

Pregnancy and Perinatal Health of Aboriginal and Torres Strait Islander Women and Their Babies: A Literature Review

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Introduction

The overwhelming conclusion from most studies and reports¹⁻⁵ is that the pregnancy characteristics of Australian Aboriginal and Torres Strait Islander (Indigenous) women and the perinatal outcomes of their babies are poorer than the non-Aboriginal and Torres Strait Islander (non-Indigenous) population. These studies also highlight that a woman's pregnancy characteristics impact upon her baby's perinatal health, such as birthweight, preterm birth and stillbirths^{6,7}. The majority of studies^{3,7,8} look at the Indigenous population as one group and do not look within this group in terms of pregnancy and perinatal outcomes. Studies looking within the Indigenous population are needed to better understand what is occurring within this population with specific needs, and design programs that are more targeted. Many studies, not only focused on perinatal health but Indigenous health in general, have thus far only reinforced messages that have been well-known for a number of years, such as Indigenous babies have poorer perinatal outcomes than non-Indigenous babies in Australia^{1,7}.

In this paper, government publications, peer reviewed and non-peer reviewed papers and reports were reviewed to examine pregnancy characteristics and perinatal outcomes of Indigenous compared to those of non-Indigenous women and babies. It focused on highlighting the limited number of studies looking within the Indigenous population of pregnant women and their babies in designing antenatal programs to address the current poorer outcomes of Indigenous babies in Australia.

Methods

Peer reviewed papers were searched through MEDLINE and non-peer reviewed

papers and articles were searched through 'Google Scholar'. Preference was given to more recent studies and those which included the Indigenous population only. Search terms included but were not limited to: 'Aboriginal', 'Indigenous', 'pregnancy', 'perinatal' and 'babies'.

Results

The Australian Institute of Health and Welfare's (AIHW) Perinatal Statistics Unit (NPSU) has annually reported on the pregnancy and perinatal health of Australian women and babies in its annual report *Australia's Mothers and Babies* since 1994. In 2007, 289,496 Australian women gave birth, according to the National Perinatal Data Collection, resulting in a total of 294,205 births. Since 2004 there has been an increase in the number and proportion of babies that have been born in Australia. In 2007 there was an increase of 12,036 births (4.3%) from the 282,169 reported in 2006, and a 14.4% increase since 2004¹.

Indigenous Mothers and their Babies

In 2007, NPSU reported that 10,883 Indigenous women gave birth which accounted for 3.8% of all Australian women who gave birth during that year. The largest number of Indigenous mothers resided in Queensland (3,170 women). The largest proportion per population identified as Indigenous resided in the Northern Territory (39.5%)¹. The Australian Bureau of Statistics (ABS) estimates that the total fertility rate of Indigenous women was 2.15 babies compared to 1.76 in the general Australian population⁹.

The age at which a woman gives birth is associated with poorer perinatal outcomes. Babies born to teenagers and older (over 35 years of age) women, are more likely to have adverse outcomes. The number of both Indigenous and

non-Indigenous teenage mothers has declined over the past 10 years, from 12,920 in 1998 to 11,912 in 2007, a reduction of 7.8% over the decade¹. In 2007, the average age at which an Indigenous woman gave birth for the first time was 25.2 years compared to 30.1 years for non-Indigenous women, and almost 19.5% of Indigenous mothers were teenagers compared to only 3.5% in the non-Indigenous population¹⁰. This high proportion of Indigenous teenage pregnancies was the main reason to include maternal age in the research, as it also highlighted the proportion of teenage pregnancies in remote areas versus urban areas.

Smoking during pregnancy is a well established risk factor for poor perinatal outcomes, including low birthweight, preterm birth and increased infant mortality^{6,11-14}. It is also more common for Indigenous women (51.8%) than non-Indigenous women (14.8%) to smoke during pregnancy². The United States Surgeon General's report (2004) concluded that smoking caused an average reduction in birthweight of about 200 grams^{6,12}. According to a 2006 report by NPSU on smoking and pregnancy in Australia, remoteness area of a woman's usual place of residence, younger maternal age and Indigenous status were all factors that influenced whether or not a pregnant woman smoked¹⁵.

