9 Summary

Introduction

This chapter presents details of the major changes noted in the data between this and the first edition, as well as summary measures of health differentials by socioeconomic status of area of residence for the health status and health service utilisation data mapped in Chapters 5 and 6.

Change between editions

The reference period for the data in the first and this second edition varies according to the dataset. In general, the Census data in this edition are ten years on from the first edition (Chapter 3: 1986 Census and 1996 Census); and the income support (Chapter 4: 1989 and 1996) and health status (Chapter 5: 1985-89 and 1992-95) datasets are seven years later. The data for services and facilities are not discussed in this chapter because of difficulties in comparing the available series over time. Nor are the data for hospital admissions, as these data were not included in the first edition (see *Differences in data treatment between editions*, Chapter 6).

Changes in socioeconomic status variables

Marked variations were recorded between 1986 and 1996 for a majority of the socioeconomic status variables mapped for the Australian Capital Territory (**Table 9.1**).

For **Canberra-Queanbeyan**, the largest increases were for the population of Aboriginal and Torres Strait Islander people (an increase of 140.1 per cent over this ten year period); unemployed people (92.3 per cent); low income families (75.2 per cent); people aged 65 years and over (66.0 per cent); dwellings without a motor vehicle (53.5 per cent); and single parent families (50.8 per cent). The only decreases recorded over this ten year period were for the variables for unskilled and semi-skilled workers (down by 12.7 per cent) and early school leavers (down by 7.9 per cent).

Variations of this order were also recorded in **Canberra** and the Australian Capital Territory.

Substantial variations were recorded in the level of income support payments to residents of **Canberra-Queanbeyan** for all of the payment types analysed (**Table 9.1**). The number of recipients for each of the payment types increased substantially, with the number of unemployment beneficiaries (an increase of 167.0 per cent) and disability support pensioners (101.3 per cent) more than doubling. Similar, although slightly larger, increases were recorded in both C**anberra** and the Australian Capital Territory for all of these payments.

Table 9.1: Changes in demographic and socioeconomic status variables, by selection of Territory, Australian Capital Territory

Per cent change

Variable	Canberra-Queanbeyan	Canberra	Australian Capital Territory
1986 to 1996			
0 to 4 year olds	6.3	5.1	4.7
65 years & over	66.0	67.1	66.8
Single parent families	50.8	49.8	49.3
Low income families	75.2	75.0	74.4
Unemployed people	92.3	92.8	91.7
Unemployed people aged 15 to 19 years	46.5	49.9	49.5
Female labour force participation (20 to 54 years)	5.4	5.2	5.3
Early school leavers	-7.9	-7.5	-7.7
Unskilled & semi-skilled workers	-12.7	-10.5	-10.8
Managers & administrators, & Professionals	44.3	42.9	42.6
Aboriginal & Torres Strait Islander people	140.1	174.2	137.6
People[1] born overseas & resident for less than five years	1.9	3.2	3.2
People[1] born overseas & resident for 5 years or more	26.7	28.0	27.9
People[1] born overseas: speaks English not well/not at all	9.8	12.9	12.9
Housing authority rented dwellings	13.8	14.1	13.3
Dwellings without a motor vehicle	53.5	56.6	56.2
1989 to 1996			
Age pensioners	18.0	19.8	18.2
Disability support pensioners	101.3	109.2	106.2
Female sole parent pensioners	41.5	41.6	41.8
Unemployment beneficiaries	167.0	176.5	173.1
Dependent children of selected pensioners & beneficiaries	75.1	75.3	75.2

[1]Includes people who were born in a predominantly non-English speaking country

Changes in health status variables

As noted in Chapter 5 (see *Background*), death rates in Australia have declined for the majority of causes. The Australian Capital Territory is no exception, with lower rates for all of the major causes of death mapped in the atlas. Percentage changes between the two periods (from 1985 to 1989 and 1992 to 1995) are shown in **Table 9.2**.

