the street end of Ward 1 at the hospital was repaired, it became the first postwar dental clinic and remained so until November 1953 when a new dental clinic was opened in Smith Street. Accommodation was at a premium so most of Ward 1 was occupied by dental mechanics, dentists, a catering officer and several other men employed with the Department of Health. Initially these men dined in the two little rooms fronting the garden square in the middle of the hospital complex, but as these were too small, tables and chairs were arranged in the end of Ward 1 next to the kitchen. This continued until dining facilities became available in the new Sisters Home (Lambell House) in 1952.

A dentist, Mr Sydney M Turnbull, was appointed in September 1947 and remained a couple of years. As recorded in Chapter 23, during 1949 Captain Harry Moss flew Syd Turnbull to most of the cattle stations and large Aboriginal settlements in Central Australia to clear the backlog of aching teeth.

Mr Frank M Drury was appointed to Darwin in February 1948 and spent two years with the Department of Health before opening up in private practice where he remained until his death on 7 February 1965. Mr Angus Campbell Miller arrived in April 1948; he was of an earlier era in dentistry, having trained prior to dentistry becoming a university course. For the first few years he was the officer in charge of establishing the dental service.

As so much of the top end of the Northern Territory could not be visited by road, the Aerial Medical Service with its Dragon aircraft was called on to transport a dentist to the coastal missions. Captain Jack Slade had foreseen this and when the RAAF hospital at Coomalie Creek was being abolished, he acquired an air sea rescue jacket and a dental headrest. The headrest could be clamped on to the back of a wooden kitchen chair. It was not ideal but it was better than no headrest at all. The dental equipment had to be light and comprised a foot operated treadle type drill.

**Dental Survey 1948**

Mr John EH Moody, who arrived in Darwin in March 1948, was the first dentist to undertake extensive work among the Aborigines. Charter aircraft, one of them flown by Harry Moss, may have been used occasionally prior to the advent of commercial flights to Arnhem Land missions in March 1954. John Moody has left a valuable record of the work he did and the condition of Aboriginal teeth in 1948. During a visit to Yirrkala he met with Dr BP Billington and others of the nutrition unit with the American-Australian Scientific Expedition to Arnhem Land. As the Expedition was without a dentist, John Moody was prevailed upon to study Aboriginal teeth in detail and to record his findings.

During the latter half of 1948 John Moody visited not only Yirrkala, but Elcho Island, Millingimbi, Goulburn Island, Croker Island, Oenpelli, Angurugu, Umbakumba, Roper River Mission, Snake Bay and Port Keats as well as a brief visit to Bathurst Island. Limits were placed on time as he had his normal work to do and, on top of that, most missions were short of food and wanted the Aborigines to be away hunting. Identification of people and the estimation of ages tended to be most time consuming. The ages of most children were available in mission records so, to estimate a woman's age John Moody noted the age of her eldest child and added on fourteen years. At that stage the medical records of the Aerial Medical Service were still a long way into the future.

In examining teeth, one of the first conditions noted was the degree of attrition and this was attributed to the food handling and cooking methods used by the Aborigines. All food was cooked in hot ashes and became impregnated with fine gritty sand. Dugong was butchered on the beach and washing the meat in the sea did not remove the sand particles. Whereas
Europeans would not eat the meat because of the sand in it, Aborigines seemed not to notice. When Sister Kettle visited Numbulwar in 1958, the amount of sand mixed in dugong meat made it almost inedible. Very little of their food was entirely free of grit. This wore the teeth down to expose the dentine and later the pulp. John Moody commented that:

A few mouths have been observed in which complete arches of teeth have been worn to the gums so that each stump has a definite hole in the centre down which a probe can be passed.

Exfoliation or a flaking off of enamel due to abrasive foods was most marked at Roper River but was in fact common to all groups. This condition began to occur at about thirty years of age and by forty-five years many mouths showed seriously damaged teeth. Although caries were a little more common at Roper River, they did occur among the bush people, for example those seen at Yirrkala where very few people were permanent residents at the mission. Alveolar abscesses were common among the older people as was pyorrhoea; John Moody considered infection could have been spread by smoking each other's pipes.

John Moody also noted a number of people from the Bulman River tribe (Ridarngu) were minus one incisor; it was a cultural practice not confined to that area alone. In fact it is still widespread amongst the desert tribes.

John Moody's report was based on the examination of 1557 mouths at 11 different centres, most of them in Arnhem Land. The degree of contact with Europeans and their food ranged from forty years at Roper River to almost no dietary change among most of the people examined at Yirrkala. There was little difference between the centres and most of the damage to teeth seemed to originate from eating abrasive materials in their natural diets. In closing, John Moody recommended 'early analysis of the water supply at each native area and an estimation of the fluorine content'.

Before moving on it should be added here that when the dentist, Mr BG Wilson, visited Numbulwar in May 1955 he reported that 'the dentitions showed remarkable freedom from caries attributable to the low refined carbohydrate intake, truly a dentist's delight'.

The mobile dental work was by far the most interesting aspect of the service but the people in Darwin and Alice Springs required their share of care. A new dental clinic with four surgeries was opened for business in Smith Street, Darwin, on 25 November 1953. It included a prosthetic laboratory for four technicians, an X-ray unit and dark room and a small store. There were louvered windows to ensure a flow of air but this also meant a lack of privacy. However, after the clinic in Ward 1 this was considered luxury.

A dental service for school children had been started in 1948; children were examined and referred to either the town clinic or to a private practitioner. There was public demand for this type of service. Also in 1953 a dental clinic was included in a new school building in Woods Street. It was well equipped with a hydraulic pump chair and a mobile electric dental unit plus an electric steriliser. The first woman dentist, Miss J Peterson, was appointed in 1954 and she provided a school dental service in the new clinic until her resignation late in June 1955. It was policy to provide fillings in children's teeth when a dentist was available to do the work and although there was much demand for services there was seldom sufficient staff.

The first postwar dental clinic at Alice Springs was within the limited confines of the original administrative block in the hospital. A complete new dental clinic in the block adjoining the Medical Superintendent's house was opened for business on 8 November 1951. This facility was seen as a necessity and given a high priority. The first dentist seems to have

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been Mr Syd Turnbull and the first technician, Mr Brian Harford. The one dentist in Alice Springs was expected to provide both a service in the outback and a school dental service in town along with caring for the community in general.

The free medical service in the Northern Territory did not include dentistry. Those who could pay had to pay and the dentists had to collect and account for the fees. This policy applied to the mobile services as well as in the towns but it was embarrassing to have to give a bill for dental services to people providing hospitality, especially so since all accommodation was in private homes as there was nowhere else to lodge or board.

**Mobile Dental Service**

There was much discussion over the type of vehicle required for mobile work in the outback. In the early postwar era the cost of a mobile clinic was prohibitive. It was decided to purchase two vehicles to carry the dental teams and equipment and use whatever accommodation was available at each centre. The vehicles selected were ex-army blitz wagons, or, in more formal language, Canadian vans made for the army by Ford in 1943. Mr Angus Miller went to Brisbane to bring back the first of the two vehicles and returned to Darwin on 16 December 1949. The blitz wagons were high off the ground but they were immensely hot in the cabin. Their other disadvantages were yet to be revealed.

The dentist Mr Geoff Marles and technician Ian Bond carried out the first survey of the western cattle stations in the Victoria River area during 1950. The following year Mr Frank R Meldrum covered the same area accompanied by the technician Brian Harford. Frank Meldrum considered the blitz wagon to be most unsuitable. It was too big, too hot and too difficult to handle on outback roads; it was so high it was frequently caught in overhanging trees and, worst of all, the petrol kept vaporising and they would have to stop and let the engine cool. During the 3498 miles (5629 kilometres) travelled, the vehicle used 384 gallons of fuel - a little over nine miles per gallon. Added to this were eleven gallons of oil. He recommended that it be replaced by a seventeen hundredweight Chevrolet truck.

The 1951 survey certainly covered some precarious roads to visit outstations on the larger cattle properties. As some of the road was in Western Australia, the survey included Gordon Downs, Nicholson, Ord River, Spring Creek, Argyle and Ivanhoe stations. Frank Meldrum commented that many other places across the border were begging for a dental visit but he was not permitted to travel further afield. On his return to Darwin after six months in the outback he recommended that the service be expanded to include Wyndham and other places greatly in need(8). This recommendation was not taken up by the Department of Health. However, the Royal Flying Doctor Service was interested in providing a dental service in the north of Western Australia and during 1954 Mr Frank Meldrum covered the Kimberley area on behalf of that organisation. At a later date, Frank Meldrum returned to the Northern Territory and spent many years in charge of the dental clinic in Alice Springs.

Mr John C Homewood, who had been in the Northern Territory for a time prior to the war, retained his registration. He owned a Gipsy Moth aircraft and operating from St George on the Darling Downs in Queensland, he visited many of the outback properties in that State to provide a private dental service. A dental mechanic accompanied him and occasionally they would extend their travels to the Northern Territory flying as far west as Daly Waters and Larrimah, then north to Katherine and Pine Creek. John Homewood maintained his Gipsy Moth was faster than the Department of Health Dragon and challenged Jack Slade on the point. The Gipsy Moth took off from Pine Creek ten minutes ahead of the Dragon but the latter reached Darwin first. During 1953 and 1954 John Homewood was the Senior Dental Officer in the Northern Territory and in that capacity he planned and authorised both the mobile clinics by road and visits to the missions by road and by air.

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The mobile dental clinics were expanded. In 1951 Mr M Burley, accompanied by technician Mr J Hall, visited most places on the Barkly Tablelands. This was repeated by Mr D Methigan and K Duigan the following year. During the dry months of 1953 Mr Don D Voller and a technician took the dental vehicle to Borroloola and some of the very isolated little properties near the Gulf of Carpentaria. Many of the people in that area received their first restorative care; until then it was considered inevitable that teeth would eventually ache and have to be extracted. Later, when attending patients at Katherine, Don Voller met Sister Margaret Giles and married a short time later.

In 1954 and 1955 Mr S Frank Vitale and Brian Harford spent several months on the Barkly Tablelands and the Gulf of Carpentaria area. At the end of 1955, after six months of travelling, they spent time in Tennant Creek where they worked in the Australian Inland Mission hall. Mr Stan Clark had replaced Brian Harford. Temperatures were excessively high, 120 degrees F (48.9 degrees C) in the building. There were no facilities until private citizens helped with the loan of a fan, adjustment to lighting, and a screen so that waiting clients could not observe the patient in the chair.

Annual visits were also made to the western cattle stations. In 1953 Mr Len Wedesweiler was accompanied by Dolphin Cubillo. In 1954 Mr Fred Thornton and Mr Stan Clark managed part of the tour before their vehicle met with an accident. The following year Mr Geoff Downes was accompanied by Howard Truran driving a Dodge utility. The service given was always much appreciated, a fact stressed by Dr Stephen Watsford in 1953 when the cost of the service was being questioned by Canberra. The biggest recurring cost was the travelling allowance paid to persons working away from their base. Much hospitality was extended by the cattle stations but conditions were often rugged. Even along the Stuart Highway there was no adequate accommodation. The author recalls a sleepless night at Wauchope followed by one fried egg for breakfast. There was no toast as the bread had not arrived by bus and no one bothered to bake scones. At Renner Springs pigs grunted and scratched themselves on the outside walls of the bedroom all night. Many men carried their swags and camped out but they deserved a little compensation for the hardships endured, not to mention heat, dust and flies. Nonetheless the costs of providing a service were constantly questioned by Canberra.

Mr Homewood resigned from 16 March 1954 and Mr Angus Miller acted as Senior Dental Officer until the transfer of Mr Bernard A Collins from the Dental Service in Canberra on 4 July 1955. With him came demands for more details of the road work as requested by Dr Louis Wienholt in Canberra. Dentists doing mobile work were promptly under pressure to provide more details without anyone to help them with their typing or to really tell them what more was required. It is not surprising that many dentists did not stay long. By 21 September 1955 Mr Collins had assessed the mobile service and had his recommendations on the desk of the Director of Health, Dr AH Humphry. One recommendation was that the Aerial Medical Service should expand to carry a dentist and technician on a regular basis and thus eliminate the necessity for mobile clinics except for four planned trips along the Stuart Highway each year. Another was that cattle station people could bring people requiring dental treatment to the various stops on the Stuart Highway. All fees charged could be remitted through the several Post Offices along this route and relieve the staff of any risk in carrying money for weeks at a time. Dr AH Humphry concurred with the proposals and advised Canberra. With the exception of the mobile clinics along the Stuart Highway, all other work by road ceased in 1955(9).

Under the new scheme some of the budget for travel was transferred to the Aerial Medical Service which enjoyed a certain amount of glamour and publicity. It is impossible to compare the costs of road work and aerial work but the service provided by the dentists did
react to a new type of pressure. There followed written complaints from nursing staff on the church missions that far too many teeth were being extracted instead of being filled. Cattle station people seemed to have been less vocal on behalf of the Aborigines. The Annual Report for 1956-57 fiscal year does not give the statistics for work outside the town clinics of Darwin and Alice Springs so a comparison cannot be made. In that same year a dental clinic was opened at Batchelor and a dentist was available at the new health centre one day each week.

The schools dental clinics were also developed both in Darwin and Alice Springs and during the school holidays they were instructed to visit schools in the outback. It so happened that the outback schools were on holidays at the same time. This caused a general air of dissatisfaction and requests came in for the restoration of the outback mobile dental service.

The Cocos Keeling Islands Service

At a time when there was a shortage of dentists, a new service to the Cocos Keeling Islands in the Indian Ocean was started. In 1957 Mr D Traini went to the Cocos Islands for a period of six weeks; the 1958 visit was made by Mr A Merrick and in 1959 by Senior Dental Officer, Mr John Levett. It was a pleasant diversion to a very beautiful island. The boat trips to Cape Don Lighthouse once a year were much more exacting as the small launch had no comforts and nowhere but the deck on which to sleep.

Mr John Levett took over from Mr BA Collins in July 1959 and after a few visits to the church missions, both Department of Health and mission staff expressed alarm over the hundreds of teeth being extracted. Mr Levett declared he would not fill the Aborigines' teeth until they learned to use toothbrushes. He introduced a campaign for all Aboriginal children to be taught to brush their teeth. As few children had anywhere to keep a tooth brush at home the brushing was done at school where each class's brushes were stored together in receptacles such as empty jam tins. Mr Levett did not check to see how his policies were being implemented. By 1960-61 many Aborigines were travelling to Darwin at the expense of the Welfare Branch to acquire dentures.