Perinatal Outcomes

A key indicator of perinatal health is birthweight. In Australia, babies born less than 2,500 grams are considered of low birthweight. A baby with low birthweight is at higher risk of dying, having a longer hospital stay and to develop disabilities and a range of other complications after birth^{1,16}. In 2007, 10,883 Indigenous women gave birth to 10,879 Indigenous

babies. In 2007 12.5% of Indigenous births were of low birthweight compared to 5.9% of non-Indigenous births. The average birthweight of an Indigenous baby was 3,182 grams compared to 3,382 grams for a non-Indigenous baby in 2007. This is a 224 gram or 6.6% percent difference in birthweight¹.

Preterm birth is another poor perinatal outcome for a baby. In 2007, 13.7% of Indigenous births were preterm compared to 7.9% of non-Indigenous births¹. The maternal age of a mother is strongly associated with preterm birth. Indigenous mothers are more likely to be younger than non-Indigenous women¹, therefore they are at an increased risk of having a preterm baby. These figures highlight the high proportion of preterm births of Indigenous babies compared to non-Indigenous babies, however, this does not provide much information about what is happening within the Indigenous population of babies.

Stillbirth is death prior to the complete expulsion or extraction of a baby from its mother where a baby is 20 or more weeks into gestation or 400 grams or more in birthweight. In 2007, the NPSU reported that Indigenous women had a higher rate of stillbirth compared to non-Indigenous women (13.3 per 1,000 births vs. 7.1 per 1,000 births)¹. The higher number of younger mothers in the Indigenous population may be the reason for this higher rate of preterm births and stillbirths.

Discussion

Other studies^{1,5,10,16,17} have demonstrated the influence of the demographic profile of pregnant women on selected perinatal outcomes that research projects need to consider when examining the pregnancy and perinatal health of the Australian Indigenous population. The literature indicates that Indigenous pregnant women have higher rates of preterm birth, low birthweight and perinatal mortality than non-Indigenous women^{1,10}. Programs addressing factors such as smoking¹¹, monitoring and treatment of Indigenous women with diabetes¹⁸ and hypertension^{19,20} are needed to address the poor perinatal outcomes associated with these conditions during pregnancy. Examples of successful interventions are also needed to guide antenatal programs. Two examples are: 'Strong Women, Strong Babies' (SWSB) program in the Northern Territory, and 'Mums and Babies' project in Queensland. Both have made achievements in pregnancy

and perinatal health of Indigenous women and their babies. They have seen increases in birthweight (171 grams for the SWSB) and increased attendance of Indigenous women for antenatal visits early in their pregnancies, monitoring and care of conditions such as diabetes and hypertension²¹.

Conclusion

Although the perinatal health of Indigenous babies still trails non-Indigenous outcomes in Australia, a few programs have achieved substantial improvements through targeted programs with Indigenous pregnant women. These successes need to be shared and adapted to other Indigenous communities in Australia, to achieve improvements in perinatal health of our Indigenous babies.

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Glossary

Birthweight: the first weight of the baby (stillborn or live birth) obtained after birth (usually obtained within one hour of birth)

Low birthweight: birthweight of less than 2,500 grams

Gestational age: the duration of pregnancy in completed weeks calculated from the date of the first day of a woman's last menstrual period and her baby's date of birth

Maternal age: mother's age at the birth of her baby

Perinatal mortality: death of the child at any time between 20 weeks gestation and 28 days after birth

Preterm birth: birth before 37 completed weeks of gestation

Stillbirth: death prior to the complete extraction from its mother where a baby is 20 or more weeks into gestation or 400 grams or more birthweight

Teenage mother: mother aged less than 20 years at the birth of her baby

Total fertility rate: number of children a woman would bear during her lifetime if she experienced current age specific fertility rates at each age of her reproductive life

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