Chapter 5

Characteristics of the sample area and the sample

This chapter provides a snapshot of the social characteristics of the area used in the study. The first section discusses the geographical variations in the study area. Subsequent sections describe the characteristics of most recent pregnancy and background characteristics of the respondents and explore relationships between those characteristics and pregnancy resolutions.

5.1 NSW and ACT—A social portrait

This section explores regional variation in various social and demographic characteristics of New South Wales and the Australian Capital Territory, the area in which the YWPS and YMS were conducted. The aim is to explore the differences in the social settings, at the macro level, in which pregnancy resolution decisions are made.

Teenage pregnancy has been examined at local area level in Britain by McCulloch (2001). He finds that non-marital teenage fertility is directly related to living in socio-economically deprived areas (McCulloch 2001). In Australia, Siedlecky (1996) suggests that great regional variation may exist in teenage abortion but does not have the data to support such a claim. In addition to examining patterns of socio-economic indicators, this section seeks to explore the spatial patterning of abortion.

The indicators used in this section are provided for Statistical Sub-Division (SSD) level with the boundaries mapped for Statistical Division (SD). The Sydney Statistical Division is highlighted. The data behind each chart can be found in Appendix Table A5.1.

Socio-economic status

Socio-economic status can differ widely between and within small areas. In this section four measures reflecting socio-economic status are discussed: the unemployment rate of females aged 15–19, the index of relative disadvantage, the percentage of the population with a tertiary degree or higher, and the percentage of 16-year-olds still at school. Data on education and the index of relative disadvantage are drawn from the ABS publication *Australia in Profile—A Regional Analysis* (ABS 1998a). The unemployment rate for teenage girls is drawn from the ABS census product CData96 (ABS 1996).

The unemployment rate for females aged 15–19 in 1996 is shown in Figure 5.1. The unemployment rate for all persons in New South Wales in August 1996 was 7.5, and 16.6 for all teenagers. The rate takes into account only those who are in the labour force, that is those employed or looking for work. As would be expected the unemployment rate is lowest for teenagers in city areas. The Sydney SD shows the lowest rates, particularly in the inner city SSDs. One SSD in the Sydney area displayed a high rate for young women. The farming areas of rural New South Wales display high unemployment rates for young women. The Snowy region of South Eastern New South Wales has low unemployment for this age group, possibly due to the winter employment of casual staff, particularly in the hospitality sector, in the snow fields. The Lower Murrumbidgee SSD also displayed a lower than average unemployment rate.

The index of relative disadvantage (shown in Figure 5.2) is a measure derived by the ABS from the 1996 Census. Its construction is based on factors such as low income, low educational attainment, high unemployment and high unskilled employment. A low value on the index indicates the area is more disadvantaged than other areas, whereas a high value indicates less disadvantage (ABS 1998b).

In the Sydney SD, most of the SSDs displayed high values on the index of relative disadvantage, that is, these areas have less disadvantage than others. However the Fairfield-Liverpool and Cantebury-Bankstown SSDs both scored low values indicating more disadvantage. The Australian Capital Territory and surrounding areas also display high values. The west and north-west regions of the state all have low values.

Figure 5.1: Unemployment rate, women aged 15-19, 1996

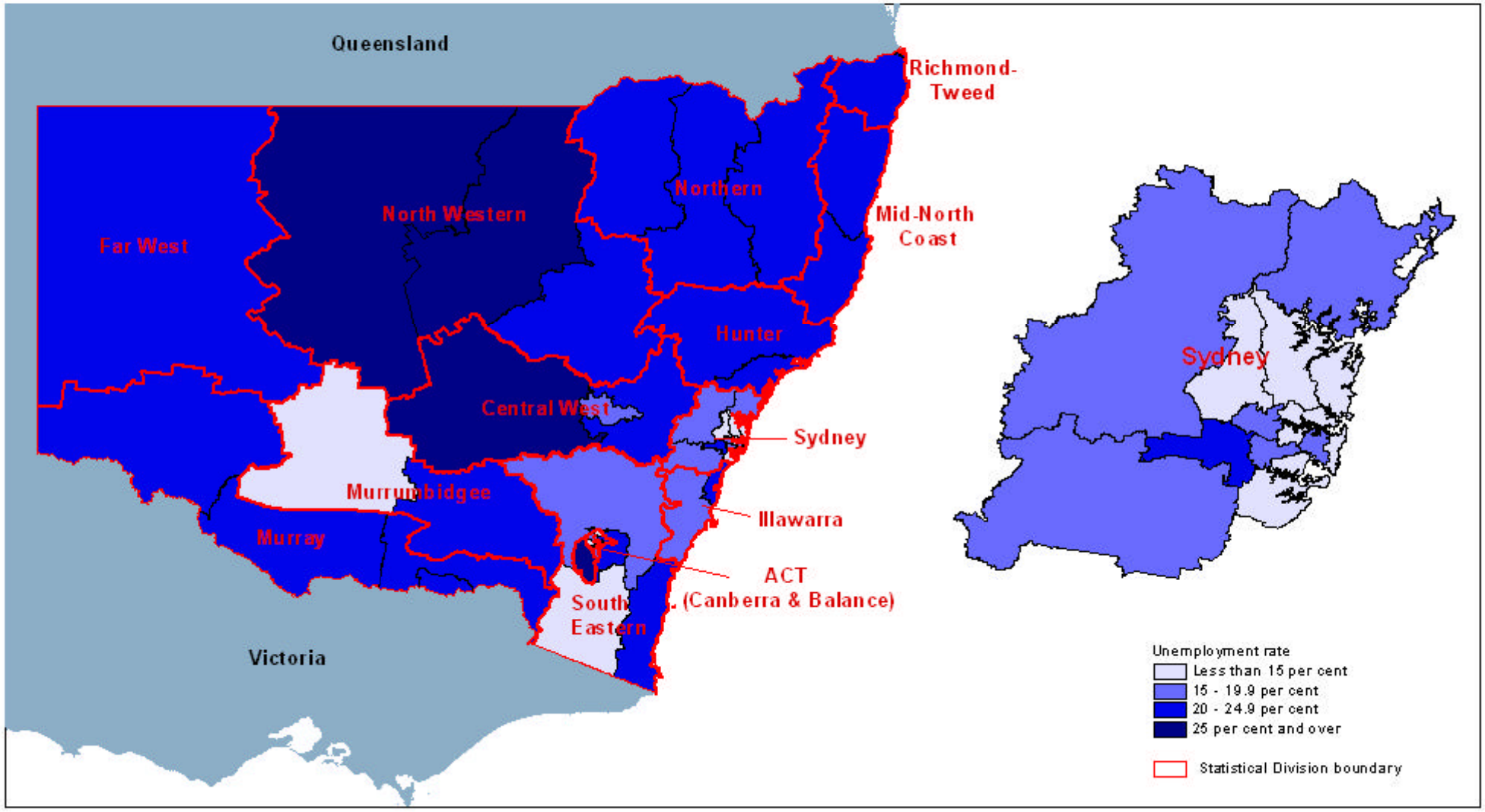
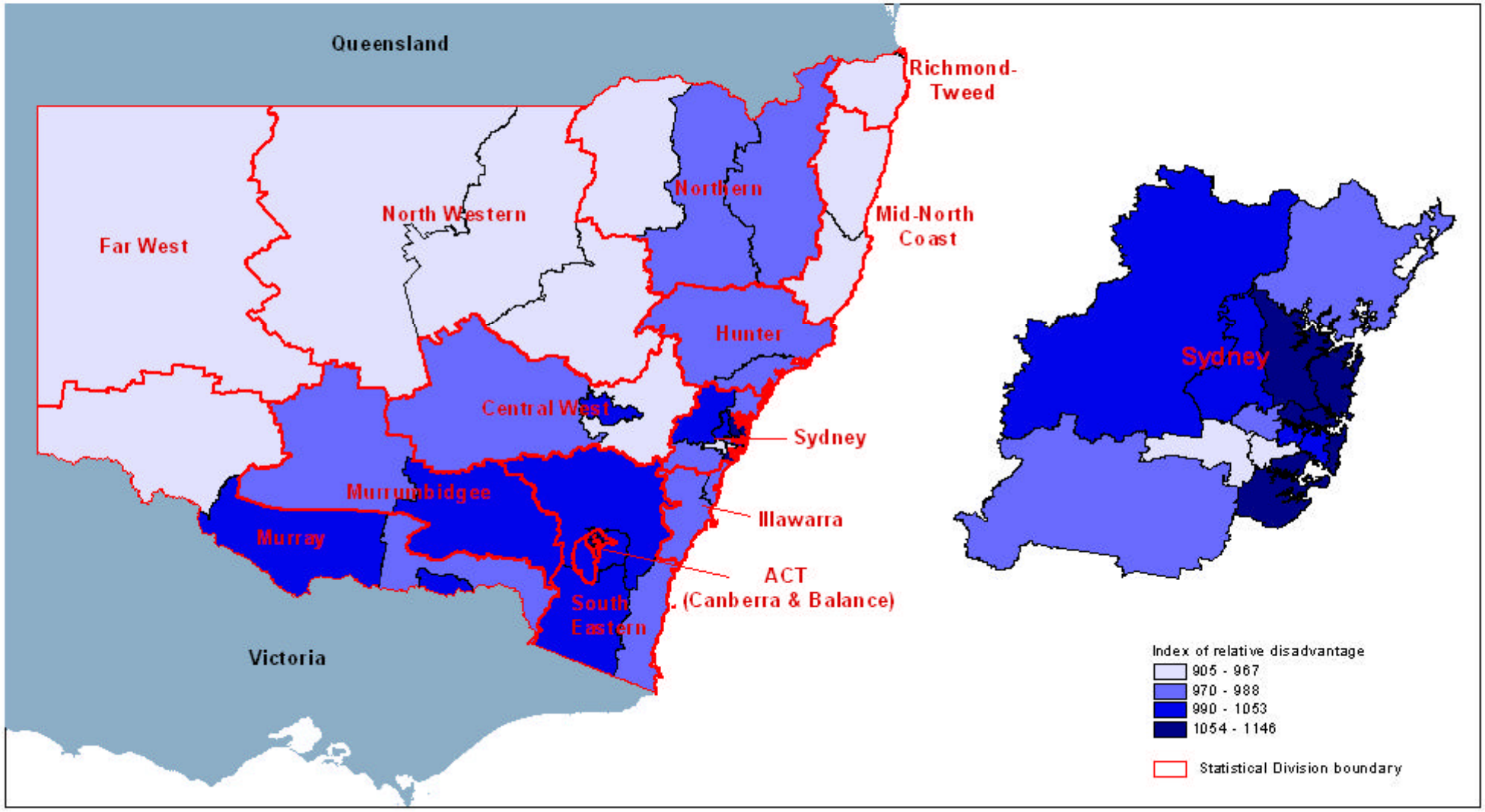