In 1960 Mr Levett undertook to do a survey by road and demanded a four wheel drive vehicle. The Land Rover was taken from the Survey Sister and given to the Senior Dental Officer. The vehicle was thoroughly serviced by mechanics with the Department of Works and Mr Levett set forth down the Stuart Highway. Somewhere before reaching Manton Dam the driver was shocked to see one of the rear wheels hurtling past him down the road and into the thick bush. He managed to stop and went in search of the missing wheel. There were wet patches everywhere so rather than ruin his footwear he removed his shoes and socks and left them in a safe place. He did not find the tyre and on his return to the highway he could not find his shoes. He then lodged a claim for the replacement of his shoes having lost them in the course of his duty.

By January 1962 Mr Levett was writing in despair about the deterioration of Aboriginal teeth. The amount of work requiring to be done was more than could be handled by his staff unless the staff was doubled. He proposed that the Welfare Branch be asked to provide dental clinics on the settlements and missions to facilitate the work of mobile dental teams. Dentists required the assistance of a dental nurse as well as a technician. This meant accommodation for three people when accommodation for just one extra person imposed a strain on the outback people who provided beds in private homes. However, the first team of three staff led by Mr SG Farrar visited Umbakumba and Angurugu in July 1963. The dentist extracted 349 teeth and restored 12 while Brian Harford made 21 full sets of dentures. This was the first time dentures had been made during dental visits by air.
Mr Levett put forward a proposal to train Aborigines as ancillary staff in the provision of oral hygiene. They could carry out routine scaling and cleaning of teeth. To prepare these people would require a training course of about four months, similar to training currently provided in some parts of the United States of America(10). The idea of training appealed to Mr Hunter C Harrison, the senior administrative officer, who discussed it with Dr Byrne. However, Mr Levett resigned shortly afterwards and was replaced in July 1963 by Mr C Roger Faul who considered there were no Aborigines with a sufficiently high level of education for such a training scheme. Dr WA Langsford confirmed this opinion with a no further action note on the file. It was not raised again for another fifteen years.

As Senior Dental Officer, Roger Faul sent the dentist Mr RW Sharp to examine the dental health of the population of Groote Eylandt. Of 492 Aborigines examined he stated that 377 were dentally unfit and 100 were in need of urgent attention. Mr Sharp made a study of the food being eaten. From his account of the food provided the diet seemed reasonable but the people were not shopping wisely from the canteen. By 1963 there was political pressure on the church missions to fill the canteens with things Aborigines wanted in line with policies on the Welfare settlements. People were buying sugar, flour, tobacco, sweet biscuits and sweets. As they walked away with their purchases many were seen to eat white sugar by the handful(11). Other health personnel had observed the same practice along with small children making a meal of a packet of sweet biscuits. After many years of argument and discussion, fluoridation of the drinking water on Groote Eylandt was eventually introduced in August 1977.

Mission staff, concerned about the state of children's teeth, started writing to the Senior Dental Officer with the request that fluoride tablets be provided for all children. Mr Faul passed the requests on to Dr WA Langsford in June 1964 but it was not implemented.

In the meantime at Alice Springs Mr Frank Meldrum and his technician Mr Tom Russell were trying to do the impossible in providing a service to the outback as well as in town. The mobile service from Darwin visited Warrabri (Ali Curung) settlement and cattle properties near the Stuart Highway but the remainder was the responsibility of the small staff at Alice Springs.

Scientific Research

Much scientific work had been carried out at Yuendumu in August 1951 when a party of seventeen men made their initial visit to Yuendumu. The party, led by Professor J Bertram Cleland from Adelaide University included a medical anthropologist, Dr Kenneth Fry (see Chapter 4), dentists, doctors and photographers. One of the dentists, Mr Murray J Barrett, studied dentition using the birth dates that had been compiled by the Rev Tom Fleming and his wife. Professor AA Abbie made a study of the metrical characteristics of the Wailbri people and this study was followed through in 1957 and 1971 by Murray Barrett and others. They found that the people were taller and considered this was due to the regular supply of food at Yuendumu since droughts no longer brought starvation(12).

Dr TD Campbell, the Dean of the Faculty of Dentistry in Adelaide University, visited Yuendumu in August 1957 accompanied by Mr Murray Barrett and Mr J A Cran. Dr Campbell had earlier carried out research at Cockatoo Creek, 25 miles (40 kilometres) northeast of Yuendumu in 1931 and at Mt Liebig in 1932. While at Yuendumu in August 1956 they made plaster casts of mouths and took X-rays. This team had their own portable power plant and X-ray unit and helped Dr John Hargrave by taking many chest X-rays. Murray Barrett continued his study of the developmental stages of dentition, time of eruption, and loss of teeth. They were concerned that the changing dietary pattern might affect the teeth(13). No mention has been found of the high concentration of naturally occurring
fluoride in the bore water at Yuendumu. The mottling in white children's teeth was said to be due to excess fluoride.

Dentist Roger Faul in July 1963 commented that teeth at Warrabri were in much better condition than at most other centres due to the naturally occurring fluoride content of the drinking water(14).

In 1962 the National Health and Medical Research Council recommended that public authorities throughout Australia give earnest consideration to the fluoridation of water supplies throughout the country. The Northern Territory Administration was slow to meet this requirement due to individual lobbying against it. Fluoridation was introduced to the Alice Springs water supply from 1 June 1971 and a few months later in the Darwin water supply.

A new Health Centre was opened at Nightcliff on 11 March 1965 to meet the needs of the expanding urban community. It contained a dental clinic along with the Infant Health and District Nursing services. Nine years later this Health Centre was destroyed in Cyclone Tracy.

By 1961 Welfare Branch staff were exercising their right to have a house to themselves and not have to provide accommodation in their homes for visiting staff from other government departments. The first indication came from Warrabri (Ali Curung) where the dental team was advised to make its own messing arrangements. This highlighted the need for fully equipped caravans for road use. On top of that the cattle station communities were asking for a service similar to the one they used to have. On 30 July 1962 Mr John Levett put forward a recommendation for two new fully equipped mobile units. Other states, namely South Australia and Western Australia, already had very suitable mobile clinics that could be copied. Two mobile dental caravans identical to those in use in South Australia were ordered from Adelaide.

A further problem arose on the Welfare settlements and was first evident at Maningrida in 1966. The Superintendent of the settlement, Mr HM Sidgwick, had requested a visit by a dentist late in 1965 and one dentist had visited by air to do extractions only. The dentist Mr PV Mezger visited in April 1966 and was made most welcome by the nursing staff and given adequate space in the Health Centre. However, Mr Mezger was under utilised and when he asked for patients he was told that no one could now tell Aborigines, children included, to go to the dentist. This attitude quickly spread and at Milingimbi the Aborigines told Sister Jessie Smith that she could pull their teeth when they ached. Very few people had any concept of protective care of their teeth. Sister Smith replied that she would not extract any more teeth and they had best make their own appointments and see the dentist before they developed toothache. The dental service to Aborigines was free so lack of finance was not a deterrent. On the cattle properties people were still directed to attend the dental clinic and no time was wasted.

Two mobile caravan clinics were delivered in 1964 and Mr T Alan Clarke, who had a special interest in the use and maintenance of these heavy vehicles and the equipment, was in charge of this aspect. Roger Faul had replaced John Levett as Senior Dental Officer in October 1962. By this time several arterial gravel highways had been blazed and formed and the construction of bridges was under way. There were no longer any overhanging trees to obstruct the high caravans. Airconditioning had been installed in the mobile clinic but it required 240 volts and some places still had 110 volt power. Radio transceivers were also installed and a request was made to the Postmaster General's office for permission to use the same frequency as the Department of Works as that department had many field stations operational at that time. This was not approved so when mechanical problems arose the
dental team had to contact the Department of Health through the normal radio channels in Darwin; they, in turn would phone the Department of Works and the latter would contact their field team nearest to the breakdown. It all took up valuable time and the message became distorted along the way. Great care was needed in towing the mobile clinics. In 1968 Mr Alan Clarke reported many problems, some due to inadequate servicing, including the nuts on wheels not being adequately tightened. One wheel went bush near Mainoru and although two men searched for it, the wheel was not found. In summing up his report Mr Clarke strongly recommended a speed limit of 40 miles (64 kilometres) per hour on bitumen and 25 miles (40 kilometres) per hour on dirt roads as sudden braking had caused much damage to both the brakes and tyres.

There was always a high turnover of dental staff. Mr Colin H Wall, writing as the Senior Dental Officer in 1970, thought things were beginning to change for the better. Prior to that the Northern Territory had been largely regarded as a stepping stone on the way to Great Britain where the National Health Service had proved lucrative for dentists. There was an establishment for twenty four dentists but the service had retained only thirteen(15). There were at that time seven dentists in private practice in Darwin.

A large new dental clinic was opened in Darwin in May 1970 in Mitchell Street. This building was under way in 1968 but took a long time to complete. It contained nine general surgeries, an orthodontic unit and several special purpose surgeries equipped with the most modern facilities then available. The Senior Dental Officer, Colin H Wall, was particularly proud of the orthopantomographic radiographic survey equipment which he stated was the third such unit in Australia. Every known facility existed in the new clinic(16). New reclining dental chairs allowed the patient to lie down and the dentists to be seated while working. Further, the upper floor of the clinic contained bedsitter type accommodation for single dentists and it was hoped this would encourage young dentists to stay longer.

The dental service continued to expand and in May 1970 Mr Graham Whitelaw from Canberra became the first resident dentist at Nhulunbuy. Six years later he was the first resident dentist at Alyangula (Chapter 31). Mr John Plummer was appointed to Tennant Creek in 1975 as the first resident dentist there. As facilities improved staff could be encouraged to stay longer.

On 26 July 1971 the Registrar of the Dental Board in the Northern Territory announced that from that date all dental surgeons were permitted to use the courtesy title of doctor if they so wished(17). Most other States had already introduced this measure and most dentists now use the title.

Endnotes

4 Moody.
7 Administration, Alice Springs Hospital, Dept Health File 10/12/1, Part 1, Darwin.
8 F Meldrum, Dept Health File 40/6/4, Darwin.
9 AH Humphry, Mobile dental units, Northern Territory Report 21 Sept 1955, Dept Health File 40/2/2, Darwin.
13 Part 1, Dental Research Yuendumu, Dept Health File 40/4/2, Darwin.
16 ...
The first two mobile dental units leave Brisbane for the overland trip to Darwin, December 1949 (photo: Angus Miller)

Dentist Terry Trousdale working at Roper River (Ngukurr) about 1960. Conditions in the outback were often hot and inadequate (Church Missionary Society collection)

The dental team in 1950 outside their clinic in Ward 1 of Darwin Hospital. L-R: Brian Harford (left), Angus Miller (right) and Dolphin Cubillo (centre). Others unknown (A Miller collection)

Dental technicians stayed much longer than most dentists. L-R: Howard Truran, Dolphin Cubillo, Stan Clark, Gordon Davis and Brian Harford farewell two of the team (Dept of Health)
CHAPTER THIRTY

THE MINING TOWNS

Batchelor

Batchelor, 70 miles (112 kilometres) by road south of Darwin, was the first of the purpose built mining towns. Moline, east of Pine Creek, sprang up for a time but apart from a weekly visit by the doctor at Katherine, it did not have a health service provided by the Department of Health.

Uranium was discovered at Rum Jungle in 1949. The Federal Government had offered £25,000 to entice mining men to search for uranium and this was awarded to Mr Jack White. For a few years he was a rich man but he frittered it away and later, when a resident at East Arm Hospital, he was on an invalid pension.

The Department of Works and Housing began the development of the town of Batchelor and had built six houses before the project was handed over to the mining company, Consolidated Zinc. The mining company built among the trees with minimum destruction of the existing vegetation. A similar policy was later implemented at both Alyangula and Nhulunbuy whereas in the 1970s in the developing Darwin suburbs almost every tree was removed along with the many small palms and pandanus.

A small six bed hospital was opened at Batchelor at the end of January 1955 and Sisters Joan Hayes and Rene Carley came from Melbourne to staff it. As the staff had a telephone they could readily contact a doctor and anyone requiring hospitalisation was sent by road ambulance to Darwin Hospital. For many years the first ten miles (16 kilometres) was a gravel road to join the sealed Stuart Highway.

A doctor from Darwin visited Batchelor one day each week and as well as providing a medical clinic, he examined both school and preschool children. The town was well provided for but the work tended to be monotonous and nursing staff usually stayed just a few months before moving on.

Alyangula

The development of Alyangula has been mentioned in Chapter 20 in conjunction with Angurugu Mission on Groote Eylandt. Manganese had long been obvious, having oozed from between the rocks in an earlier era. Dust from the manganese was black, in contrast to the red bauxite near Gove airstrip. Groote Eylandt Mining Company (known as GEMCO), a subsidiary of Broken Hill Proprietary Co Ltd, negotiated with the Aborigines for mining rights and the payment of royalties. The mining of manganese commenced in 1963 along with the development of the town of Alyangula. On 18 July 1966 a District Welfare Office was opened to ensure good relations between the Aborigines and the mining people. As a result many Aboriginal men were employed and they enjoyed the same award wages as other employees.

GEMCO said they would build and staff their own hospital but, to ensure adequate quarantine of overseas shipping, the Department of Health insisted that they staff a health centre if GEMCO built it. By August 1964 there were forty white men on the job with an
expectation of one hundred men in the near future. For a time this imposed a heavy strain on the nursing staff at Angurugu. To make matters more difficult some men who did not appreciate the isolation attempted to demand evacuation to Darwin with the Aerial Medical Service by making their own emergency call on GEMCO's radio telephone link().

A large jetty was constructed early on to allow ships to bring in food and building supplies and to take out ore. Many people were not prepared to live humbly while houses were being built and they made life difficult for Sister Emma Brunker, a married nurse appointed in February 1965. Sister Brunker and her husband also lived under rugged conditions while waiting for a house.