In **Canberra-Queanbeyan**, the largest decreases were recorded for deaths of people aged from 15 to 64 years from circulatory system diseases (down by 52.2 per cent), respiratory system diseases (down by 40.3 per cent) and accidents, poisonings and violence (down by 36.0 per cent). All causes mortality was 36.4 per cent lower over this period, marginally more so for males than for females.

There were also reductions for every category in **Table 9.2** for **Canberra** and the Australian Capital Territory as a whole.

Table 9.2: Changes in selected health status variables, by Section of Territory, Australian Capital Territory
Per cent change[1] 1985-89 to 1992-95

Variable	Canberra-Queanbeyan	Canberra	Australian Capital Territory
Infant deaths	-28.9	-41.9	-35.4
Deaths of 15 to 64 year olds			
Males	-36.9	-42.0	-37.0
Females	-35.4	-38.9	-34.0
Persons, by cause			
Circulatory system diseases	-52.2	-52.8	-49.6
All cancers (malignant neoplasms)	-32.5	-38.0	-32.5
Lung cancer	-29.1	-29.8	-30.9
Respiratory system diseases	-40.3	-43.6	-37.4
Accidents, poisonings & violence	-36.0	-40.9	-35.8
Other causes	-8.0	-19.4	-12.2
All causes	-36.4	-40.9	-35.9

[1] Per cent change 'represents the difference (between the reference periods) in death rates: for infants, it is the infant death rate (infant deaths per 1,000 live births); and for deaths of 15 to 64 year olds, it is the rate per 100,000 population produced by indirect age (or age-sex) standardisation

Summary of findings by socioeconomic status of area of residence

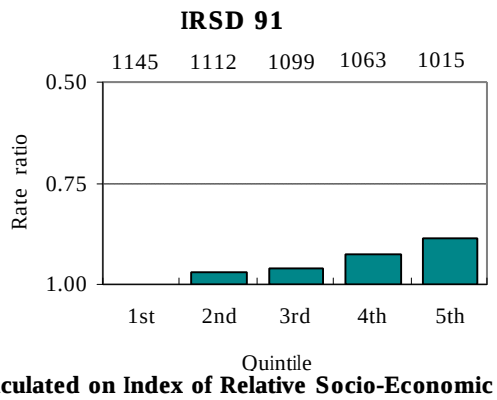
Background

In order to summarise the extent of health inequalities shown in the maps in the earlier chapters, the health status and health service utilisation data are presented in chart form on the following pages. The data have been re-cast to show the average rate (or standardised ratio or percentage) by socioeconomic status of the SLA of address in the records studied. To do this, each SLA in **Canberra-Queanbeyan** was allocated to one of five categories (quintiles) based on its Index of Relative Socio-Economic Disadvantage (IRSD) score (this index is described on page 14). Quintile 1 comprises the twenty per cent of SLAs in these major urban centres with the highest IRSD scores, and Quintile 5 comprises the twenty per cent of SLAs with the lowest IRSD scores. The average rate (or standardised ratio or percentage) was then calculated for each of the five quintiles. For example, the average infant death rate was calculated for the most advantaged SLAs (Quintile 1), for the most disadvantaged SLAs (Quintile 5) and for each of the intervening quintiles (Quintiles 2 to 4). These rates were then graphed, with the rate, standardised ratio or percentage for the first quintile set to 1 in order to highlight variations from the rates recorded in the most advantaged areas (**Figure 9.2**). For the variables for people reporting their health as fair or poor and the Physical Component Score, the quintiles are based on postcode groups.

As noted in Chapter 3, the ABS has calculated the IRSD so that low scores indicate greatest disadvantage. This is the reverse of the way in which other data in the atlas has been calculated, where higher rates, standardised ratios etc. indicate poorest health, highest utilisation of health services and greatest disadvantage. In order to present the graph of the IRSD in a form that is visually consistent with the other graphs in this chapter (ie. with the bars increasing in size to the right, and above the base of 1), the scales on the chart in **Figure 9.1** have been reversed.