Figure 5.2: Index of relative disadvantage, 1996



Education is a key element of disadvantage and unemployment. Figure 5.3 presents the percentage of the population with a tertiary degree or higher. The inner Sydney areas all display high levels of education with over 20 per cent of the population holding tertiary qualifications. The Australian Capital Territory also had high levels of education. The central and western areas of New South Wales had the lowest levels of education, corresponding to their high levels of unemployment and more disadvantaged status. The Mid-North Coast area also has low educational attainment with corresponding high unemployment and more disadvantage.

For a more accurate reflection of the educational situation of teenagers in these areas, Figure 5.4 presents the percentage of 16-year-olds who are still attending school. This map shows that in the Far West, North Western, Northern (excluding the Northern Slopes) and Hunter SDs, less than 75 per cent of 16-year-olds are still in school. These were also the areas with high unemployment for young women. The inner Sydney areas, the Australian Capital Territory and surrounding regions and the Illawarra region all had high proportions of 16-year-olds still at school.

The preceding four maps indicate that there is a definite regional pattern in the socio-economic indicators at Statistical Sub-Division level. The city areas of Sydney, the Australian Capital Territory and surrounding areas, the Illawarra and the Northern Slopes all displayed favourable socio-economic indicators. The Far West, North Western, Central West and Murrumbidgee tended to display less favourable indicators.