A small prefabricated health centre, with an attached flat for a Sister, was opened in December 1965 and was inspected by Sister Brenda Divine on the 23rd. As Sister Brunker did not need the flat, it was used for Department of Health visitors (such as the doctor) flown in to quarantine overseas shipping. In 1967 Sister Estelle Drinkwater (another married woman) took over and by this time GEMCO had appointed Mr Jack O'Hare, a St Johns Ambulance trained man from Darwin, as the safety officer on the mining site. Mr O'Hare trained two Aboriginal men in first aid and one of them, Jonathon, a son of Didjidi from Angurugu hospital, became a permanent officer in this area of work.

There was also a dental clinic attached to the small prefabricated health centre. From 1970 onwards Dentist Graham Whitelaw visited every four to five weeks from Nhulunbuy until he was appointed to Alyangula in 1977 as a resident dentist for the whole of Groote Eyland.

Sister Peggy Maher, an Irish nurse, transferred to Alyangula from Tennant Creek Hospital in 1968 to manage a difficult situation. Many of the white men, unaccustomed to isolation, were drinking heavily and this led to tragic accidents on the few roads. However, none of the accidents occurred in the work situation. In the early 1970s there were two Sisters at Alyangula and by 18 November 1978 when the spacious new health centre was opened by Mr Sam E Calder, DFC, MHR, there was a staff of four and a doctor. Dr Tom Gavranic was the first doctor appointed to Groote Eyland in September 1974. Prior to that doctors were visiting regularly by air from Nhulunbuy.

**Nhulunbuy**

The town of Nhulunbuy, which became a regional centre for Eastern Arnhem Land, was developed as a mining town by the Swiss mining company Nabanco. Gove airstrip, which had been constructed by the RAAF during the war, was opened on 28 January 1944. It was named after a young airman who had crashed on take off from Milingimbi on 20 April 1943(2). The airstrip was built on top of a rich deposit of bauxite and it was not long before geologists became interested. Shortly after the war mining companies began seeking the right to explore.

The first commercial air service to Yirrkala was introduced by McRobertson Miller Airways in March 1954 at the same time as their service to Milingimbi. The wartime Gove airstrip was then the best airstrip outside Darwin and presented no problems for the Avro Anson aircraft.

The first miners to arrive came by barge across the Gulf of Carpentaria from Weipa in Queensland in April 1958, having endured cyclonic weather on the way. They tied up at the old RAAF wharf at Drimmie Head in Melville Bay, unloaded a Jeep and drove twenty miles (32 kilometres) through the bush to Yirrkala Mission. This was an exploratory party.
who established a camp on the northern aspect of the airstrip and introduced the first transport. There was much discussion with the Government over the area to be mined but no discussion with the missionaries at Yirrkala or with the Aborigines. When the missionaries realised the mining men had included the Yirrkala cow pastures and water supply in their submission to the Government they protested.

There was also other activity in the area when the ELDO (European Launcher Development Organisation) tracking station was developed about ten miles (16 kilometres) south of the airstrip. By 1967 there were seventy five men at ELDO living in prefabricated buildings. This was a scientific team and they had an experienced first aid officer. When ELDO was later abandoned, the buildings were used for Dhupuma Aboriginal College.

The nursing staff at Yirrkala, Sisters Thelma Harlock and Doreen Lawton, provided medical care for the first thirty Nabalco men during 1965-67. The occasional case of malaria came into the area so the nursing staff had to be vigilant. However, these men became progressively more demanding and took up much of the Sisters' time. In May 1967 a District Welfare office was established at Gunyibinya, half way between the mission and the mining camp, to oversee relationships between the men and the Aborigines. Mr Ted Egan spent a couple of years at Gunyibinya and endeavoured to have Nabalco employ Aboriginal men, but they were not keen to do so. During the development stage that commenced in February 1969, Nabalco expected the men to work sixty hours per week, with appropriate penalty rates. The Aborigines did not want the heavy workload, so were not employed.

The nursing staff at Yirrkala were greatly pressured. They had their own share of nasty mishaps without the added burden of Nabalco. Buffalo bulls, outcasts from the herds further west, roamed the bush and would attack people if taken unawares or when cornered. Word was received at Yirrkala that an Aboriginal woman had been gored by a buffalo. Sister Lawton went with the rescue party. As she wrote to friends at the time, the woman had a huge hole in her chest where the horn had passed through. The horn came out under her right arm and then pierced her upper arm. She was carried to the mission on a stretcher and flown to Darwin the next day; she recovered. On another occasion there were great shouts from a nearby billabong from which the mission drew its water supply. A man had waded into waist deep water to shoot ducks when a crocodile arose right in front of him. As it opened its jaws he jammed the rifle down its throat, but he was badly torn by the creature's claws. He too was flown to Darwin Hospital(3). On top of this was the typhoid outbreak at Yirrkala in April 1968 when the mining men could no longer use the health facilities at the mission. It was then time for the mining company to have its own clinic.

Sister Stephanie Vale (later Mrs Werner) arrived at the Nabalco camp, known as Prospector's Camp, near the airstrip in July 1968. There were then forty men and three women and they were preparing for an influx of new workers. She was accommodated at the Nabalco guest house, later better known as the Arnhem Hideaway Motel. The Wallaby Beach camp was then opened about twenty miles (32 kilometres) from the first camp. It was near the site for the wharf and the alumina plant and a more adequate treatment room was provided there. Sister Vale travelled between the two camps. During 1968 a doctor with the Aerial Medical Service visited every six weeks. Apart from that, Nabalco had installed a radio telephone and Sister Vale could make a call any time on this, but it was not private and everyone nearby could hear everything she said.

There were no serious accidents during the developmental stage; these came later once there was a bitumen road on which to speed. However, there were odd accidents. Fishing
was popular from either the beach or a boat. One young man had just landed a barracuda and was bending over it to remove the hook when it flipped up and caught his nose in its teeth.

A second Sister was appointed in mid-1969 shortly before Sister Vale resigned in August to marry and make her home in Nhulunbuy. The mining company had wanted the town to be called Gove, but the Aborigines submitted their own name for the area, Nhulunbuy, which was unique. The plan included a hospital, a health centre and a dental clinic. By July 1970 an aircraft hangar was under construction along with the hospital and eight staff houses for the Department of Health.

On 23 July 1969 a prefabricated health centre was opened at Wallaby Beach with the nursing staff living in caravans. Dr Graham Isaacs was appointed soon afterwards and was joined by Dr John V Quinn in January 1970. Charter aircraft were then used to allow a doctor to visit Groote Eylandt for medical clinics and for the quarantine check of all overseas ships. Sister May Quinn worked with her husband at the clinic.

The newly developing town of Nhulunbuy was not left without a dental service. There were regular visits by air from Darwin and in 1969 Mr Alan Clarke lived at ELDO tracking station for a time to meet the dental needs of the whole area. A dental caravan was sent to Nhulunbuy in May 1970 and Mr Graham Whitelaw was appointed as the first resident dentist. The caravan was set up near the Wallaby Beach health centre and then later moved to Mt Saunders prior to the opening of the new health centre and dental clinic in 1972. In 1973 the dental caravan was transferred to Angurugu on Groote Eylandt and became a semipermanent clinic in the grounds of the local health centre. This greatly facilitated the work of visiting dentists.

Dr WA Langsford approved the design for the hospital and it was he who named it Gove District Hospital as a gesture to the mining company. This added to the two name confusion that has persisted in the town. The hospital is in two sections. The front block is for casualty, radiography, pharmacy, offices and records. The second block has three levels with an operating theatre and labour ward on the top floor. Later staff transferred the labour ward down one floor to the midwifery ward. It is a most impractical design requiring more nursing staff than the number of inpatients warrants.

The town of Nhulunbuy grew rapidly and the population increased. By 17 May 1971, Dr Quinn reported that Dr Tom Gavranic had just replaced Dr E Docker who had served a year in the area. There were, by then, five nursing staff and conditions became very congested in the Wallaby Beach health centre.

On 26 October 1971 the front block of the new hospital was opened for both inpatients and outpatients and fees for service were introduced. The complete hospital was officially opened by the Minister for Health, Sir Kenneth Anderson, KBE, on 7 July 1972. Dr John Quinn was the Medical Superintendent while Dr Tom Gavranic had become the first Regional Director. Mr Graham Whitelaw remained the resident dentist for the region.

An Aerial Medical Service for Eastern Arnhem Land came into being on 3 January 1972 when one of the Dove aircraft arrived with a pilot, engineer and Sister Cecily M Jarvis. Initially, the radio service was conducted from Darwin with Sister Jarvis following the medical session on a radio. She would then contact the Darwin office by radio telephone. It took time to obtain permission to operate another radio from Nhulunbuy. Sister Fay Leggett took over in October 1972 and then Sister Agnes 'Steve' Swan in August 1973. A regional health office was established in a government office building in December 1972.
and the staff gradually expanded to provide most services. Specialist doctors from Darwin visited the hospital at regular intervals.

Dhupuma College for Aboriginal children started in the school year of 1972 with Mr Alan Fidock as the Principal. He was later replaced by Mr Neal Barry, who had been a mission school teacher in Papua New Guinea. The prefabricated buildings erected for the ELDO tracking station were used but as these began to need replacement, the Government elected to close the college in July 1980 and it was not replaced.

On 17 November 1970 the first sod was turned for the Walkabout Hotel. The Aboriginal Council at Yirrkala lodged a protest over the granting of a liquor licence to the new hotel. On 15 August 1970 a group of thirty young Aboriginal men had already been in a brawl with forty Europeans which did not augur well for the future. The mining company wanted a liquor outlet to keep their men happy so it went ahead. Over the next decade alcohol took a heavy toll among the people at Yirrkala. Money was squandered, children were hungry and neglected and family life was greatly disrupted. A massive new social problem had been introduced and had to be dealt with by the Aboriginal Council and the Departments of Health and Welfare. The Aboriginal population was then about nine hundred, all of whom were tribal Aborigines.

**Ciguatera Poisoning**

In 1972 a new health problem arose at Nhulunbuy and a little later at Yirrkala. The fishing in the area is excellent with many large species, namely barracuda, mackerel, queenfish, turrum, coral trout, coral cod, sweetlip, red emperor and scarlet sea perch. They could be readily caught by line from a boat or from the long sandy spit near the processing plant. The fish were so large that the townsfolk shared them or served barbecued fish steaks when entertaining. People began complaining of symptoms suggestive of poisoning and some were sufficiently ill to warrant admission to the local hospital. Those affected complained of dizziness, nausea and vomiting, diarrhoea, tingling around the mouth and in the feet and fingers. In severe cases there were muscular aches with loss of control in balance and coordination. Some experienced respiratory distress.

Mr Noel Whitehead from Nabalco started collecting information(6) and it was the Queensland Department of Fisheries that suggested the problem might be ciguatera. Action was taken through the local news media to inform the public of the need for caution. When the Medical Superintendent of the hospital, Dr Pablo Aralar, and his wife, Dr M Angeles Aralar, both became seriously ill after eating a barracuda, the Department of Health became more actively involved in identifying the cause.

The Aborigines at Yirrkala were also affected and they declared they had never had this condition before. All records are not readily available, but on 9 May 1977, Dr Stanley Linco, the Regional Director, reported twenty three people ill at Yirrkala, nine of whom had been admitted to hospital. One of the Aboriginal Health Worker staff admitted she had eaten fish liver when they had been warned of a high concentration of the toxin in the liver of affected fish.

Action was taken by the mining company Nabalco to ensure they were not causing pollution of the sea. It had been suggested that small fish were eating algae growing on dead coral and big fish were eating the small fish thus entering the food chain. At the time of writing the condition still occurs but the local residents have learned caution in having one person sample a fish prior to serving it to whole families or friends. Not all fish are affected. There remain many unknown factors that warrant further research.
Nhulunbuy has continued to develop as a regional centre for Eastern Arnhem Land. With a population of about four thousand and all facilities for High School education, many families have settled there. Road access has been slow and at the time of writing the bush track from Mainoru to Nhulunbuy is only open for a few months of each year at the end of the dry season in August and September. The health service based in Nhulunbuy serves a regional population of about ten thousand, most of whom are Aborigines.

Each of the three mining towns had had a factor in common, the retention of the indigenous trees. Apart from that, Batchelor's role has changed and it is now a centre for Aboriginal education while the other two centres continue with mining. The greatest impact on the indigenous Aborigines has been the availability of alcohol which has led to many new social problems.

Endnotes

1 Dept Health File 64/363, Darwin.
3 D Lawton, letters to the author, various dates.
5 Dept Health File 70/1060 Report, 17 May 1971, Darwin.
6 N Whitehead, Ciguatera, fact or fantasy, Nabalco, nd, typescript.
The first Health Centre at Alyangula. It was replaced by a larger building in 1978
(Dept of Health)

This fully airconditioned Health Centre was opened at Alyangula 18 November 1978
(Dept of Health)

Nhulunbuy in 1987. The town centre is in the upper right corner and the hospital complex lower centre (photo: NABALCO)
CHAPTER THIRTY-ONE

HEALTH CARE IN THE OUTBACK

Dr Richard Brock was the first of the Survey Medical Officers (see Chapter 20). In 1945 Major Claude Lum at Alice Springs Hospital had recommended four doctors for mobile survey work among the Aborigines. Dr AJ Metcalfe in Canberra considered one such doctor would be sufficient but even so it took six years for the Public Service Board to approve even one position. As Dr John Hargrave commented at Warrabri (Ali Curung) in November 1956, there was a 'great reservoir of treatable but untreated disease' and no one to do the work(1). For the most part, Aborigines accepted their sickness as a part of life and were unaware of what could be done for them. Very few sought hospital care of their own volition.

Dr Stephen Watsford, the Director of Health late in 1950, had a clear vision of what was needed. He introduced individual medical records for everyone in the outback and in particular for the Aborigines who were a preliterate people. Sister Meryl Nichol of the Aerial Medical Service extracted information from the hospital records in Darwin and added this to the individual histories until an invaluable set of records had been established.