Figure 5.3: Percentage of the population with tertiary qualifications, 1996

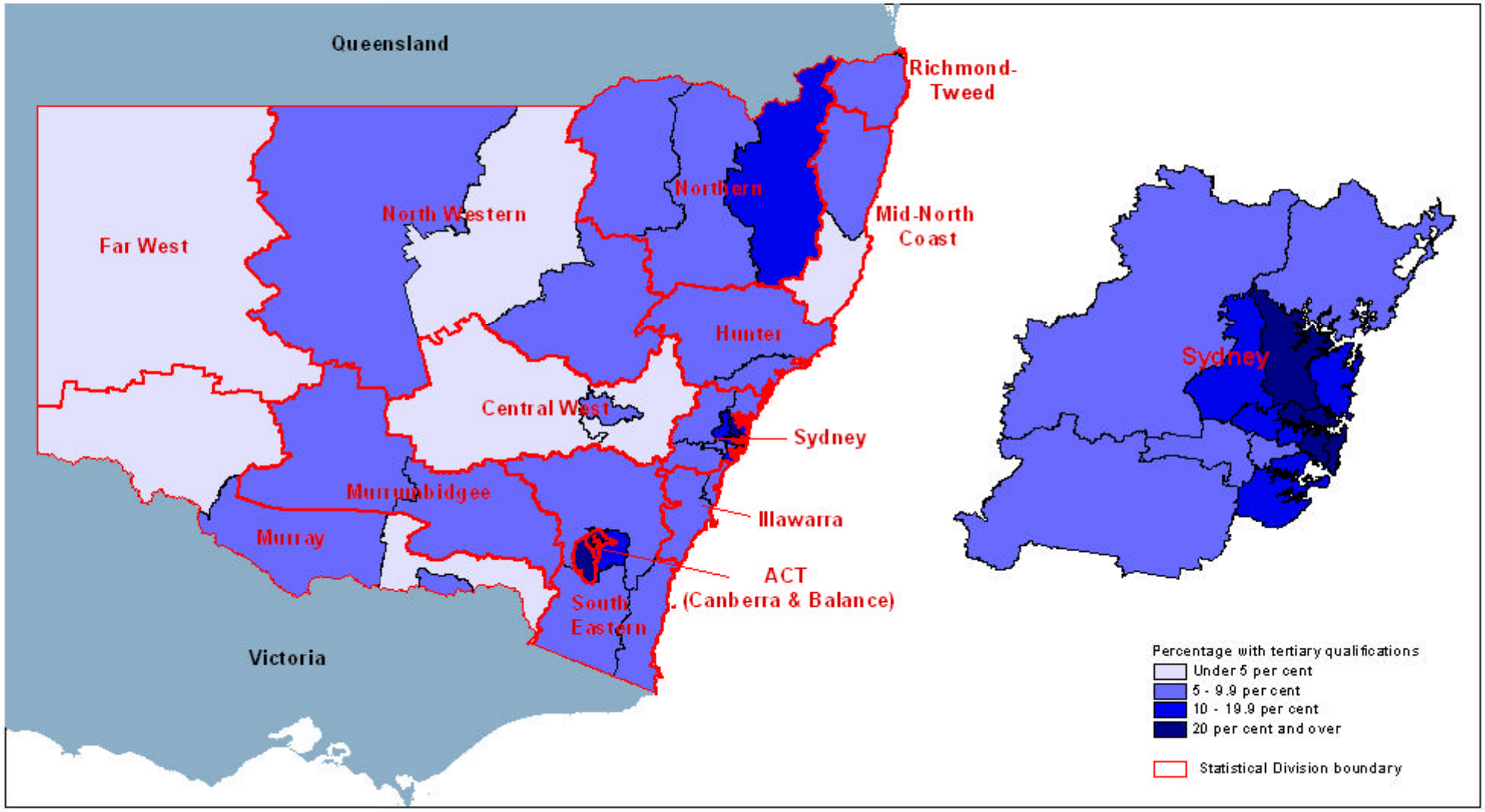
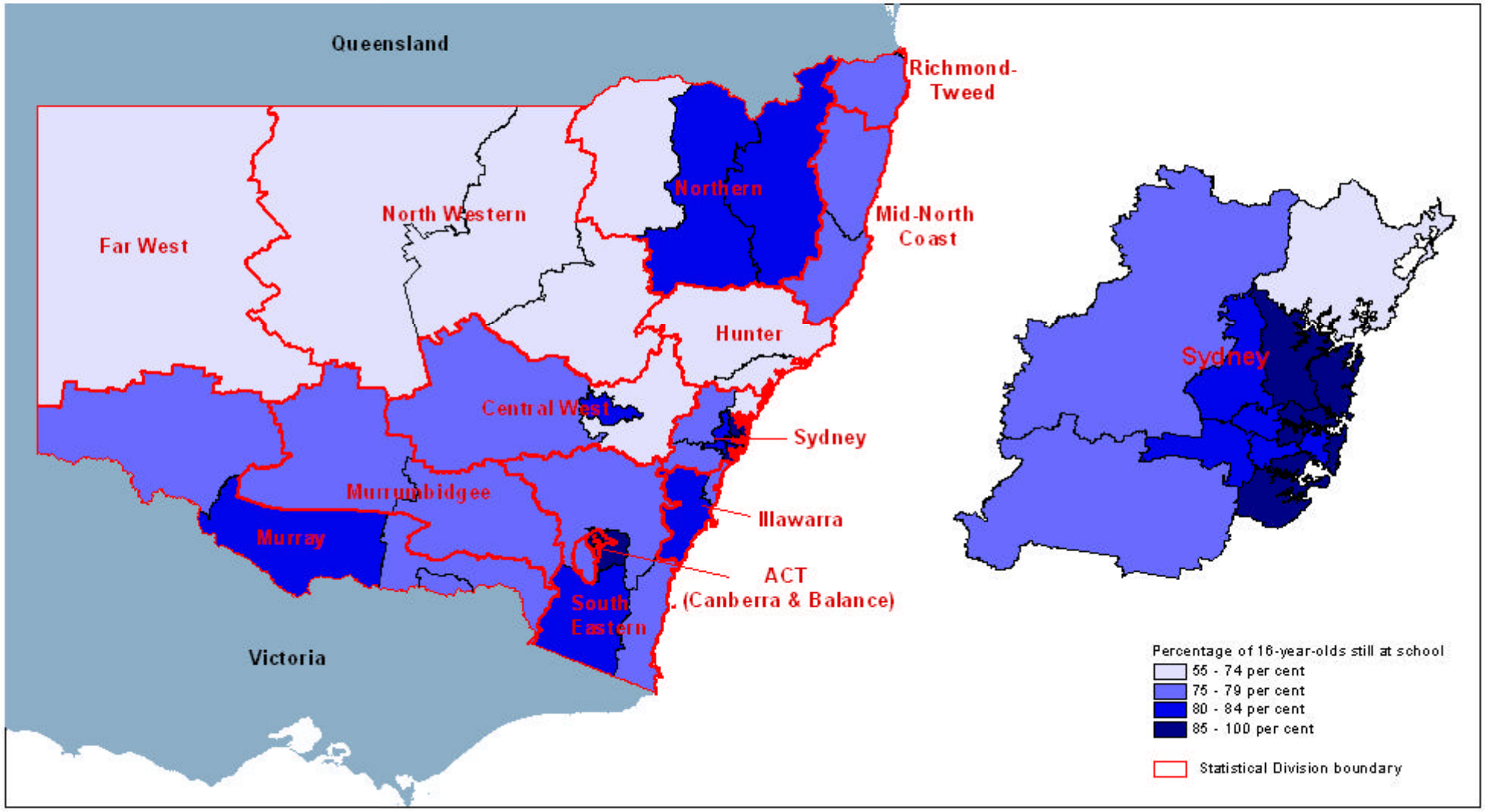


Figure 5.4: Percentage of 16-year-olds still at school, 1996



Ethnicity

The two indicators used to explore ethnicity are the percentage of the population identifying as indigenous Australians, and the percentage of the population born in a non-English speaking country. Both indicators are derived from the 1996 Census and were obtained at the SSD level from CData96 (ABS 1996).

In 1996 the proportion of the Australian population identifying as indigenous was 1.7 per cent (ABS and AIHW 1997), with 29 per cent of the indigenous population residing in New South Wales (ABS 2001). However, it is apparent from Figure 5.5 that there is considerable variation in the distribution of the indigenous population, relative to the non-indigenous population, throughout New South Wales. The Sydney SD, South Eastern, and much of the Murray had less than two per cent of their population identifying as indigenous. Most of the SSDs with less than one per cent were located in inner Sydney and the Australian Capital Territory. The inland band from Northern, through Central West and Murrumbidgee had between two and five per cent identifying as indigenous, as did the coastal areas. The SSDs in the western half of the state and the North Western SD had over five per cent of the population identifying as indigenous. The SSDs with the highest proportions of indigenous Australians were also the ones with the poorest economic indicators found in the previous section. This reflects the poor social conditions experienced by many indigenous communities.

In addition to its indigenous population, Australia is also home to many migrants. In 1996, 23 per cent of the Australian population were born overseas (ABS 1998c) and 13 per cent of the population were born in a non-English speaking country (ABS 1998c). While the indigenous population displayed higher concentrations in remote areas of New South Wales, those born in a non-English speaking country were heavily concentrated in the city areas (Figure 5.6).

The highest concentration was in Fairfield-Liverpool (42%), perhaps associated with the poor economic indicators found in that area. Less than five per cent of the population were born in non-English speaking countries in the majority of SSDs outside of Sydney and the Australian Capital Territory.