It was Dr Richard Brock who commenced medical survey work, initially at Delissaville (Belyuen) in May 1951. From there he went on to other settlements and missions and compiled medical records for each person. It was a very time consuming task to ensure each person was adequately identified. As there was no Registered Nurse at Delissaville, the records were not duplicated until later. All Aborigines received a full medical examination; staff were also examined if they wished to be included. From there Dr Brock was flown to Bathurst Island (Nguiu), Garden Point (Pularumpi), Snake Bay (Milikapiti) and Croker Island (Minjilang) in turn. On these older settlements the people had a working knowledge of English but on the large Arnhem Land missions very little English was spoken. All Aboriginal names were spelt phonetically and had to be checked with the available mission records.

Borroloola

An economy model four wheel drive Land Rover was purchased for survey work. It was a short wheel base model that could negotiate steep sharp creek beds. The main drawback with this vehicle was the lack of lining. When travelling over rugged country, the driver would frequently hit his or her elbow on the hard metal of the door. During July to September 1951 Dr Brock visited Borroloola and the several small cattle properties in the area adjacent to the Gulf of Carpentaria. These properties were without airstrips and the victims of leprosy remained hidden for years. Borroloola was 350 road miles (563 kilometres) northeast from Newcastle Waters (near Elliott) but the Carpentaria Highway was not blazed until several years later.

There were 113 Aborigines at Borroloola in August 1951. The Welfare Branch Superintendent, Mr H Ellis, and his family lived in the original police station. A small cottage with a bark roof provided a cool room for a medical clinic. Later, when a large iron store was erected, the medical clinic was in one area of that and it was unbearably
hot. Mrs Ellis, who was not a nurse, was doing the medical work and Dr Brock left her with medication for twenty-four Aborigines, including two with leprosy. Everyone was given a Mantoux test but there was no BCG vaccine available for the negative reactors; that was given the following year.

Yirrkala

It was January 1952 before Dr Brock was able to start work at Yirrkala on the northeastern tip of Arnhem Land. The staff of the mission comprised Mr Doug Tuffin and his family and a Fijian, Reverend Taniela Lotu and his family. Miss Joan Proctor, the school teacher, who usually did the dispensary work, was on holidays so it fell to the two men to help the doctor to identify everyone. The population in contact with the mission was about three hundred of whom Dr Brock examined and recorded one hundred and seventy. This left the medical records for the area incomplete, but they were expanded during subsequent surveys until a record existed for everyone.

Dr Brock treated five people for malaria and recorded the infection as Benign Tertian. He carried a microscope as part of his equipment so the diagnosis was confirmed. The staff at Yirrkala were all taking Paludrine as a prophylactic. There were possibly five cases of leprosy, but some of these required a second opinion and were referred to Dr AH Humphry. One leprosy patient was started on sulphone therapy. Sick people were at that time found in two beds underneath the teacher's house and Dr Brock thought this posed a threat to staff. During the outbreak of malaria in 1955 all of the staff were affected. Sister Audrey Fielding had been appointed to Yirrkala in December 1954 and played a major role in the eradication of malaria in that area (Chapter 20).

In June 1952 Dr Brock and his wife Betty, a Registered Nurse, started survey work in the Alice Springs area at Yuendumu (Chapter 21). He visited all the new government settlements and the missions before being asked to relieve at Alice Springs Hospital where he contracted hepatitis. After recreation leave he resumed work but was not really well for a considerable time.

Medical Survey Staff

Dr WA Langsford became the second Survey Medical Officer in 1953 after a year as one of the first two Resident Medical Officers at Darwin Hospital. He carried out surveys at Angurugu, Numbulwar, Roper River Mission and Umbakumba. At Roper River Mission he met the indigenous motor mechanic, Mr Phillip Roberts, and invited him to join the medical team as a driver mechanic for an extensive survey around the western cattle stations and Hooker Creek (Lajamanu). The missionaries were not keen to lose the services of one of their well trained Aboriginal staff, but felt they should not stand in Phillip's way if there was a chance of a good job with a higher wage than they could afford. The road team that covered the cattle stations in the Victoria River area in 1953 comprised, Dr Langsford, his wife Rita and Phillip Roberts in a Department of Health Land Rover accompanied by Mr Creed Lovegrove and his wife Jean in another vehicle. This team was too large for the limited accommodation both on cattle stations and at Hooker Creek. After one year as a Survey Medical Officer, Dr Langsford worked mainly with the Aerial Medical Service, visiting outposts for a few hours and the occasional overnight stop. He then joined the Immigration section of the Commonwealth Department of Health and spent three years in Germany screening prospective migrants.

Dr J Tarlton Rayment became the third doctor to work in medical surveys and his work is recorded in Chapters 19 and 20. He took a particular interest in tuberculosis control and
was the first doctor to operate a mobile X-ray unit. Dr Rayment conducted full medical surveys along with his work on tuberculosis and achieved much without a supporting team of radiographers and clerical assistants.

Dr Dennis Stanbury and his wife Jill, a Registered Nurse, carried out an extensive program by road in 1956 covering the cattle stations in the Roper River area and then the Barkly Tablelands. They found many new cases of leprosy. Their work was cut short in April 1957 when they were in an air crash (Chapter 16). Although neither was seriously hurt, they resigned shortly afterwards.

The medical officer who came and stayed was Dr John Hargrave. In January 1956 he was appointed to the Alice Springs area and in 1957 transferred to the northern region. Dr Hargrave's underlying goal in life was to eradicate leprosy and his opening into this field came in September 1957 when he undertook the initial medical survey of the Aborigines at the new settlement of Maningrida (see Chapters 17 and 20). It was Dr Hargrave who realised the need to teach the nursing staff in the outback how to recognise the early signs of leprosy so that they could undertake much of the screening. He also taught them the special care necessary for patients on domiciliary treatment. There were many firsts in the career of this man; he was a leader, not a follower.

Dr EA 'Ned' Iceton spent several years as a Survey Medical Officer from late 1958 to 1963. Dr Iceton gathered much information for his own use later in teaching social and community medicine. Dr Noel Vawser followed in 1964 at a time when Dr Langsford was changing the concept of survey medical work. However, by that time much of the continuing medical survey work was being carried out by the Survey Sisters who referred patients to doctors visiting the outback with the Aerial Medical Service.

As mentioned in Chapter 20 Sister Ellen Kettle was the first Survey Sister. She was the Senior Sister at Delissaville (Belyuen) when Dr Stephen Watsford had that position transferred to the Department of Health in March 1954. Three years later, in 1957, the Public Service Board approved a position for a Senior Sister, Medical Surveys, but it was late in 1959 before they agreed to any further nursing staff positions.

The first task delegated to Sister Kettle was the treatment of trachoma at Hooker Creek (Lajamanu) settlement and the eradication of hookworm found there by Dr Langsford in his survey the previous year. There was no question of a vehicle for transport as it was unthinkable that a woman should drive alone around the outback. There were two formed and sealed roads in the Northern Territory, the Stuart Highway and the Barkly Highway. All other roads were either graded by a fire plough that left the road surface lower than the surrounding country or were just two wheel tracks through the grass. There were no road signs except where men had scarred a tree with an axe or had left an empty drum as a marker. For the first five years of medical survey work, Sister Kettle relied on other people for a lift from one station to another. Cattle station staff were most helpful as they appreciated the work being done. Other government staff offered transport when they were travelling in the same direction, but apart from these, Connellan Airways could usually find room on one of their aircraft. As mentioned elsewhere, the Department of Health did not always reimburse Connellan Airways for the many times they transported Sister Kettle and her heavy medical kit. Connellan Airways, with a fortnightly service, was a lifeline to the outback. An account of Hooker Creek in May 1954 is detailed in Chapter 18.

In 1954, and for several years later, all the cattle stations employed Aborigines. There were 235 Aborigines at Wave Hill and the nearby police station (Kalkurang). Victoria River Downs had a similar population but they were dispersed to four outstations. Other
pastoral properties had smaller groups and most were employed, the women doing housework and gardening while the young men were mostly stockmen. It was always difficult to treat the men for trachoma as they camped where they were mustering cattle.

Immunisation with Triple Antigen (diphtheria, pertussis and tetanus) was introduced at this time, the series of injections being completed later by the Aerial Medical Service.

The greatest single health problem among the cattle station Aborigines was the need for adequate food for infants. Traditionally, Aboriginal babies were breast fed for up to two years or more and this practice was not interfered with unless the mother became pregnant again. Frequently, mothers would breast feed a two year old infant along with a new baby. This led to the slow starvation and death of the second child. The problem was similar to that on settlements and missions until there were nursing staff to teach and guide mothers. A few of the larger cattle stations such as Wave Hill and Victoria River Downs later employed a Registered Nurse. Some Aboriginal mothers were very young and their own bodies were still growing. This was particularly so in the 12 to 16 years age group who could not adequately breast feed their babies and these unfortunate infants added to the high infant mortality. Occasionally white women were found who would take an interest in the welfare of Aboriginal babies on the various stations and on these occasions the infants survived.

The work of the Survey Sister evolved as the need was recognised. While the Survey Sister was in a given area, all Aborigines were physically examined for leprosy. In this way new patients were found at an early stage in the disease. The fear of being isolated from families was soon overcome as Dr Hargrave encouraged many to be treated at home.

Many of the western cattle stations were visited again in 1955. In 1956 all the cattle stations on the Barkly Tablelands and in the vicinity of the Gulf of Carpentaria were visited, trachoma was treated and everyone was checked for leprosy. It became obvious that if the life expectancy of infants was to be improved it was necessary to visit each place at more frequent intervals. A submission was prepared requesting two more Survey Sisters, a second for the northern region and one for the Alice Springs area. The Public Service Board pointed out the paucity of statistics to support the request. It required mortality figures to convince them of the need for more staff.

**Aboriginal Mortality**

The pathologist, Dr John M Crotty, in conjunction with Dr Dick Webb, was steadily compiling information on mortality in the Aboriginal population. Added to this was the census of Aborigines compiled by the Welfare Branch. In the calendar year of 1958 the known infant mortality was 138 per 1000 live births(2). This type of information, compiled by doctors, could not be ignored by the Public Service Board. Even so, it was August 1959 before they approved positions for two more Survey Sisters and a clerical assistant for the Aerial Medical Service.

**Aboriginal Infant Health Clinics**

In the meantime Dr Dick Webb took the initiative in introducing infant health services to the Aboriginal communities. Record cards with a weight graph were printed. For convenience, these cards were the same size and shape as the medical record cards. The weight curve used was that developed by Dr FW Clements in 1933 for a group of white Australian infants. This graph was in use until replaced by the Harvard graph in 1970.
In 1958 Sister Kettle was asked to introduce the concept of infant health clinics on all church missions and welfare settlements. Most of the Registered Nurses with the Methodist and Anglican missions had a qualification in Infant Health, whereas very few on the Welfare settlements or the Catholic missions had undertaken this course. There were no special staff for infant health work; it was an extra task on top of an already heavy load with the result that in subsequent years, on some settlements and missions, the babies were weighed but the graphs were not maintained. The really keen staff would do the graphs at home at night, but too much was expected of a few devoted people.

Sister Kettle started the Infant Health work at Yirrkala mission on 11 April 1958 (see Chapter 20). Sister Audrey Fielding had been recording weights in a book and these were transferred to the graphs. All infants under five years were weighed, measured and their development assessed. Dentition was similar to that for white Australians; some had teeth at seven months of age while others were ten months or more before their first teeth erupted. Dentition influenced nutrition as mothers insisted babies could not eat solid foods until they had teeth. Weights and heights (lengths) were presented on scattergrams to show a comparison with the graph for white Australian babies. The infants' heights were similar to those for white infants, but from five months of age onwards the weight graph fell below that for their white counterparts. Scattergrams for each mission and settlement were prepared separately and showed some variation, but all had in common a falling off in weight gain from about four months of age onwards.

During the initial infant health survey, Sister Kettle started a register of births and infant deaths for use by the Department of Health. There were excellent records available on all the church missions but very few records existed on welfare settlements. Some Welfare Superintendents did establish registers at the local level but they were followed by men who regarded this practice as unnecessary and some deliberately disposed of records. All births were registered and the notifications were sent to Darwin, but in communities where families did not remember birth dates it was essential to have a local register. School teachers later required the birth dates. Furthermore, names were frequently changed or misspelled and it was often necessary to refer back to the register. Deaths were recorded against the births and this allowed the Department of Health to identify where the deaths were occurring. The mortality was calculated each year and it was found to be very high.

Later, in 1966, Sister Kettle calculated heights and weights for an Aboriginal graph. This was the first, for until then it had been assumed that there was no difference between Aboriginal and non-Aboriginal babies. The only graphs that had been adequately maintained were on the Methodist missions in Arnhem Land where several well qualified nursing staff had given continuous service. Where there was a turnover of nursing staff the records were too unreliable for use in statistical calculations. Dr Webb was transferred to Australia House in London and no other doctor took a particular interest in the maintenance of the baby weight graphs until the appointment of D Donald S Jacobs in 1964. It was three years later that Dr Kerry Kirke took the initiative in the maintenance of adequate records in the Alice Springs area. Sister Kettle's research was published in 1966 and showed that the average Aboriginal baby weighed 6 pounds 6 ounces (2.892 kilograms) at birth compared with 7 pounds 8 ounces (3.402 kilograms) for white Australian babies (3). Within three months they had doubled their birth weight and continued to grow well until about five months of age when the weight curve steadily dropped below their white counterparts. Mr Edwin Milliken, the Deputy Director and statistician with the Welfare Branch, interpreted the published findings as the natural growth pattern of Aboriginal babies. Dr FW Clements and several other paediatricians did not concur and expressed the opinion that the weight graph indicated undernutrition. By five months of age most mothers' breast supply was insufficient for their babies' growing needs. Most white mothers were offering their babies complementary milk feedings and
solid foods by that age and the babies continued to grow. There were problems to be overcome in convincing mothers of the need for extra food at an early age and, furthermore, to provide the food in a clean condition and safe from flies. Even today it will still require many years of infant health counselling to achieve the standards necessary to ensure a babyhood free from episodes of infective diarrhoea.