Figure 5.5: Percentage of the population identifying as indigenous, 1996

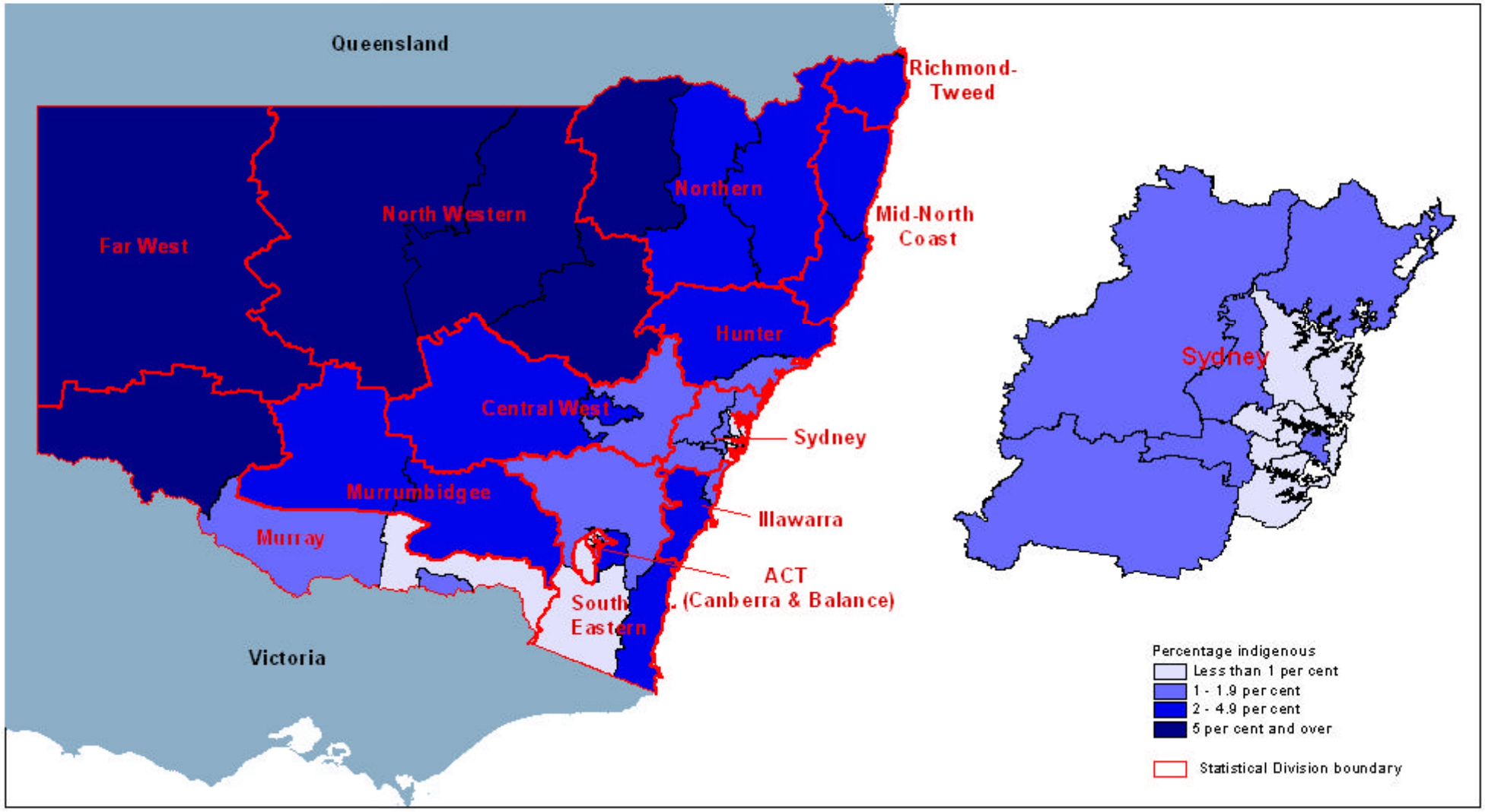
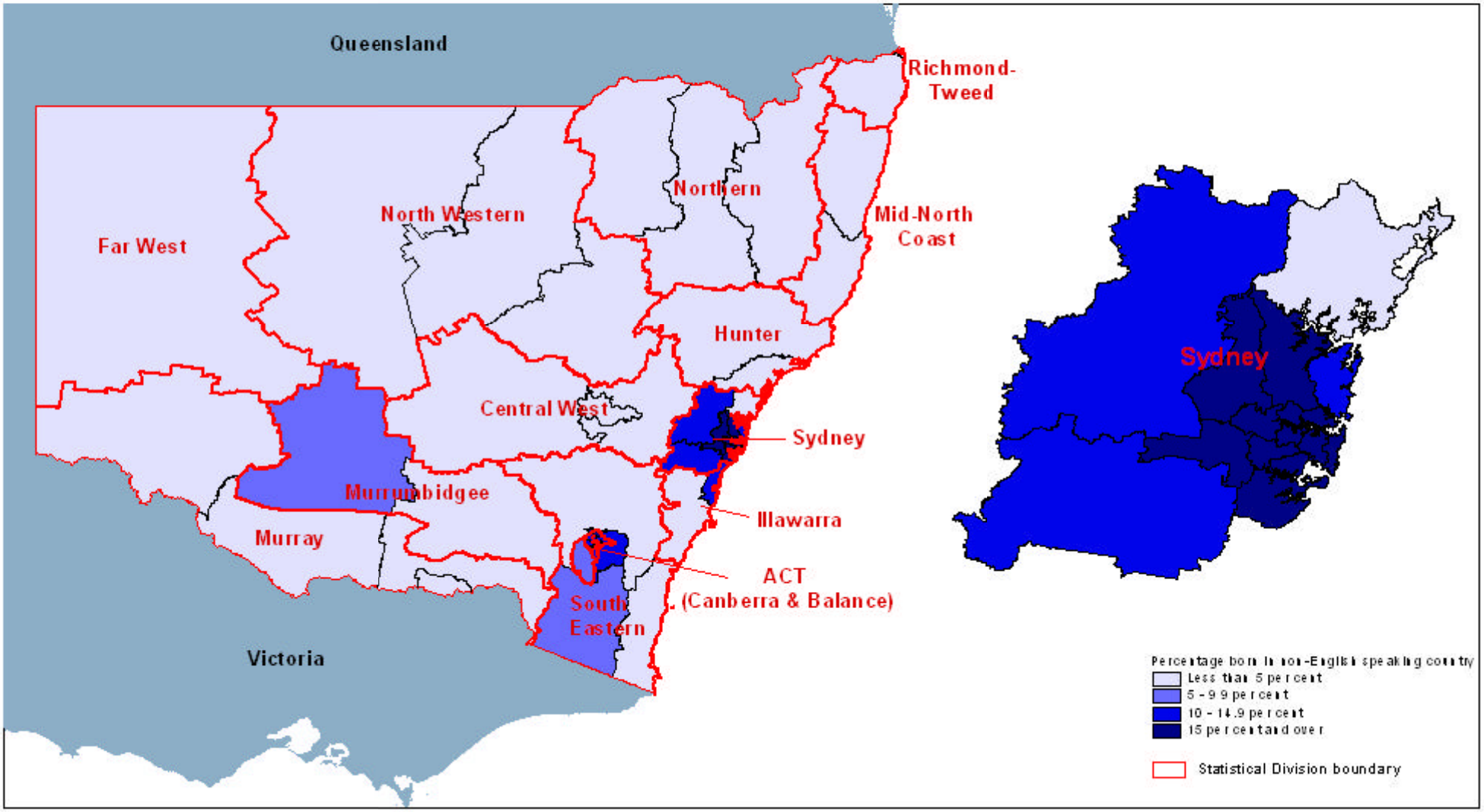


Figure 5.6: Percentage of the population born in a non-English speaking country, 1996



Fertility

This section explores the geographical aspects of two indicators of teenage fertility, the teenage fertility rate (TnFR) and the percentage of total fertility attributable to teenage fertility. The data for both indicators are drawn from unpublished data on the number of births in Statistical Sub-Divisions. Age-specific fertility rates are calculated using the estimated resident populations for each statistical sub-division.