Registration of Births and Deaths

In developing the Aboriginal height and weight graphs, Sister Kettle had sought the guidance of Dr FW Clements. He advised on the initial approach and then recommended that she consult with staff of the Registrar of Births and Deaths in Darwin. There were a few adding machines in Darwin by 1965-66, but the Registrar of Births and Deaths had the only calculator that could assist with standard deviations. During conversation with the staff of that department, it became clear that the Welfare Branch registered Aboriginal births, the Registrar registered white babies and no one was registering any of the babies of part-Aborigines. Each department thought the other was doing this. Sister Kettle mentioned this to Dr Langsford who promptly referred the matter to the Canberra office. From there it went to the respective Ministers and then back to Darwin. Other shortfalls were also discovered; many Greek and Italian families did not know they had to register babies and they had been missed for over twenty years. The outcome was that from there on the hospitals had to ensure the registration forms were completed before newborn babies left the hospitals.

As the Registrar of Births and Deaths was only recording white babies, Dr Langsford was able to publicly announce in 1965 that the Northern Territory had the lowest infant mortality rate in Australia. His staff were astounded but as Dr Langsford pointed out, he was quoting official figures; the figures compiled on Aboriginal infant deaths by the Department of Health staff were not official. The mortality among Aboriginal babies was suppressed until Dr Peter Moodie from the School of Public Health and Tropical Medicine visited Darwin early in 1968. Dr Moodie challenged the medical and nursing staff over not assessing the infant mortality among the Aborigines and in response all the births and deaths for several years were put in front of him. Having gleaned all the Department of Health material, he consulted with staff of the Welfare Branch and found that the statistics were identical. A paper based on infant and toddler mortality among the Northern Territory Aborigines was read at the Third Australian Medical Congress in Sydney in August 1968(4). It was published the following year and showed an infant mortality rate (under one year) of 131 per 1000 live births plus a further rate of 40 per year in the second year of life. More about the causes of death in Central Australia is recorded in Chapter 21.

Proposed Mothercraft Home

Following extensive surveys of infant health during 1958 and 1959, Sister Kettle put forward a proposal for a Mothercraft Home in Darwin. A second home was also needed in Alice Springs but it was considered expedient to ask for one such home at a time. Dr Dick Webb, then Director of Health, supported the proposal in principle and raised the subject with the new Director General of Health, Sir William Refshauge, late in 1960 a few months prior to his departure for overseas. Dr Webb had already told the Legislative Council that Aboriginal infant mortality was about 20 per cent under five years of age(5). Sister Kettle suggested that two of the spacious old houses on Myilly Point be made available, one for mothers and babies and the second for staff quarters. The Director General was interested and his deputy Dr WFH Crick requested a formal proposal in writing.
Dr Webb left in March 1961 and Dr Ian Byrne took over as Director of Health with Dr WA Langsford as his deputy. Sister Kettle prepared a list of tragedies, babies whose lives could have been saved had there been somewhere to care for them. A seventeen year old mother of twins was sent to Bagot and within days one baby was dead. Then there was the tragedy at Newcastle Waters where grandparents disposed of a week old baby who cried continually. At the inquest the mother was reported as ten years old. Darwin Hospital discharged convalescent babies long before they were sufficiently fit to survive on cattle stations and within days these infants added to the mortality rate. Dr Langsford prepared a reply for Dr Byrne's signature. He stated that the figures for mortality were not correct; no one really knew how many babies died but there were not many, and further, it was not the policy of either the Department of Health or Welfare Branch to rob Aboriginal mothers of their responsibilities. He overlooked the fact that many of those mothers were teenage girls and were deprived of a service that existed in all other States.

From Canberra, Dr Crick referred the proposed home to Dr FW Clements in Sydney. He was enthusiastic and suggested a more substantial building. In reply to this Dr Langsford, now Director of Health, sent copies of the proposal to each of the Commonwealth Directors of Health in other States and awaited their replies. The outcome was an even more elaborate proposal fast reaching a prohibitive cost. Architects planned and estimated until it appeared the home would have to be built in stages. By this time the need for a facility of this nature at Alice Springs had become urgent but no one dared suggest a second home.

Sister Kettle suggested a site be selected in the Rapid Creek area before that suburb claimed all the land. It was envisaged that an Infant Health Centre should be built on the same block. Dr Langsford said to leave it to him and he chose a block in Charlotte Street, Fannie Bay, with a beautiful view of the sea. This block was triangular in shape and very steep; it later lent itself to a luxury home. Bureaucracy killed the project. The years passed and no Mothercraft Home was ever built in Darwin. At Alice Springs the child mortality became so grim that the Minister for Health, Senator Sir Kenneth Anderson, in August 1971, announced the purchase of Mt Gillen Motel for conversion to a Child Health Unit (Chapter 22).

Mobile Survey Work

After five years of field work without adequate transport the original unlined Land Rover was made available to Sister Kettle in April 1959. Sister Meryl Nichol in the Aerial Medical Service warned: 'you must have that vehicle properly checked as it is you who will have to walk home if it breaks down'. Her warning was timely as the tool kit and spare parts were grossly inadequate. Sister Kettle left Darwin on 8 April 1959 to visit stations along the Stuart Highway; it was too soon after the wet season to venture far off the bitumen road. As it was, there was heavy rain a few days earlier and she drove over the railway Bridges at Elizabeth River, Adelaide River and Katherine River and through very deep water near Manton Dam. From Katherine south to Alice Springs all properties near the highway were visited. A few months later, she drove over the Murruriji track to visit all the western cattle stations. Having the use of a vehicle made it possible to visit properties that had been missed for years, the first of these being Hidden Valley where a young man was seen with leprosy.

Another isolated station that had not seen anyone from the health services since the war was Legune. Legune could only be approached from the Kimberly Research Station on the Ord River. The township of Kununurra was constructed later. On 22 July 1959 an Aboriginal stockman from Carlton Station accompanied Sister Kettle on the 72 miles (116 kilometres) journey across country from the Research Station to Legune. It was a bone
shaking trip as the dry blacksoil plains were deeply pitted from the hooves of cattle during the wet season. The journey took just six hours and was worth the effort as two cases of leprosy were found and were taken to Wyndham to be picked up by the Aerial Medical Service from Darwin. One of these two patients died a few months later but the second, a twelve year old girl, made a good recovery. Legume Station was still using a pedal operated radio transmitter at the time, a model that even then had become rare. A couple of years later this station was purchased by LJ Hooker and the pedal radio disappeared, marking the end of a colourful era.

During the 1959 survey, Sister Kettle had been doing Mantoux tests (Heaf method) on the cattle stations in preparation for the first mobile X-ray survey. On 6 August she received a telegram instructing her to return to Darwin. Dr Rene Manning needed the Land Rover to do Mantoux tests on the Barkly Tablelands and although that area did not require a four wheel drive vehicle, the Department of Health did not have an alternative. The Anti Tuberculosis Association of New South Wales team was already in Alice Springs and required all people to be Mantoux tested prior to being X-rayed.

Over the next couple of years many other small properties were visited by road, including Mudginberri, Munmalary, Nourlangie, Gimbat, Dorisvale, Tipperary, Ooloo, Woolner, Marrakai and the buffalo shooters' camps. Many more victims of leprosy were found who then travelled to Darwin in the Land Rover with Sister Kettle.

As mentioned earlier it was late 1955 before the Public Service granted two more positions for Survey Sisters. Sister Liorabel Reynolds was appointed to the Alice Springs area and Sister Betty Holderness to the northern region. It was late in the year and Sister Holderness found the heat overwhelming; after one short trip in the Land Rover she resigned to return to infant health work in Victoria. Sister Dawn Tyrer arrived in March 1960 and spent a year in the outback, but she found driving over rugged roads and changing heavy tyres in the dust and heat too physically strenuous.

Sister Ngaire J Stichbury who arrived from Queensland in mid-1961 had come to stay and remained sixteen years. In 1961 Sister Stichbury accompanied Sister Kettle during a survey by road of the western cattle stations. By this time highways had been blazed but the newly formed roads were full of sharp sticks or pieces of roots that staked the tyres. The work covered included assessment of babies and advice to the mothers and to the wives of station managers who were prepared to help. Very few white women wanted the extra work of supervising suitable food for Aboriginal infants, but attitudes slowly changed. Everyone was checked physically for early signs of leprosy to ensure the disease was discovered before there was damage to hands and feet. All immunisations were brought up to date and a record given to the Aerial Medical Service for the Sisters there to give second and third injections. Once audiometric screening was introduced it was added to the program; more staff were then required as this type of screening was time consuming.

During the survey of the western cattle stations in 1961, Sister Stichbury discovered an Aboriginal woman, 'Cocky', with an obvious breast cancer at Waterloo Station. Cocky was encouraged to go to Darwin where a mastectomy was performed. She was then the first Aboriginal woman sent to Adelaide for radiation. Cocky was embarrassed over the loss of one breast so Mary Keller, the social worker, bought two brassieres and gave them to Sister Noreen O'Connor, the Sister in charge of Ward 3. Sister O'Connor asked Dr John Quinn with what she should pad the bra and he facetiously replied 'bird seed'. On the evening prior to Cocky's departure, Mary Keller discovered the bras filled with bird seed and took them to the Sisters Annex where she and Sister Kettle replaced the seed with soft foam rubber. Early the next morning Cocky departed wearing her new bra.
Attempts were made to prepare a years program in advance, but the Survey Sisters were frequently diverted to cope with epidemics or other emergencies. In 1962 Professor RH Black from the School of Public Health and Tropical Medicine visited Darwin to discuss the most practical way to eradicate the remaining pockets of malaria in the country. He was anxious to have the World Health Organization (WHO) declare Australia free of malaria. The main trouble spots were identified as the whole of the Roper River valley, Numbulwar, Mainoru and Mountain Valley. There were groups living in the bush who presented at each of these centres from time to time and who were possibly carriers of malaria. Sister Stichbury was flown to the Roper then to Numbulwar to administer an eradication course of Primaquine and Chloroquine over a period of two weeks. Sister Kettle travelled by road to Mountain Valley and Mainoru where she arrived late on 30 July 1962. Mrs Margaret Dodd at Mainoru had sent messages to the bush Aborigines and encouraged them to come for treatment. Most members of the known nomadic groups were there and while they received adequate fresh beef to eat, they stayed. Mrs Dodd had contracted malaria herself during the 1957 outbreak and was anxious to see it eradicated. As recorded in Chapter 19 malaria was eradicated in 1962. All cases of malaria occurring since then have been contracted overseas.

In 1963 Sister Stichbury and Sister Kemp from Alice Springs carried out an extensive survey of the people on the Barkly Tablelands (Chapter 24). During the same period Sister Brenda Divine accompanied Sister Kettle around the western cattle stations in the cool weather of 1963. The Land Rovers had been replaced by four wheel drive Toyotas and although the new vehicles were enclosed to reduce the dust, they were very heavy to handle, with a marked tendency to be too heavy. In the Borroloola area Sister Stichbury struck a new problem with the Toyota as it was too long for some of the short steep creek crossings. The rear bumper bar caught on the road and left the rear wheels in suspension. It required much hard digging to release it. The nursing staff protested but to no avail as a senior officer in the Department of Health considered the Toyotas were ideal and other government departments were at that time also buying them.

The Survey Sisters team was increased by a further two staff in 1963 to provide screening of all school children. The Schools Medical Service in the northern region did not include the Aboriginal schools, but Dr Anne Urban at Alice Springs did extend her work to the Aborigines. It was often said that the Sisters on Welfare settlements and church missions could do this work, but most of them had more to do than they could handle without screening school children. Furthermore the Survey Sisters had been taught the work expected of them whereas, with a high turnover of staff on Welfare settlements, few had time to learn before moving on.

**Blood Transfusions in the Outback**

The nursing staff on the missions and Welfare settlements had long been asking for more knowledge to cope with the tasks facing them in the outback. Early in the 1950s some of the mission Sisters had spent a couple of weeks in Darwin Hospital for orientation; this did help, but it was still inadequate. By the end of the 1950s the three doctors working in conjunction with the Aerial Medical Service had arranged to spend at least one whole day at each of the larger centres to allow time for screening of the contacts of leprosy and tuberculosis and other conditions needing a follow up. Dr Hargrave looked after Groote Eylandt, Elcho Island, Maningrida and Bathurst Island and during this time he gave many blood transfusions to Aboriginal infants at both Elcho Island and Bathurst Island. This involved their families in donating the blood and it reduced the number of admissions to Darwin Hospital. Dr Edgar Emmerson took responsibility for Yirrkala, Milingimbi, Roper River Mission (Ngukurr), Numbulwar, Borroloola and Mainoru. Dr Michael Ryan looked
after Port Keats (Wadeye), Daly River Mission, Hooker Creek (Lajamanu), all the western cattle stations, Oenpelli and Goulburn Island. As recorded elsewhere (Chapter 20), Dr Ryan frequently gave blood transfusions to anaemic infants at Port Keats where the male members of the family donated blood. Also, by arrangement with the tribal elders, many of the eight to twelve year old boys were circumcised in the mission hospitals where a surgically clean operation was assured. Tribal elders filled their obligations by being present. The medical service to the outback was excellent and the nursing staff had time to chat with the doctor over an after dinner cup of tea. When Dr WA Langsford was appointed as Assistant Director of Health in 1961 this was all drastically changed.

Dr Langsford purchased a beautiful thermos flask in which he could carry a three course meal prepared at the hospital. This ensured complete independence from mission, settlement and cattle station hospitality. He set out to demonstrate that he could do as much in one day as the other doctors did in three. Where airstrips were near the missions he would go to the hospital, but where there was any distance involved, those who were sick were brought to him at the airstrip. This put even more pressure on the nurses in the outback as they continued to do their best for less urgent cases without the support of a doctor. It was a distressing time for all and one of the outcomes was an increase in the number of infants with severe to gross anaemia. Many more infants were sent to Darwin Hospital. Progressively more responsibility had to be taken by the few Survey Sisters in their efforts to support the nursing staff in the outback. Sister Kettle suggested to Dr Langsford that the Department of Health provide in-service training courses for them, but he replied that it was Harry Giese's business, not his.

College of Nursing, Summer Schools

The need for in-service training was frequently discussed with Matron Peg Downer at the hospital. As she was not personally involved, she could look at the situation objectively and she suggested that the local committee of College of Nursing (Australia) provide a training course. The members of the College of Nursing promptly took up the challenge and agreed that the length of any course should be a week. The Sisters in the outback were asked what they wished to learn and the answers flowed back: leprosy, child health, anaemia, hookworm, diarrhoea and the rehydration of infants, infected ears, trachoma - the list continued. Dr Langsford was advised and was asked for the use of hospital facilities. He concurred but added that any Department of Health staff who chose to attend would require his permission to be away from work. The Welfare and mission Sisters were not allowed to stay in hospital accommodation. A program was prepared and submitted to Mr Giese who was keen to help with air fares for a given number of Sisters. Mr Giese also arranged accommodation for his nursing staff while the church authorities catered for their own.

The first course, known then as in-service training, was held at Darwin Hospital in October 1963 and Dr Langsford graciously gave the opening address. Subsequent courses were called the Annual Summer School. It was greatly appreciated by all who were able to attend. The exchange of experience was invaluable as isolated staff tended to see their problems as unique. Observation visits were arranged for all who requested them, the most popular visit being to the East Arm Hospital to learn more about the care of leprosy patients. The medical staff in Darwin Hospital were delighted to have an opportunity to teach and advise on how they would like to see emergencies, such as serious burns, treated in the outback prior to despatch to hospital so the Summer School soon became an important annual event.
Arnhem Land Bush

As recently as 1962 there were still groups of Aboriginal people in Arnhem Land who were outside of the care of the health services. It was a land without roads, but Rev Harold Shepherdson from Elcho Island, the founder of the outstations movement, had many small airstrips on which he landed at three weekly intervals. Very occasionally one of the nursing staff from the mission would accompany him and give penicillin injections to children suffering from yaws.

Each time Sister Kettle visited Milingimbi, Sister Jessie Smith expressed her concern over leprosy patients known to be on the mainland. A woman, Niwurur, diagnosed by a visiting doctor in 1956 as having lepromatous leprosy, was one of these. During a medical survey the doctor had requested an aircraft to evacuate her but she had disappeared and had not been seen again. There were also some of the children of an influential man who, from time to time, visited Maningrida as well as Milingimbi. Sister Kettle reported these known patients to the Director, Dr Ian Byrne, with the recommendation that someone should go into the bush and find them. Sister Jessie Smith had already camped with the Aborigines at the old Florida homestead site at Murwangi. Flagstones from the homestead floor and a huge corner post, along with coils of rusted barbed wire still identified the area. Although Sister Smith had a good working knowledge of the local dialect, her success in finding people who did not want to be found was limited. Dr Byrne's reply on this matter was: 'you know what needs to be done; you do it and I will support you'.

Sister Kettle contacted Rev Gordon Symons at the Darwin headquarters of the Methodist Overseas Mission on the corner of Knuckey and Mitchell Streets. It was just two minutes walk from the Department of Health headquarters on the Esplanade. Arrangements were made for the linguist, Beulah Lowe, to accompany Sister Kettle with the latter providing the camping gear. Rev Shepherdson agreed to provide the aerial transport and make prior arrangements with the Aborigines. The Department of Health had no camping gear so a small tent and a rather heavy radio transceiver were borrowed from the Army headquarters at Larrakeyah. The transceiver had a limited range and operated on a different frequency from the missions at Milingimbi and Elcho Island which meant transmitting on one frequency and receiving on another; it was not a success and was not used again on subsequent visits into Arnhem Land. The tent was necessary to ensure privacy and to protect clothes, food and bedding from the heavy dew at night.

Ellen Kettle and Beulah Lowe spent three weeks in the Arnhem Land bush during August 1962 and saw one hundred and five people all but five of whom were examined. They started work at Murwangi (Florida homestead), where the airstrip had not been well maintained. The local Aborigines were responsible for knocking down the grass, flattening termite hills and removing any regrowth of trees. A total of thirty eight people were seen including four previously diagnosed cases of leprosy. These were all young people dominated by a powerful personality, Nulmarmar, who claimed he owned the land when in fact it belonged to Mangan, a more gentle personality. The missionaries on Milingimbi had about ninety head of cattle at Murwangi and had made Nulmarmar responsible for their care in an attempt to dissuade him from killing and eating them. Nulmarmar allowed one of his sons to go to Milingimbi for treatment and a few days later he visited and took him away again. A couple of years later the lad died in the bush. Another patient was Wanjara (pseudonym) who had been diagnosed at Maningrida in April 1958. She was then thirteen years old and, after a short period of treatment, her husband (Nulmarmar's son) went to Maningrida to claim his wife. When seen in 1962 she was breast feeding a baby. Beulah Lowe explained to a meeting of Aborigines that if Wanjara was not given medication the little baby could develop leprosy. This brought an angry
response from a young man who claimed the baby as his promised wife. Wanjar said she would go to Milingimbi but she disappeared overnight.

The second camp site visited was at Mirrngaytja where Rev Shepherdson had a bough shelter for a church and meeting centre. The tent was pitched beside the shelter which served as a dining area and also as a medical clinic. Drinking water was drawn from a beautiful lagoon, but as it was infested with crocodiles no one could swim or wash in it.

A total of forty-nine people were seen at Mirrngaytja on this occasion but there were over eighty persons there the following year. Nalandir, a man of forty years, who had already spent several years at East Arm Hospital, was living there and he was most helpful in finding people and identifying them. Dried fruit was given to all children after examination and this encouraged them to bring in friends not already seen. Beulah Lowe conversed freely with the children and discovered family groups living in the bush further out. Adult Aborigines denied the existence of other people but when given names, they agreed to lead the visitors to them. New cases of early leprosy were found but not all were willing, at that stage, to go to a church mission for treatment. The missing woman Niwurur had not been seen anywhere and, after much negotiation, some of the men agreed to lead the way.

Yurrkudjarak camp was about twelve miles (19 kilometres) west of Mirrngaytja and took three and a half hours at the brisk pace set by the Aborigines. The guides drank from billabongs and caught their lunch of large water snakes and a tortoise as they travelled. The two Sisters carried their lunch and a billy of weak black tea rather than risk diarrhoea from unboiled water and unfamiliar foods. A second billy of tea was brewed during lunch for the long return walk. The Aborigines found this highly amusing. There were eighteen people at Yurrkudjarak and as they had not seen nor heard the visitors approaching, they were all in the camp. Two white women posed no threat and Beulah Lowe conversed freely with them while Sister Kettle prepared lunch on a paperbark tablecloth provided by the Aborigines. Several people besides Niwurur had gross deformities; one woman sat on a foot so that it could not be examined. When Beulah Lowe told them they did not have to go to hospital but could have medicine at Elcho Island mission, Niwurur just sat and cried. It was obvious to Sister Kettle that the damage to Niwurur’s face was not due to leprosy; it appeared more like a burn but she could not reverse the earlier diagnosis; Niwurur had to be seen by Dr Hargrave. At that time none of the people needing treatment would leave the security of the bush, but after their friend Rev Shepherdson assured them Dr Hargrave would not take them away, they did eventually go to Elcho Island. Niwurur did not have leprosy, which highlighted the need for specialists in this field of medicine.

Mr Giese of the Welfare Branch was duly informed that over forty of the Aborigines seen and recorded during the 1962 medical survey were not in his Register of Wards. A full record, as compiled by Beulah Lowe, was given to that department. A Patrol Officer, Jeremy Long, was then sent on a patrol of the area and found very few people as most disappeared into the bush. There was still great fear that government men might be police who would take them away and it took many years to replace that fear with trust.

In August 1963 Sister Kettle visited the Arnhem Land mainland again, this time accompanied by Sister Judith Brockhurst who already had five years background experience, first at Milingimbi and then Elcho Island. She had a good working knowledge of the local dialects. Mirrngaytja was visited again and there were eighty-two people within easy walking distance. Three people with untreated leprosy all agreed to being flown to Elcho Island. All eyes were examined for trachoma and most showed either scarring of their eyelids or thick follicles from trachoma, but it was not possible to treat them without someone being available to remain at Mirrngaytja for an extended period.
Murwangi was visited again, but there were only fourteen people there and this group included all those known to have leprosy. From Murwangi the two nurses were flown to Mata-Mata (near the coast on the mainland opposite the English Company Islands) where they spent three days. Barajuna, the man in charge, had built houses on stilts sufficiently high to walk underneath. These provided the most advanced type of housing to be found in Arnhem Land and possibly in the Northern Territory. It was a well ordered, clean camp with all utensils stored out of reach of the dogs. There were thirty-seven people who claimed Mata-Mata as home and of these, twenty-six were examined. Barajuna had six wives and twenty-six recorded children, most of whom lived at Mata-Mata. One of his two grandchildren examined had early signs of leprosy and Barajuna was most cooperative in having his family treated.

Sister Kettle attended the New South Wales College of Nursing during 1964 and was unable to visit the Arnhem Land Bush again until 1965. Dr Hargrave went instead, accompanied by a recent arrival, Dr Noel D Vawser. Sister Judith Brockhurst from Elcho Island joined the survey party as she already knew many of the people and she could communicate in the local dialect. Rev Shepherdson flew the group of three to Mirrangaytja where they examined forty-nine people. From there Dr Hargrave and Sister Brockhurst walked to Doinjji (Dhoindji) which is south of Lake Evella, but the people disappeared into the bush leaving the hot ashes of their campfires. The doctor and Sister were not carrying camping gear and after a restless night on the hard ground they walked back to Mirrangaytja. In the meantime, Dr Vawser had visited other nearby groups. Rev Shepherdson flew the party on to Caledon Bay where thirty-nine were examined, and to Guramura where a further fourteen were seen. No visit was made to Mata-Mata as thirty people from there were currently visiting Elcho Island and had already been examined(7). The people from Murwangi had shifted camp to Nangalala where the airstrip was not ready so they were not seen in 1964.

Early in 1965 Sister Jessie Smith carried out a survey of five hundred and forty people at Milingimbi and had a list of whom she wanted Dr Hargrave to examine as suspects for leprosy. He visited Milingimbi from 27 to 30 April, 1965 and checked the health of one hundred and twenty nine from among whom he diagnosed two new cases of leprosy, plus one old tuberculoid leprosy patient from the mainland. However, there were still people missing whom he wanted to see and a visit to the mainland was arranged. The Methodist missionaries had established a new outpost at Nangalala on the western aspect of the Goyder River and had constructed a small jetty to allow a boat to bring supplies from Milingimbi. The river was tidal and could be most precarious. The people from Murwangi had moved to Nangalala the previous year but the airstrip was still not open.

Accompanied by Sister Jessie Smith, Rev Marcel Spengler and several Aborigines as crewmen, Dr Hargrave was taken by boat to the Goyder River. The party left Milingimbi at 3 am on the turn of the tide and then had to await the inflowing tide to go up the river to the landing where they arrived at 1 pm. Nineteen Aborigines were checked, three of whom were missing patients(8). The young woman Wanjar was one of these whom Nulmarmar would not permit to go for treatment and by this time her hands and feet were seriously damaged. There had been no damage when first diagnosed at Maningrida several years earlier. Dr Hargrave spoke to Nulmarmar and his son, the husband of Wanjar, and explained to them that if Wanjar came for treatment she would receive an invalid pension but she could not receive this while treatment was refused. It had been a long struggle to obtain pensions for these people and it ensured they could buy food at the mission and not have to hunt for it. Nulmarmar and his son were left with something to think about. The visitors did not stay long as they had to leave the river on the outgoing
tide or risk being stuck in the mud and bitten by mosquitoes or being trapped on the sandbar at the mouth of the river.

Sister Kettle visited the bush camps again during August 1965 when the swampy country was dry and the weather was sufficiently cool for walking. Five places were visited and one hundred and forty-four Aborigines were examined during a survey covering eighteen days. Nangalala was the first camp and as the mission had a tractor on the mainland, the journey by boat was only to a landing on the beach not far from Milingimbi. Sister Kettle and Sister Smith rode on the back of the tractor. The same people were seen again as seen earlier by Dr Hargrave, but this time Sister Smith immunised all the children. Not long afterwards a track was opened and Sister Smith acquired a motorbike on which she visited Nangalala on a regular basis during the dry season.

Sister Smith had intended to accompany Sister Kettle during the survey at Mirmgaytja, but she became ill and was replaced by an experienced Aboriginal nursing assistant, Buyumin, whose contribution to the success of the survey was invaluable. Sister Kettle had been asked by Dr Bruce McMillan from the School of Public Health and Tropical Medicine in Sydney to obtain faeces specimens for examination for parasites and Buyumin had little difficulty in achieving cooperation. Most people were, by then, well aware of hookworm and the necessary procedure for examination. One hundred and thirty-six specimens were despatched to Sydney where, apart from some hookworm, most of the parasites or ova found were from half cooked foods eaten mainly by the older people. The viscera of crocodiles were most popular, but, the people had seen worms in the intestines of kangaroos and bandicoots and they threw the gut from these into the fire. The viscera of some birds and lizards were also eaten. Cycad nuts had just been harvested and since the uncooked nuts were poisonous, the women were busy preparing them, first by soaking in water, then crushing them into flour before kneading the whole into dampers. The cycad dampers provided part of the feast at special ceremonies and were being stacked ready for Rev Shepherdson to transport to Elcho Island(9).

New outstations visited in 1965 included Buckingham Bay and Dulmuwayndayngur to the south of Buckingham Bay. Sister Kettle also visited Caledon Bay by air with Rev Shepherdson and it was there that she saw a three year old boy eat half a pound tin of golden syrup. He sat naked on the ground with the open tin in the circle of his legs and snarled whenever another child came near him. Using his fingers as a scoop he ate until full. Indulgent parents let small children eat whatever they wanted. Rev Shepherdson did not trade biscuits or jam but treacle and golden syrup were available. All trade was by barter in exchange for crocodile skins, good quality shells and pandanus mats and baskets. From the air in 1965 Rev Shepherdson drew attention to a road being blazed by a bulldozer from Gove airstrip to Arnhem Bay by the Nabalco Mining Company; it was a sign of change and he was not sure the Aborigines were ready for it.

In October 1965 Sister Heather Graham from the Survey Sisters section was examining school children at Elcho Island when Rev Shepherdson suggested that she and Sister Leila Jones should accompany him to the Koolatong River camp, inland from Blue Mud Bay. Nineteen people were living in a very beautiful area with adequate food and water(10). While the numbers were small the land could support them and they were all in good condition. Over the years ahead visits to the outstations were made by prior arrangement with Rev Shepherdson who let the Aborigines know beforehand that there would be Department of Health visitors.