In 1996 the teenage fertility rate (TnFR) for Australia was 20.1 births per 1,000 teenage women. There were marked differences in the fertility of teenagers across New South Wales and the Australian Capital Territory (Figure 5.7). In the inner Sydney areas and in the Australian Capital Territory the teenage fertility rate was less than 20. In the areas surrounding Sydney and the regions bordering Victoria, teenage fertility was within the range of 20–25. North-eastern New South Wales and the coastal regions were within the range of 25–30 births per 1,000 teenage women. The remainder of New South Wales had very high teenage fertility with rates over 30. The lowest rates were found in the Sydney areas of Lower Northern Sydney (2.7 per 1,000), Hornsby-Ku-ring-gai (3.5 per 1,000), and Eastern Suburbs (5.0 per 1,000). North Central Plain (68.8 per 1,000) and Macquarie-Barwon (86.6 per 1,000) had the highest teenage fertility rates.

In some areas, high teenage fertility rates may be just a reflection of higher fertility in the area. For all of Australia, teenage fertility accounted for 5.6 per cent of total fertility. In the inner Sydney areas and the Australian Capital Territory teenage fertility accounted for less than five per cent of total fertility (Figure 5.8). In the north-west areas of New South Wales teenage fertility accounted for over 10 per cent of total fertility.

The high percentage of the TFR attributable to teenagers in Macquarie-Barwon (15.1%) and North Central Plain (15.0%), combined with the high teenage fertility rates in these areas reflect a younger age of fertility than most other parts of the state. This also reflects the pattern of childbearing at young ages for indigenous Australians as discussed in Chapter 2.

Figure 5.7: Teenage fertility rate (TnFR), 1996

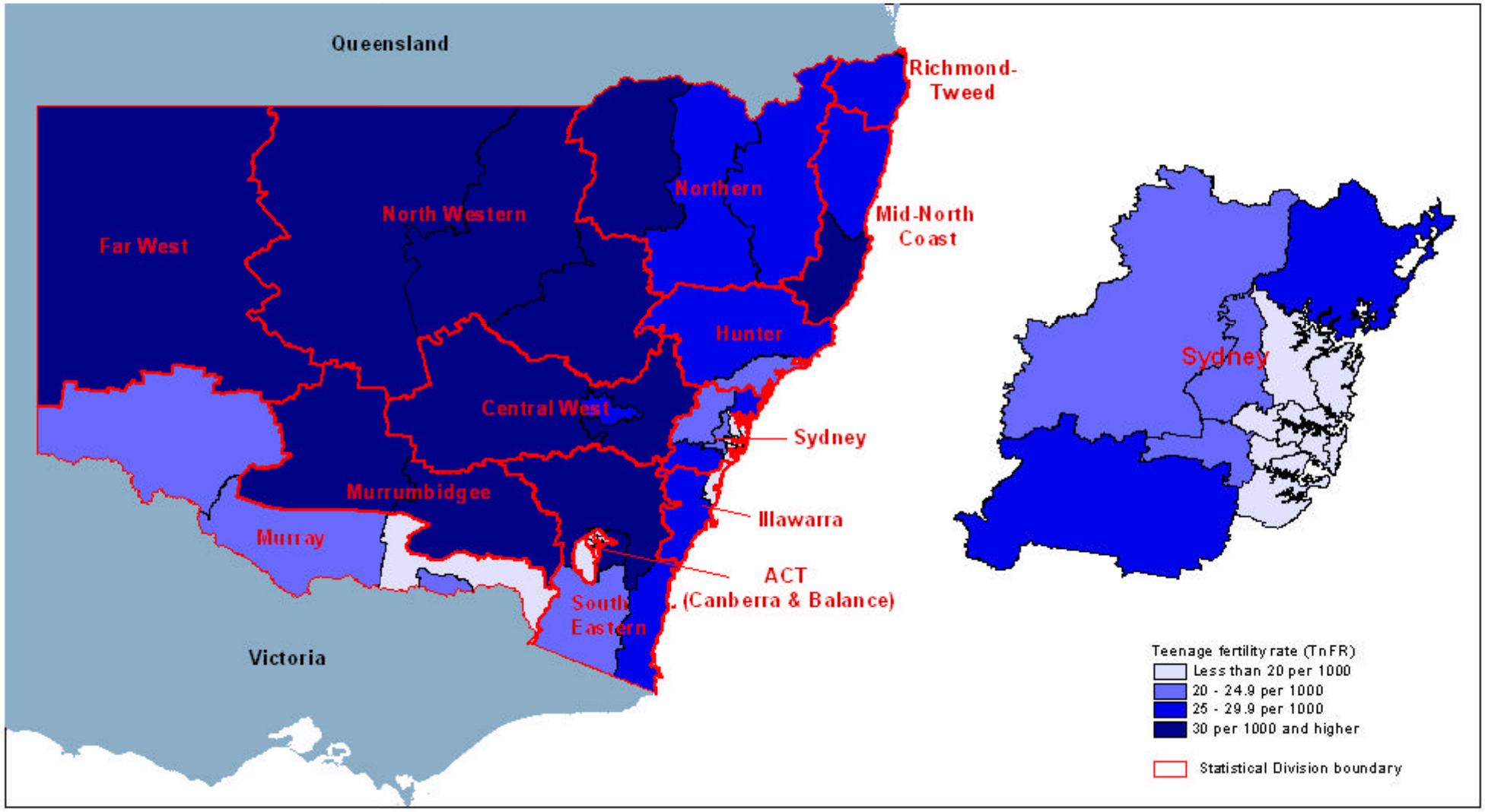
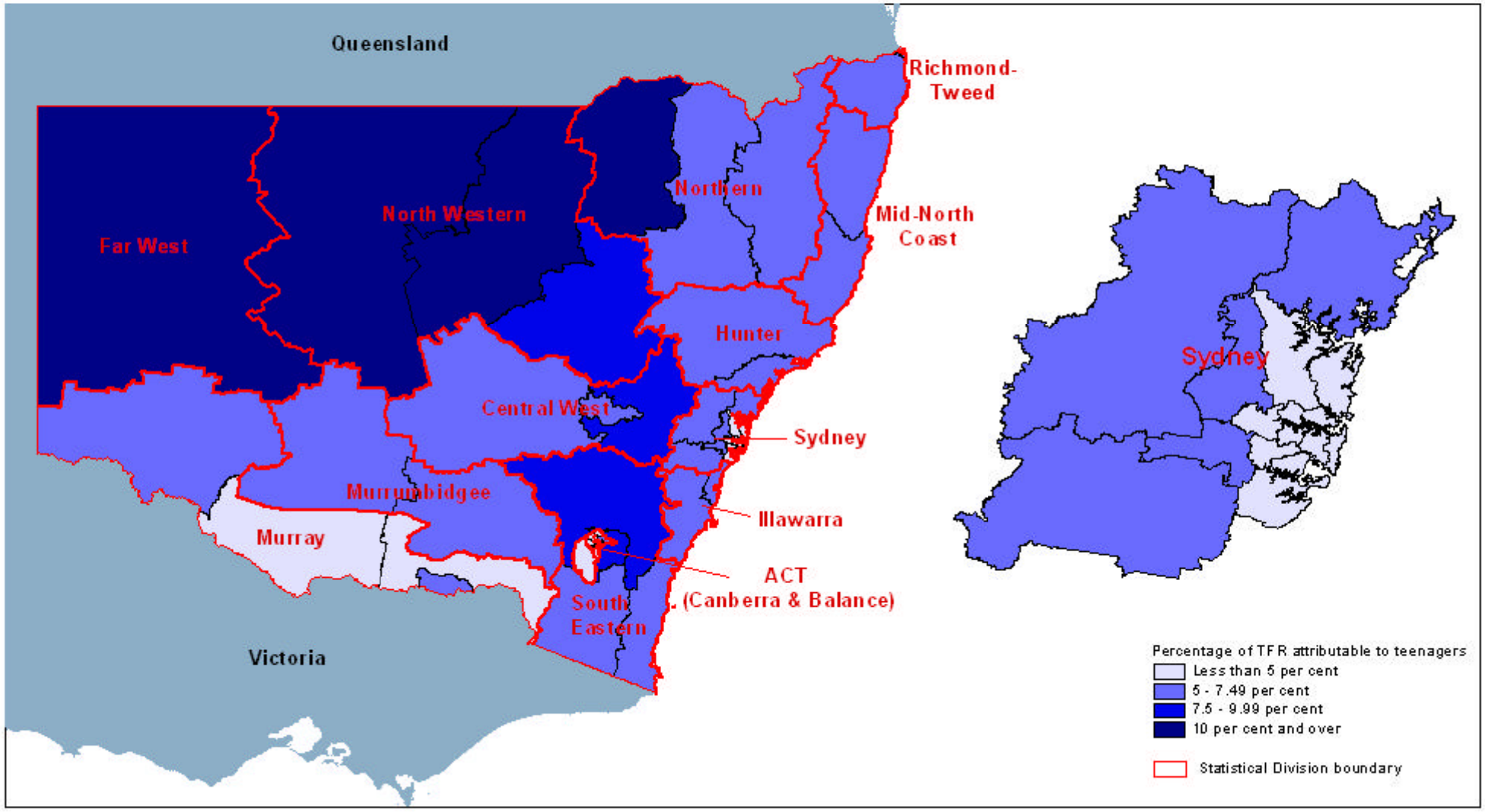