Apart from the mining company bulldozers, the next major change came in 1968 when Rev Shepherdson applied for a licence to establish a sawmill at Lake Evella (Gapuwiyak). He envisaged a township of two hundred and fifty persons that would draw off people
from the crowded township of Galiwinku on Elcho Island. The birthrate on Elcho Island was about 60 per 1000 leading to a dramatic increase in the population.

Nangalala - Ramingining

In September 1966 Sister Jocelyn Yeatman, working with Sister Smith at Milingimbi, visited Nangalala and found Wanjar was camped further out. Following advice that she was in poor condition, Sister Yeatman walked for hours towards Murwangi to find her. On this occasion her husband agreed that she go to Milingimbi and even to Darwin if necessary. Wanjar was flown to Darwin on 1 November 1966 and admitted to East Arm Hospital(11). It was always disappointing for Dr Hargrave to have to do a repair job when he knew he could have prevented the damage had the Aborigines cooperated earlier. In this case pieces of dead bone had to be removed from Wanjar's feet before the deep seated ulcers would heal. Special boots were then made to support what remained of her feet. She had to learn to wear the boots and to look after them. The damage to her hands was largely irreversible, but she was taught how to care for what remained to prevent further damage. Her husband agreed to live at Maningrida and she was sent there to continue her medication. At a later date, when there was a trained nurse at Ramingining the family returned to their home area.

Nangalala steadily developed with a few houses for staff, stock yards and abattoirs. The mission planned to butcher sufficient fresh meat to supply Milingimbi and possibly Elcho Island. It was intended that the cattle grazing at Murwangi be butchered at Nangalala. The development seemed excellent until a visiting Health Inspector realised that the water table at Nangalala was too high for septic tanks and suggested the proposed township be on higher ground. The Welfare Branch had a new site surveyed ten miles further inland and by October 1972 one staff house had been built at Ramingining and forty acres cleared for a garden.

In the meantime, in 1968, the mission had added a small medical clinic to the side of a shed and one of the Sisters from Milingimbi visited there quite regularly during the 'dry' season. Sister June Law was there with her husband in 1968 and worked part-time in a voluntary capacity. Sister Jocelyn Shepherd (nee Yeatman) was living there with her husband, a mechanic, in 1970 and worked voluntarily while rearing her own babies. At this time the population had increased to about one hundred and thirty as Aborigines returned to their home country. Sister Rhoda Hoadley, another married woman, worked voluntarily during 1972-73 and anyone sick was taken over to Milingimbi to see a doctor.

The Department of Health took over the provision of a health service in 1974 when a male nurse, Mr Brian James, brought in a caravan by barge to provide a home for his wife and children. A prefabricated health centre was erected at Nangalala when it should have been on the new site at Ramingining. When Brian James left in 1976 an Aboriginal Health Worker, John White, took over and, with regular guidance from Sister Jessie Smith, he coped well. By this time a good airstrip had been constructed by the Government and a doctor was able to visit regularly. Sister Marion Laney spent a year there before marrying. She was replaced by Sister Sandra Spiers who was there when the health centre was moved to Ramingining late in 1978.

Aboriginal Child Health

During the latter half of the 1960s, Dr Donald S Jacobs took an active interest in the health of outback infants. He came to Darwin in January 1964 and later that year he met the visiting paediatrician and nutritionist, Dr Frederick W Clements, from the Institute of
Child Health at Sydney University who undoubtedly influenced his career. Dr Jacobs undertook extensive surveys of infants on all the missions and settlements and he studied growth and development. From the existing records in the outback he extracted the number of times infants had been admitted to a district hospital and the amount of medications they had received, in particular antibiotics. The results of these surveys remain as individual reports for each mission and settlement and although the material is invaluable, it has unfortunately not been fully analysed and published.

With the change to the metric system, introduced in 1966, it became necessary to change the weight graphs for infants and eventually to replace all the scales for weighing babies. Professor George Maxwell had already introduced the weight graph in use in South Australia and this was based on a British standard. There was much discussion over whether or not the Aboriginal weight graph, published in June 1966, should be used as a standard for Aboriginal babies. Dr Jacobs, in discussion with Dr Kerry Kirke at Alice Springs, decided to use the Harvard graph based on Boston babies. This standard was being promoted by the World Health Organization to allow a comparison between babies in various countries. The first metric weight graph became available about 1970 and is still the most accurate record for use by Registered Nurses. However, it was too detailed for use by Aboriginal Health Workers and about 1976 a simplified graph, known as the 'Road to Health' graph, was introduced. On it Aboriginal infants whose weights range between the 80th to 100th percentile are considered safe, whereas those whose weight falls below the 80th percentile require special attention.

Dr Jacobs spent twenty years in the Northern Territory, latterly as the Regional Director in the Top End. Unfortunately he moved into the broader aspects of public health rather than specialising in child health where the need has always been so great. However, he did make an important contribution towards the control of sexually transmitted diseases in both urban and rural areas.

**Medical Survey**

Once the Department of Health had field staff to collect information and compile statistics, the Public Service Board was more amenable to approving new staff positions. Even so, most of the increase came one at a time. Sister Brenda Divine, a nurse with a long background experience in the outback, called at the Darwin office late in 1962 to enquire about survey work. At the time she was the senior nursing officer with the Australian Inland Mission, having served at Mary Kathleen mining town in Western Queensland and at Fitzroy Crossing in Western Australia. After a much needed holiday, Brenda Divine returned in March 1963 as the third Survey Sister in the northern region. She travelled on the *Ghan* to Alice Springs where she was met at the railway station by the hospital secretary, Mr Dennis Spain. While in Alice Springs she made a short road trip north with Sister DE Kemp, the Survey Sister for the southern region. At Stirling station, Mrs Josie Petrick, a registered nurse, asked the two Survey Sisters to visit a sick woman in the Aboriginal camp. As the woman was having difficulty breathing, the two Sisters, one on each side, raised her a little and she instantly died. An autopsy revealed pulmonary tuberculosis yet Stirling station had been visited during the mobile X-ray campaign late in 1959. Further investigation revealed more tuberculosis and Sister Divine found very quickly what preventive health work was all about.

In Darwin, Sister Divine was instructed by Dr Hargrave in the recognition of leprosy and by Fr Frank Flynn in the diagnosis and treatment of trachoma. On 26 April 1963 he went with Sister Kettle by air to Maningrida where eighty people in a population of seven hundred were currently on treatment for leprosy(12). The situation there had problems due, in part, to the policy of communal feeding of the entire Aboriginal community in one
large dining room. Meals were staggered so that babies were fed first, then school children and lastly the adults. The babies' evening meal was at 3.30 pm when most were not even hungry. Mothers admitted that they gave the infants biscuits bought from the canteen when they cried from hunger later in the evening. At that time the population visiting Maningrida numbered nine hundred and forty-five and with natural increase it was soon over one thousand. Permanent outstations were being discussed, but it took a few years for these to evolve. Anaemia had become a serious problem with infants as young as three months of age having haemoglobin estimations as low as 3.8 gms per cent. Many of the babies were sent to Darwin for blood transfusions. There had been no anaemia in 1957. Many people were under the impression that hookworm entered the body through bare feet when in fact it will invade any part of the body that comes in contact with contaminated ground. Clothed or bare babies laid on the ground were, in fact, at risk if hookworm was present.

In 1964 Dr Langsford introduced the concept of a team approach to field work in the rural area. Oenpelli was selected as the site for a special project to include the development of health education techniques. A preliminary staff meeting was held in Darwin in April 1964 and the first visit of the team to Oenpelli took place in June, followed by further visits in July, October and November. The original team comprised Dr Noel Vawser, Sister Ngaire Stichbury, Sister Ness from Darwin Hospital, Mr Jim Sheppard, the senior Health Inspector, Mr Phillip Roberts and a dietician, Miss Moira Rankin. Dr Clements from Sydney joined the team during one visit to Oenpelli in 1964. In the immediate postwar era, Dr Clements had worked with the WHO as a consultant on nutrition and was also one of the founders of the concept of health education. This was a new approach that encouraged people to recognise their own problems and to think of ways of overcoming them rather than being told what they ought to do.

Dr Clements visited Oenpelli again in January 1965, accompanied by Sister Brenda Divine. This was followed by a Health Education seminar at Alice Springs in February and was attended by several mission and settlement nursing staff and others. As Dr Clements was a lecturer at the School of Public Health and Tropical Medicine, his visits to the Northern Territory were during the academic breaks. Sister Kettle visited Oenpelli in June 1965 and again in March 1966 as a follow up to the health teaching introduced by Dr Clements. There was a marked improvement in the attitudes of most mothers, and also the grandmothers who did much of the baby minding while the younger women worked. They had messages to be passed on to Dr Clements as a result of his earlier questioning about baby rearing customs. There was a new air of responsibility. Alcohol had not become a problem at that stage; it followed the 1967 Referendum. By then Sister June Armstrong had left for Papua New Guinea and had been replaced by Sister Aileen Lawler.

Dr Jacobs and Sister Kettle accompanied Dr Clements to Oenpelli during his third visit in July 1966. At this time he introduced a high protein vegetable food which could be served like porridge. It was most palatable and both parents and infants liked it. Paediatricians in developing countries were exploring alternatives to milk products. There also seemed to be a degree of lactose intolerance(13). Professor Maxwell was investigating this condition and had included Maningrida in his survey. The outcome of this research left little doubt that repeated episodes of diarrhoea led to a temporary intolerance of lactose; it was not a genetic factor. Dr Clements visited Maningrida in July 1966 and was shocked at the communal feeding situation which the Director of Welfare was determined to make work. Most of the dining room cutlery had disappeared and as the school children were not allowed to use their fingers in their food most of the midday meal went into the pig bin. The infant feeding situation was a little better as someone had ensured all the teaspoons
remained in the dining room. Dr Clements considered it most undesirable to attempt to provide meals for up to a thousand persons, not to mention the colossal expense.

Dr Clements was invited to participate in the College of Nursing Summer School from 15 to 19 November 1965; the main theme was health education. The following year he visited again from 14 to 18 November 1966 to teach on all aspects of child health as applicable to the Northern Territory situation. In conjunction with Dr Don Jacobs he dealt with the ever present problem of treating infective diarrhoea and the rehydration of small infants.

It can be said that Dr Clements introduced the concept of health education but, apart from that, Sister Lois Reid at Angurugu was the first to produce written teaching material as a guide for the use of school teachers. Although Lois Reid had achieved three nursing certificates, she was employed by the Church Missionary Society as a school teacher. When Mr Harry Giese saw the material she was developing, he gave her every encouragement and her productions were the first of their kind to be used in Aboriginal schools. In August 1971 a Health Education section was started within the Department of Health with the appointment of Dr Foong-San Soong from Malaysia as the officer in charge.

By June 1965 there were staff positions for seven Survey Sisters, two in Alice Springs and five in the northern region. Some very capable women were recruited but they did not all remain in the strenuous fieldwork. Sister Heather M Graham came early in 1964 and transferred later into the Schools Medical Service. Sister Gwen Mahaffey and Sister Nancy Frith joined the staff in mid-1965, but Sister Mahaffey suffered from asthma and found the dusty roads unbearable. Sister Frith had earlier spent a couple of years with the Eskimos in the frozen north of Canada where, for half the year, she had been completely isolated. She gave two valuable years to rural health work before moving on to Sydney where she made a major contribution to a community health research project with the School of Public Health and Tropical Medicine.

In 1963 Mr EJ Tonkin from the Commonwealth Accoustics Laboratory taught audiometric screening to Sisters Stichbury and Graham. Many children suffered hearing loss due to repeated and chronic ear infections. As ears healed, the children were fitted with hearing aids but unfortunately other children teased the wearers. Some teachers found it necessary to keep the hearing aids at school so they would not be thrown away.

Dr Albert Khan, an ENT specialist from Sydney, examined many children in Darwin and on the Aboriginal settlements during 1964 and 1965. He was followed by Dr Maurice Brown and Dr Dean Beaumont who made about twelve visits to the Northern Territory between 1966 and 1970 and compiled much valuable information on the incidence of otitis media. The latter doctors submitted a proposal to the National Health and Medical Research Council for further study in 1972 but it was rejected.

Many children sent to Adelaide or Sydney for ear surgery were away from home for up to six months and the Welfare Branch expressed concern. It was in 1971 that Dr Rory Willis, the Senior Otolaryngologist at the Royal Melbourne Hospital was asked to assess the possibility of ear surgery being done in Darwin Hospital. During his first visit Dr Willis performed operations (tympanoplasty) on the ears of four children; all did well and three experienced a valuable gain in hearing. This was an important milestone as it proved that such surgery was possible in an isolated part of Australia.

In July 1972, Dr Willis made a more extensive visit when over one hundred outpatients were examined and twelve ears were operated upon. Yirrkala was visited and sixty-eight
children were examined. In Alice Springs thirty-three were examined and four minor operations were performed. Six of the twelve operations in Darwin were tympanoplasties; all were successful with worthwhile hearing gains. Dr Willis visited again in October 1973 when a young ENT specialist, Dr Charles Finlay-Jones, was a Registrar at the hospital and a further six ear drum repairs were performed(14).

The following year, in January 1974, Dr ABN Rao, from Hyderabad in India, was appointed as a full-time ENT specialist at Darwin Hospital and has continued the work started by Dr Willis.

All Rural Health Sisters carried out surveys for leprosy in conjunction with their other work with the overall aim of checking everyone at risk once each year. Those who had close family connections with leprosy were seen more often. In this way the disease was diagnosed and treated before there was time to pass it on to others. From 11 November 1963 Sister Patsy Chalmers became a clinic Sister to provide outpatients treatment in the leprosy control section and to coordinate the case finding and advise the field staff of people who had missed out on the screening. Where people still lived a seminomadic life, it was never possible to check them all. A decade later critics, were saying this method was wrong as all people had a right to privacy whether or not they had the disease and were infecting others. It was the most appropriate method at that time and patients were identified, diagnosed and treated before there was any permanent physical damage to their hands and feet. On 23 March 1967 Sister Eileen Jones, after three years on the staff of East Arm Leprosy Hospital, was appointed to leprosy control on a full-time basis and is still doing this work twenty years later.