Figure 5.8: Percentage of total fertility attributable to teenage fertility, 1996



Abortion

This section explores the regional patterns of abortion by use of the abortion rate and the ratio of abortions to births. The number of abortions provided for public patients in public or private hospitals is not available at local area level due to the questionable reliability of patient information. Therefore, the data represented in Figure 5.9 and Figure 5.10 refer to Medicare claims for abortions in free-standing clinics, or surgeries, and for private patients in public or private hospitals. The abortions are classified by the postcode of the patient. Caution must be exercised when using abortion data based only on Medicare claims. By excluding the abortions performed in hospitals the number of abortions is under-enumerated. It is not known whether this equally affects all geographic areas, or whether some are more affected than others.

The total teenage abortion rate in 1996, based on Medicare claims, was 19.1 per 1,000 women. Low rates of abortion were found throughout western New South Wales[8]. The band of higher abortion rates stretching from Tweed-Heads along the coast, and through Sydney to the Australian Capital Territory reflects the access to abortion clinics for women living in these areas. However, the low abortion rates for Hornsby-Ku-ring-gai, Lower Northern Sydney and Inner Western Sydney, coupled with their low fertility rates suggest a lower rate of teenage pregnancy in these areas. Because of the very high economic status of families in these areas, it is possible that more abortions were performed and no Medicare claim was made.

The ratio of abortions to births for teenagers is presented in (Figure 5.10). The ratio only approaches or exceeds one in SSDs with access to abortion services in clinics or private surgeries. Geographic variations in the ratio of teenage abortions to births is a possible reflection of two things: access to abortion clinics and differing attitudes to family and abortion in rural and remote areas. Because the ratio used here excludes most abortions performed in hospitals it is possible, but unlikely, that the ratio in rural and remote areas

[8] The Upper Darling region has a very small population of teenage girls and the estimates of fertility and abortion provided here are not considered reliable.