Sister Jillian Moore, who had joined the Church Missionary Society in November 1964, made a study of the attitudes of Aborigines to the health services. She joined the Rural Health section in July 1966 and with her background knowledge and interest in teaching health, her contribution proved invaluable. Aborigines had some strange ideas. When doing Mantoux tests on Groote Eylandt, one young man told her in very good English, 'Don't worry about me thanks Sister. If I get tuberculosis the government will give me a pension'(15).

On another occasion when Sister Moore suggested to an Aboriginal employee of GEMCO (mining company) that he spend some of his pay on food for his children, he replied that his wife had the child endowment. In Central Australia this important concept was explored by the Rev Jim Downing. He also recognised the fact that men regarded their wages as theirs alone and that child endowment, given by the Government, was seen as adequate for the total support of their children.

The Groote Eylandt people were well known for their independent attitude and their mercurial tempers, but Sister Moore was already well known to them so few problems arose. There were two Sisters, June Ashbury and Airlie Callanan, on the mission staff so Jillian Moore was not on call for emergencies. However, she was awakened at 2 am one morning with an urgent request to go to the hospital. A few weeks earlier a young pregnant woman with a heart condition and severe anaemia had been sent to Darwin Hospital for delivery. She did not like it there so returned home, someone having paid her airfare and it was indeed the era of self determination. This woman was in labour, with two feet delivered to the knees, and panting in distress from her heart condition. The Sisters delivered the baby to the umbilicus and then saw a large spina bifida. Two Sisters went to the radio and spoke to Dr Gordon White in Darwin. His instructions were clear and precise and they delivered the shoulders but then realised there was a hydrocephalic head. At 4 am Sister Moore was back at the radio and Dr White said he would be in the air on his way at first light. He arrived at 8.30 am, collapsed the head of the now dead
foetus and completed the delivery. The woman was flown back to Darwin Hospital because of her cardiomyopathy and the possibility of further complications, but two days later she was home once more, having discharged herself. This young woman was not from the bush. She had been educated in the mission school and this type of action placed an unnecessarily heavy professional burden on nursing staff isolated from a major hospital.

Sister Moore commented on the notion that Aborigines considered they were doing the white staff a favour by going to the hospital or health centre. They felt under no obligation to attend at the times most convenient to the staff. There were many calls at night for things that could have been treated during the day and this left the staff with little or no time to themselves. The training of Aboriginal Health Workers should have solved the problem but did not always do so. Two early Health Workers at Angurugu, Didjidi and Aringari, were very responsible and resourceful people, but they had retired from the work. Another generation of well educated Health Workers staffed the health centre. In the late 1970s a Sister was leaving after seven years work. During that time she had a holiday every second year but she had never taken a day off to visit Umbakumba. She went to Umbakumba for a few hours leaving the several Aboriginal staff in charge at Angurugu. During her absence a child met with an accident but none of the Health Workers could be found. Alyangula Health Centre was just sixteen kilometres distant along a straight bitumen road but no one thought to go there and the child died. All their anger was directed against the Sister who dared to leave them for a few hours. After that episode, Department of Health staff were appointed to Angurugu and Aboriginal staff shared 'on call' responsibilities.

Late in 1973 Sister Moore was appointed to Nhulunbuy as the first Rural Health Sister (new title). East Arnhem Region had come into being. She saw her role as supportive to other field staff and Sisters Joan Mulloy and Ivory Shields at Angurugu certainly appreciated her visits. It was a time of encouraging the Aboriginal town councillors to take some responsibility for health services and this required much individual initiative and patience. As Sister Moore wrote later:

*Our own expectations of health were so different from the Aborigines. We knew that things like anaemia and running ears, which undermine health, could be treated and a lot of diseases and ill health could be prevented. We felt under a certain amount of pressure by our own experience and from the specialists in Darwin who supported us, to improve the Aborigines’ health situation. The onus of health and medical care was carried by the nurses in the bush. In the bigger settlements and missions the onus was multiplied by the sheer number of people involved. The bush nurses were heavily committed to the improvement of health, yet continuously bogged down by the mundane - attending minor treatments, trying to encourage people to complete treatments and being 'on call' continuously. Many of the Aborigines seemed to accept a lower standard of health as normal and I am sure many could not see the connection between how they felt and the little tablets we suggested they swallow, especially when the response to treatment was gradual rather than sudden...so much depended on Government policies, and I think the policy of 'self determination', drastic though it was, heralded the beginning of real involvement by the Aborigines in their own health care(16).*

Sister Moore remained with the Department of Health until September 1974. During her time at Nhulunbuy she had repeatedly relieved at the Yirrkala Health Centre which had been staffed by the Department of Health since December 1970. During a period of three
and a half years to April 1974, a total of twenty-three Sisters had resigned from the Health Centre due to the aggressive attitudes of men who were drinking heavily. The Town Council at Yirrkala took the whole problem in hand and dealt with the Nhulunbuy suppliers of alcohol as well as the men concerned. Some young men voluntarily went to Bremer Island for a time to live off the land, while at Yirrkala Liyapidiny Marika, BEM, assumed responsibility for helping broken families to resume a more settled life once again.

Other nursing staff who served with the Rural Health Service (previously Surveys) for a few years included Sisters Janette M Sheridan, Patricia O'Shannessy, Ann Trinder, Janet Crutchett, Heather Cardinal, Christine Travers, Jan Wyllie, Lois Thompson and Margaret Eldridge.

An overall review of the rural health services in the Northern Territory was presented by Sister Kettle at the Third Australian Medical Congress in Sydney during 12 to 16 August 1968. This complemented the paper presented by Dr Peter M Moodie on 'Mortality and Morbidity in Australian Aboriginal Children' already mentioned elsewhere. In 1968 the Aboriginal population was in the vicinity of twenty-one thousand with several thousand more mixed race people. There were 860 births in 1967, giving a birth rate of 40 per 1000. In the same year there had been 398 deaths leaving a natural increase of four hundred and sixty-four. Approximately 45 per cent of the population was under fifteen years of age with a life expectancy of about fifty years(17), a similar picture to other newly developing countries. The health services had developed with divided control until, in 1968, there were seventy-eight nursing positions at forty-eight outposts (missions, settlements and cattle stations) all of which were under non-medical and non-nursing control. The Welfare Branch had an establishment of eighty-four positions and subsidised a further twenty-five positions on church missions and nineteen on cattle stations. In June 1968 only eighteen of these positions were filled by nurses qualified in both midwifery and infant health in addition to general nursing certificates(18), and most of these were on missions.

There was no nursing administration to select staff or to support them once appointed. Nursing staff in the outback worked in isolation; it was a very demanding task. Although the Aerial Medical Service had expanded and radio communication had improved, in 1968 there were still no transceivers in the outback hospitals or health centres, and staff had to leave their patients to go to the radio. On top of that the diagnosis made by the doctor was based on the examination by the nurse and on her observations. It could not be otherwise, but the responsibility was very heavy.

Sir William Refshauge, the Director General of Health in Canberra, expressed his interest in 'Development of Rural Health Services in the Northern Territory' as presented by Sister Kettle. On her return to Darwin, Sister Kettle prepared a submission on the need for expansion of the Rural Health Nursing Service and the urgent need to bring the Sisters working in the hospitals on Welfare settlements under the direct control of the Department of Health. The completed document was presented to the Director of Health, Dr WA Langsford, on 12 December 1968 and included the training of Aboriginal health staff(19). Dr Langsford's one comment was, 'Why didn't you write it before?'. A similar paper had, in fact, been prepared in August 1965 but the climate was not right. By the end of 1968 there was much political interest in the health of Aborigines and very real concern over infant morbidity and the overcrowding of Alice Springs Hospital. A few weeks later Sister Kettle went on recreation leave and on her return, at the end of January 1969, she became Matron of Alice Springs Hospital for a few months prior to seconmand to Papua New Guinea on 12 June 1969 as the Principal Matron in charge of nursing in that country.
Some aspects of the submission on 'Organisation, Development and Administration of Nursing Services in the Northern Territory' were put into effect a few months later by the appointment of more nursing staff to mobile health work and the provision of suitable four wheel drive vehicles. Sister Ngaire Stichbury provided the planning and organisation of staff. Action was taken at Ministerial level for the transfer of the hospitals on the Welfare settlements to the Department of Health and this came into effect on 1 January 1973. Colossal development and many new health centres followed the election of a Labor Government in December 1972. However, there was also much trauma due to dramatic change as the Welfare Branch was dismantled and sweeping new concepts were introduced. The rest of the story is outside the scope of this history and warrants a further book at a later date.

Endnotes

1 JC Hargrave, Medical survey, Warrabri native settlement, Dept Health File 60/639, Darwin.
6 ES Kettle, Medical Survey - Old Arafura Station Area on Goyder River, 6 Sept 1962, Dept Health File 63/623, Darwin.
8 JC Hargrave, Leprosy control - Milingimbi, 10 May 1965, Dept Health File 63/572, Darwin.
12 ES Kettle Report Maningrida April 1963, Dept Health File 60/727, Darwin.
16 ...
18 ES Kettle, Development of rural health services in the Northern Territory, Paper delivered at Third Australian Medical Congress, Sydney, 12-16 Aug 1968.
19 ES Kettle, Organisation, development and administration of nursing services in the Northern Territory, submission to the Director of Health NT, 1968.
Sister Ellen Kettle (1960), the first of the Survey Sisters and the author of this history

Drs Michael Ryan and John Hargrave lunch at the Keep River crossing on the way to Lejune station in 1960. They had been flown to Wyndham (photo: E Kettle)

Sister Ngaire J Stichbury spent from 1961-78 with the Rural Health team and made many long tours of cattle stations and settlements by road (courtesy: N Stichbury)

Sister Jillian Moore worked with the Church Missionary Society before joining the Survey Sisters for several years (courtesy: J Moore)
Sister Kettle and Sister Brenda Divine checking the health of children at Humpty Doo cattle station October 1966 (photo: J Dewey)

Sisters Lois Thompson (front) and Heather Cardinal immunising children at Adelaide River 16 August 1969 (photo: Dept of Health)
Lilies for lunch at Murwangi in Arnhem Land in 1962. Food was plentiful in the Goyder River area (photo: E Kettle)

Sister Kettle unpacking at the Mirrngayija camp after being flown in by Rev Shepherdson August 1962 (E Kettle collection)

Sister Brockhurst on the site of 'Florida' (1888) homestead at Murwangi near Ramingining August 1963. The flagstone floor was nearby (photo: E Kettle)

This young man from Murwangi in 1962 refused treatment for leprosy and died in the bush a couple of years later (photo: E Kettle)
EPILOGUE

Some parts of this history have extended past the planned date of 1970 as the health service is a continuing process and many changes have taken place since then.

The financial cuts in 1971 hit already inadequate health services to the most needy sections of the community, in particular the infant health services to Aboriginal communities in Central Australia. This led to the purchase of Mt Gillen Motel and its conversion to the Alice Springs Child Health Unit that was opened in Alice Springs on 5 February 1972. At the same time the services that had been cut were all restored.

Early in February 1972, the Government announced an 'Inquiry into the Health Services' in the Northern Territory. A committee of three men, two of them doctors, was appointed and they conducted hearings in all major centres between 4 April to 30 June 1972. Many people felt strongly about the health service and 94 written submissions were made to the committee. They visited all major centres and also ten Aboriginal missions and settlements. A few days prior to the release of the report in August 1972, the Government announced that all health services on Aboriginal settlements would become the responsibility of the Department of Health from 1 January 1973. Further, several new health centres were planned to replace inadequate or unsuitable buildings. Dr WA Langford left Darwin on 6 November for a senior post in Canberra and was replaced as Director of Health by Dr Desmond Travers.

More changes followed with the election of a Labor Government on 5 December 1972. The new Minister for Health, Dr Douglas Everingham, promoted a program for the redevelopment of health centres throughout the outback. Health centres had less inpatient beds than the previous hospitals and an expansion of the Aerial Medical Service was necessary to fly to hospital many who would have otherwise been nursed at home. More pregnant women were flown to Darwin, Nhulunbuy and Alice Springs Hospitals for delivery; the need for this may have followed the change from a hunting society to one with ready access to food in stores and a lack of exercise.

Dr Charles Gurd, a previous Director of Health in Fiji, was appointed as the Medical Superintendent of Darwin Hospital in September 1972. Having come from a cyclone-prone country he soon established a 'cyclone plan' and conducted an exercise in the hospital. On 6 December 1973 he became the Director of Health and was on hand on Christmas morning 1974 when Cyclone Tracy devastated most of Darwin. Many people had gone south for holidays and in line with the usual practice there had been no elective surgery over the Christmas period; many beds were empty. Following the cyclone four wards were unusable, a further six wards were flooded due to damaged roofs while only one ward was in good condition. The city's power was off but the hospital had emergency power and the theatres were functional. Shortly after daylight patients began arriving but others had to wait for roads to be cleared. Over 500 patients were brought to the hospital while private doctors and community health nursing staff opened clinics in schools or other buildings that still remained. Surgeons in private practice found their way to the hospital. A total of 112 casualties were admitted to Darwin Hospital.

Late on Christmas Day a RAAF Medevac Hercules aircraft arrived and early next morning the first group of patients requiring much medical and nursing care were flown out to hospitals interstate. The aircraft returned for more until all long-term patients had been transferred. A total of 49 deaths were recorded while another 16 people were reported
missing at sea. Among those killed was the hospital anaesthetist, Dr Paul A Macklin. Medical aspects of the aftermath of Cyclone Tracy have been well recorded in the *Medical Journal of Australia*, 24 May 1975.

The cyclone slowed down the construction of the new hospital at Casuarina as building materials were urgently required elsewhere. The new hospital was occupied during May 1980. A Royal Charter was granted in 1983 and the hospital became Royal Darwin Hospital. In January 1987 the former Darwin Hospital opened again as the University College of the Northern Territory.

On 1 July 1978 the Northern Territory achieved a degree of autonomy in the granting of self-government. Commonwealth Government departments were steadily handed over including the Department of Health on 1 January 1979. There have been many blessings in having the seat of decision-making in the midst of the scene of action and the author wishes to thank the Northern Territory Government for its keen interest in recording history.

*Dr Charles Gurd, CBE Director of Health at the time of Cyclone Tracy was the right man for the job at that crucial time* *(Dept of Health)*

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