Figure 5.9: Teenage abortion rate (TnAR), 1996

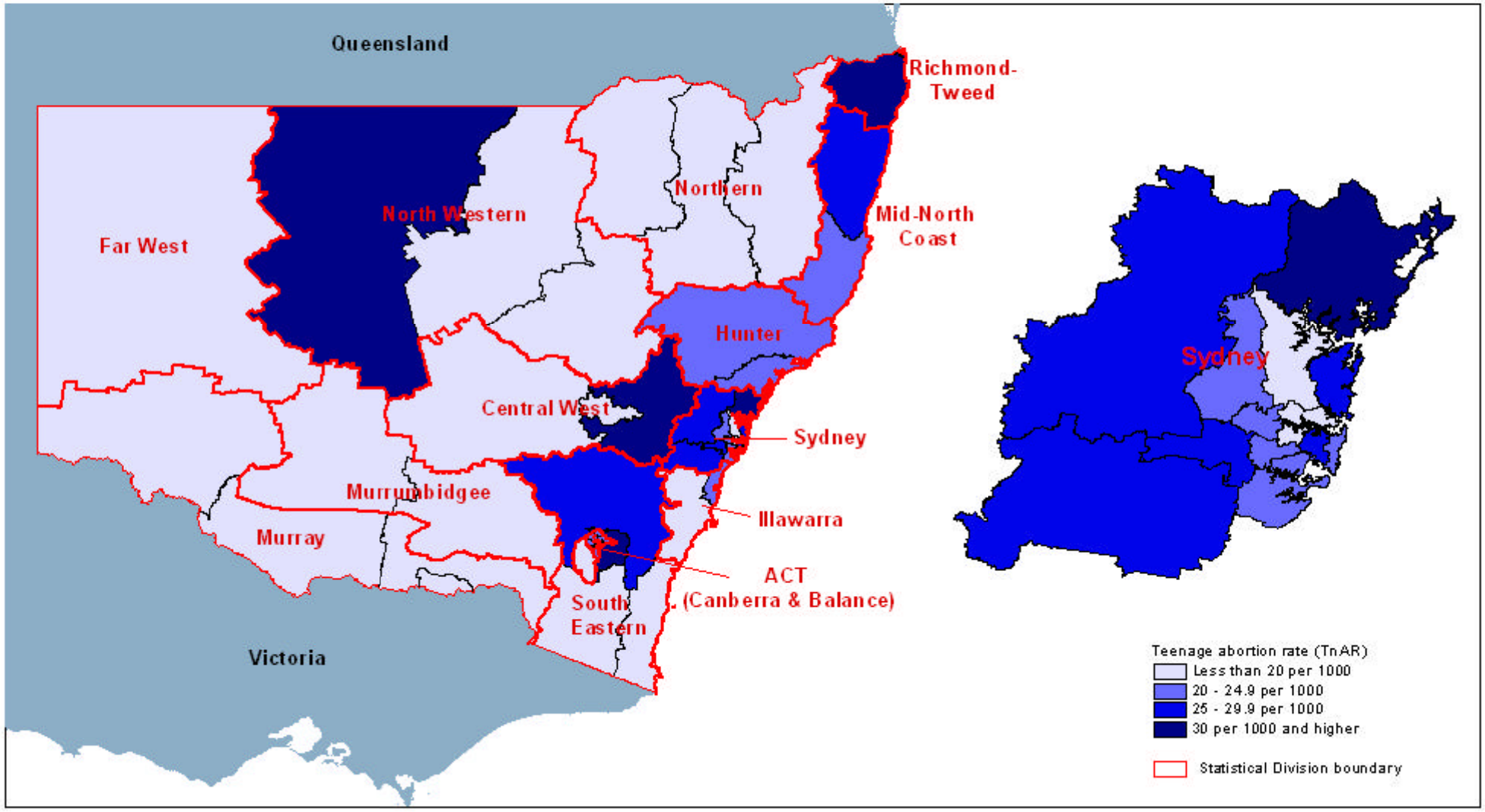
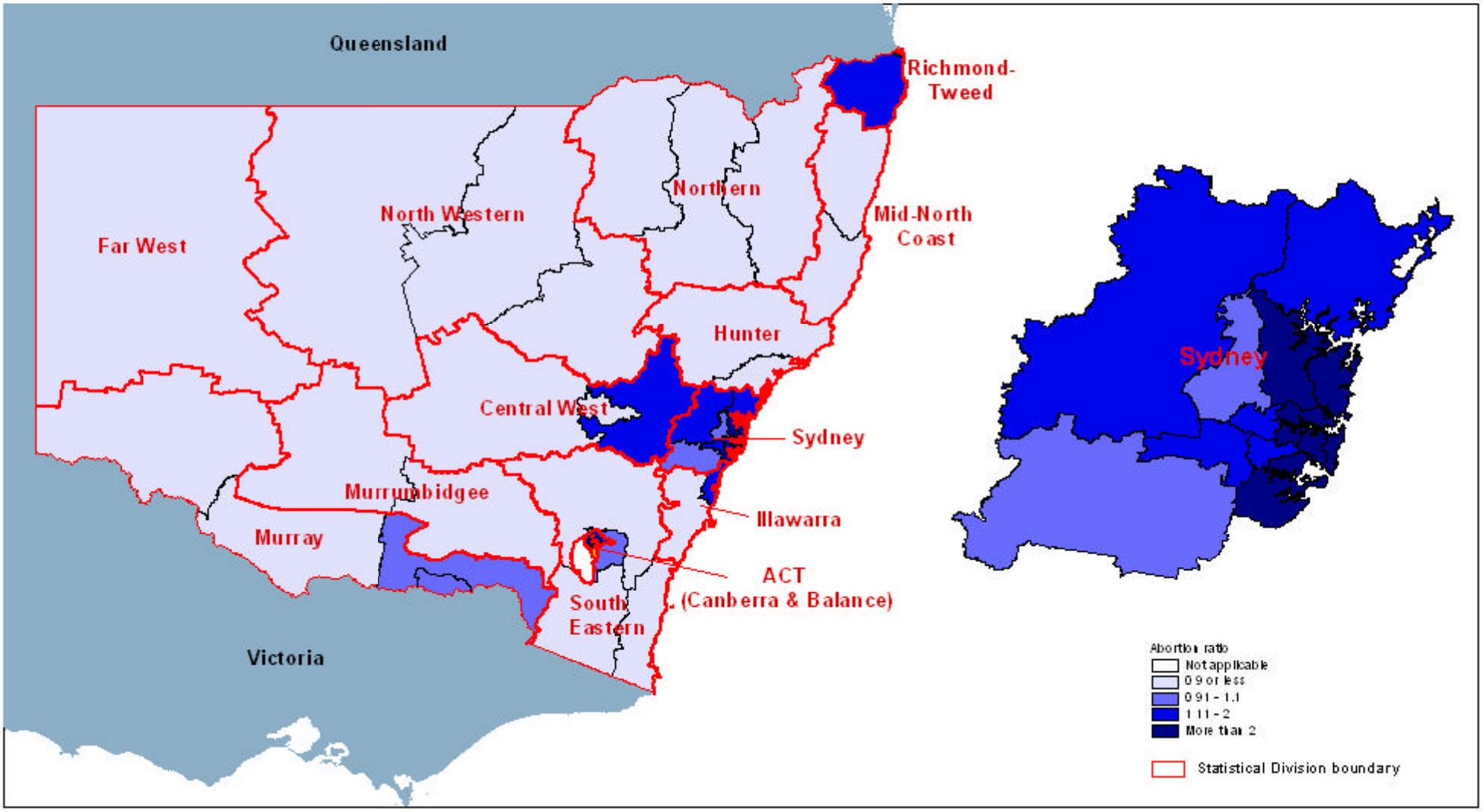


Figure 5.10: Ratio of teenage abortions to teenage births, 1996



could be higher. As abortion clinics are located around Sydney and Canberra, with clinics in Tweed-Heads and Albury, access seems to be a major factor in determining abortion levels.

This summary of socio-economic and demographic indicators highlights the different characteristics found throughout New South Wales and the Australian Capital Territory. The fertility of teenagers reflects other social characteristics such as unemployment and disadvantage, ethnicity and, particularly, indigenous status. Abortion also shows regional variation and is particularly prevalent in areas where abortion services are more readily available.

5.2 Pregnancy characteristics of the sample

The data presented in this section provide a description of the characteristics related to the pregnancies for which the sample was chosen, that is, the most recent pregnancy. Respondents were asked about their pregnancy histories, their feelings when they found out they were pregnant and whether or not they considered other options for resolving their pregnancies. Table 5.1 presents the respondents responses to these questions.

The most obvious difference between the two groups was in the planning of their pregnancies. None of the women who chose abortion indicated that they had planned their most recent pregnancy (Table 5.1). In contrast, 22 per cent of those who chose motherhood indicated that their pregnancy was planned. The two groups also differed considerably in their pregnancy histories. Those in the motherhood group were more likely, than were those in the abortion group, to have reported being pregnant before, and to report resolving that pregnancy through birth. While those in the abortion group were less likely to have had a previous pregnancy, they were more likely to have had a previous abortion than were those in the motherhood group.

As would be expected women who chose motherhood were more likely to report feelings of happiness when learning of their pregnancy than those who chose abortion. Only 14 per cent of those in the abortion group reported feeling happy as opposed to 66 per cent of the motherhood group (Table 5.1). Feeling happy about the decision to continue their pregnancies was nearly universal among the motherhood group (92%). The majority of women in the abortion group (62%), however, expressed mixed

feelings about the decision to terminate their pregnancies, with a further 34 percent reporting feeling 'Glad or relieved' (Table 5.1). This could be in part due to the timing of the surveys. Those in the motherhood group have had longer to come to terms with their decision, whereas those in the abortion group would be reporting their feelings within days of having the abortion.

Table 5.1: Characteristics of pregnancy by pregnancy resolution

	Motherhood		Abortion	
	n	%	n	%
Planned current pregnancy**	250	22.4	-	0.0
Previous pregnancies				
Been pregnant before**	387	34.5	42	20.8
Had a previous birth**	210	18.7	10	5.0
Had a previous abortion**	107	9.5	37	18.3
Had a previous miscarriage**	133	11.9	5	2.5
Feelings about pregnancy**				
Extremely unhappy	29	2.6	52	26.7
Unhappy, but adjusted to it	352	31.7	115	59.0
Happy	389	35.0	28	14.4
Extremely happy	342	30.8	-	0.0
Satisfaction with decision**				
Happy (Glad or relieved)[1]	1,028	92.3	67	33.5
Mixed feelings	81	7.3	124	62.0
Unhappy	5	0.4	9	4.5
Consideration of other options				
Birth or abortion**	197	17.6	121	59.9
Adoption**	45	4.0	23	11.7
End pregnancy yourself**	20	1.8	11	5.6

* $p < 0.05$

** $p < 0.01$

1. Women in the abortion group were asked if they felt glad or relieved rather than happy.

Source: YWPS (Evans 1999).

Young women who chose abortion were more likely to consider alternative options for resolving their pregnancies than those in the motherhood group (Table 5.1). Only 18 per cent of the motherhood group considered abortion compared with 60 per cent of the abortion group who considered birth. Adoption was considered by few women in both groups, with four per cent of those who chose motherhood and 12 per cent of those who chose abortion, considering adoption as a means of resolving their pregnancies.

A small proportion of women in both groups (2% motherhood, 6% abortion) reported trying to end the pregnancy by themselves. Most of these women reported the use of alcohol or drugs as a means to end their pregnancies. Other methods reported were

horseback riding, excessive exercise, getting a friend or partner to repeatedly punch their stomach, taking herbs or excessive doses of Vitamin A.

From the outset then, the women in the two groups report differences surrounding the context and their feelings about their pregnancies. Women who chose motherhood were more likely to have been pregnant before, to have planned their pregnancies (although the majority were unplanned), and to have been happy on finding out they were pregnant. There were also more likely to feel happy about their decision. Those in the abortion group were more likely to consider other options for resolving their pregnancies and to have had mixed feelings about the decision.

5.3 Background characteristics of the sample

In this thesis, background characteristics refer to characteristics of the respondent before or around the time of her conception. Table 5.2 presents selected background characteristics of the YWPS sample by resolution decision. Most of these variables displayed significant relationships, based on Chi-squared tests, with the resolution decisions of respondents.

Area of residence affects the resolution decision in the expected direction. That is, women in the abortion group were more likely to be living in inner urban areas, at the time of conception, and less likely to be living in rural and remote areas. This reflects the issues of service provision and access as discussed in section 5.1. There were also differences between the two groups in their living arrangements at the time of conception. Nearly three-quarters of the abortion group lived with their family of origin at the time of conception, compared to only half of those in the motherhood group. The motherhood group were more likely to be living with the putative father, either alone or with his family. Similar proportions were living alone or with peers.

Religion and ethnicity were also related to pregnancy outcome. Having no religion was associated with abortion, while adherents of non-Catholic Christian denominations were more likely to become mothers. Similar proportions of each group stated that they were Catholic. For those who specified a religion, attendance at religious services was not significantly related to the resolution of their pregnancies. With regard to ethnicity, women born in non-English speaking countries had a higher representation in the

abortion group, while indigenous women were more likely to be in the motherhood group.

The respondent's age at conception was tested as a dichotomous variable (Table 5.2) and also as a continuous interval variable using a means test (not shown). Neither test established a significant difference between the two resolution groups in terms of their age at conception.

Table 5.2: Individual background characteristics by pregnancy resolution

	Motherhood		Abortion	
	n	%	n	%
Area of residence**				
Outer urban	544	48.5	102	50.5
Rural and Remote	540	48.1	63	31.2
Inner urban	38	3.4	37	18.3
Living arrangement at conception**				
Family of origin	535	47.7	149	73.8
Putative father	473	42.2	31	15.3
Alone or with peers	114	10.2	22	10.9
Religion*				
No religion	306	27.4	76	38.2
Catholic	283	25.3	48	24.1
Other Christian	496	44.4	71	35.7
Muslim/Other non-Christian	33	3.0	4	2.0
Church attendance				
Regular	136	16.0	22	15.4
Occasional	321	37.7	44	30.8
Never	395	46.4	77	53.8
Ethnicity**				
English speaking	985	88.1	172	85.1
Non-English speaking	55	4.9	28	13.9
Indigenous	78	7.0	2	1.0
Age at conception				
17 or younger	291	26.0	64	31.7
18 or older	828	74.0	138	68.3

* $p < 0.05$

** $p < 0.01$

Source: YWPS (Evans 1999).

These bivariate relationships are important in their own right, but need to be tested controlling for other factors. The following section describes a multivariate logistic model based on the respondents background characteristics. It forms the basis of analytical models to be used in subsequent chapters.

5.4 Association between background characteristics and pregnancy resolution

Logistic regression, using the base category method, was employed to analyse the multivariate nature of the relationship between the background characteristics discussed in section 5.3 and the decision to terminate or continue a pregnancy. The results are presented in Table 5.3.

Table 5.3: Logistic regression coefficients—Parameter estimates of background variables on resolution decision[1]

	Model I			
	β	SE	Odds Ratio	
Area of residence				**
Suburban	0.00		1.00	
Rural and Remote	-0.23	0.18	0.79	
Inner urban	1.62	0.29	5.04	**
Living arrangement at conception				**
Family of origin	0.00		1.00	
Putative father	-1.53	0.23	0.22	**
Alone or with peers	-0.56	0.28	0.57	
Religion				**
No religion	0.00		1.00	
Catholic	-0.56	0.22	0.57	*
Other Christian	-0.69	0.20	0.50	**
Muslim/Other non-Christian	-1.29	0.62	0.28	*
Ethnicity				**
English speaking	0.00		1.00	
Non-English speaking	1.41	0.30	4.10	**
Indigenous	-1.90	0.73	0.15	*
Age at conception				
17 or younger	0.00		1.00	
18 or older	-0.32	0.18	0.73	
Constant	-0.92	0.22		**
-2 Log Likelihood change	957.73			
Degrees of freedom	10.00			
Cox & Snell pseudo R^2	0.11			
Number of cases	1310.00			

* $p < 0.05$

** $p < 0.01$

1. Dependent variable coded as 1=Abortion 0=Motherhood.

Source: YWPS (Evans 1999).

The multivariate model confirms the relationships found in the bivariate analysis (Table 5.3). The odds of choosing abortion for those living in a rural or remote area were 79 per cent of the odds for those living in suburban or outer urban areas. Similarly, the odds for those living in inner urban areas were 504 per cent of the odds of the base category. Respondents who did not live with their family of origin had lower odds of

choosing abortion. This effect was strongest if she were living with the putative father and his family.

Religion and ethnicity were also significantly associated with the resolution decision. Respondents of all religions displayed lower odds of choosing abortion than those with no religion. Muslims and other non-Christians had the lowest odds, followed by other Christians and Catholics. Indigenous women displayed lower odds of choosing abortion than non-indigenous women born in Australia or another English speaking country. Those born in a non-English speaking country had higher odds of choosing abortion than non-indigenous women born in Australia or another English speaking country.

5.5 Conclusion

This chapter has examined the external environment in which the pregnancy resolution decisions of the population under study have been made. It has shown that within one state of Australia, New South Wales, there are large geographical variations in the fertility and abortion experiences of teenagers. This could reflect the underlying socio-economic and demographic characteristics of these areas. In particular, access to abortion services is highlighted in the stark contrasts in the abortion rate and ratio in areas with and without ready access to abortion services.

It has also examined characteristics of the pregnancy being resolved, and some background characteristics of the respondents to the Young Women's Pregnancy Survey. Already it is apparent that there are differences between those who terminated and those who continued their pregnancies. Women in the motherhood group were more likely to have planned the current pregnancy, been pregnant before and resolved that pregnancy through birth than were those in the abortion group. They were also more likely to express happiness, both about the pregnancy and with their decision. Perhaps because of this, they were less likely than those who terminated their pregnancies to have considered other options for resolving their pregnancies.

In terms of background characteristics, living in an inner urban area, with the family of origin, reporting no religion and being from a non-English speaking background were associated with increased odds of abortion. The lowest odds of abortion were associated

with being indigenous, adhering to a non-Christian religion, living with the putative father and living in a rural or remote area.

The remainder of this research builds on the model presented in Table 5.3 to examine other factors that may be associated with the resolution of teenage pregnancies. In Chapters 7, 8 and 9 this model is used to control for the effects of the respondent's background while testing the effects of education, the impact of significant others and psychosocial characteristics. In Chapter 6, however, we move backward to explore patterns of sexual initiation and contraceptive use prior to pregnancy.