Figure 9.1 shows that the average IRSD score in 1991 for Quintile 1 (comprising the most socioeconomically advantaged SLAs in **Canberra-Queanbeyan**) was 1145, decreasing for each quintile to a score of 1015 in Quintile 5 (the most disadvantaged SLAs).

Figure 9.1: Differentials in IRSD scores for SLAs in Canberra-Queanbeyan, by quintile of socioeconomic disadvantage of area, 1991



Source: Calculated on Index of Relative Socio-Economic Disadvantage, ABS 1991 Census

The IRSD shown in this graph and used in the health status graphs (**Figure 9.2**) is from the 1991 Census, as the health status data generally relates to the period from 1992 to 1995. The IRSD used for the health service utilisation graphs (**Figure 9.3**) is from the 1996 Census, as the data is for periods close to the 1996 Census. At the 1996 Census, the IRSD scores were, for Quintile 1, 1150; Quintile 2, 1114; Quintile 3, 1093; Quintile 4, 1071; Quintile 5, 1019.

Results

Health status in Canberra-Queanbeyan/

Figure 9.2 shows similar graphs (to that above) for each of the health status variables for SLAs in **Canberra-Queanbeyan**.

The bars in the graph show the rate ratio for the variable in each quintile. The rate ratio is calculated as the value (eg. the standardised ratio (SR) in each quintile divided by the SR in Quintile 1: the rate ratio for Quintile 1 is 1.0). Using the graph of years of potential life lost (YPLL) from deaths between the ages of 15 to 64 years as an example, it can be seen that the rate ratio in Quintile 5 is almost 1.86 (ie. the SR is almost 86 per cent higher in the areas in Quintile 5 than in Quintile 1). The actual values of the SRs (shown above the bars) range from 74 in the most advantaged areas (26 per cent fewer YPLL than were expected from the ACT rates) to 138 in the most disadvantaged areas (indicating that there were 38 per cent more YPLL than were expected from the ACT rates). Large differentials were also evident for deaths of 15 to 64 year old females (from an SDR of 58 in Quintile 1 to 132 in Quintile 5) and deaths of 15 to 64 years olds from circulatory system diseases (89 to 160), respiratory system diseases (67 to 163) and the combined causes of accidents, poisonings and violence (59 to 159).

Although there is some variability across the quintiles, the pattern is generally for the highest socioeconomic status SLAs (those in Quintile 1) to have the most advantageous (ie. in the majority of cases the lowest) rates and, generally, for the most disadvantaged SLAs (those in Quintile 5) to have the highest rates. The most notable exception is the Physical Component Summary (PCS), for which low scores indicate poorer health. Despite the narrow range of these scores, there is a clear gradient across the quintiles of socioeconomic disadvantage of area. Unlike the other capital cities, there is little variation in the Total Fertility Rate, and what there is shows a decline with increasing disadvantage.

Health service utilisation in Canberra-Queanbeyan

Figure 9.3 shows the rate ratios for each of the health service utilisation variables for SLAs in **Canberra-Queanbeyan**. Although there is some variability across the quintiles, the pattern is generally for the most advantaged SLAs (those in Quintile 1) to have the lowest admission rates, and for the most disadvantaged SLAs (those in Quintile 5) to have the highest rates.

The major exceptions include the variables for admissions to a private hospital and admissions for lung cancer, breast cancer of females aged 40 years and over, and for the surgical procedures of Caesarean section, hysterectomy and lens insertion, for which the standardised admission ratios decrease with increasing disadvantage. There is a less consistent pattern evident for a number of the other variables; and only minor variations are evident in immunisation rates of children at age 12 months.

Changes over time in health status by socioeconomic status of area of residence

The two previous sections have shown the overall decrease in death rates in **Canberra-Queanbeyan**, as well as the differentials in death rates by socioeconomic status of area. In this section, the extent of the change in death rates is again shown, but in a way which highlights the differentials evident by socioeconomic status of area (**Figure 9.4**).

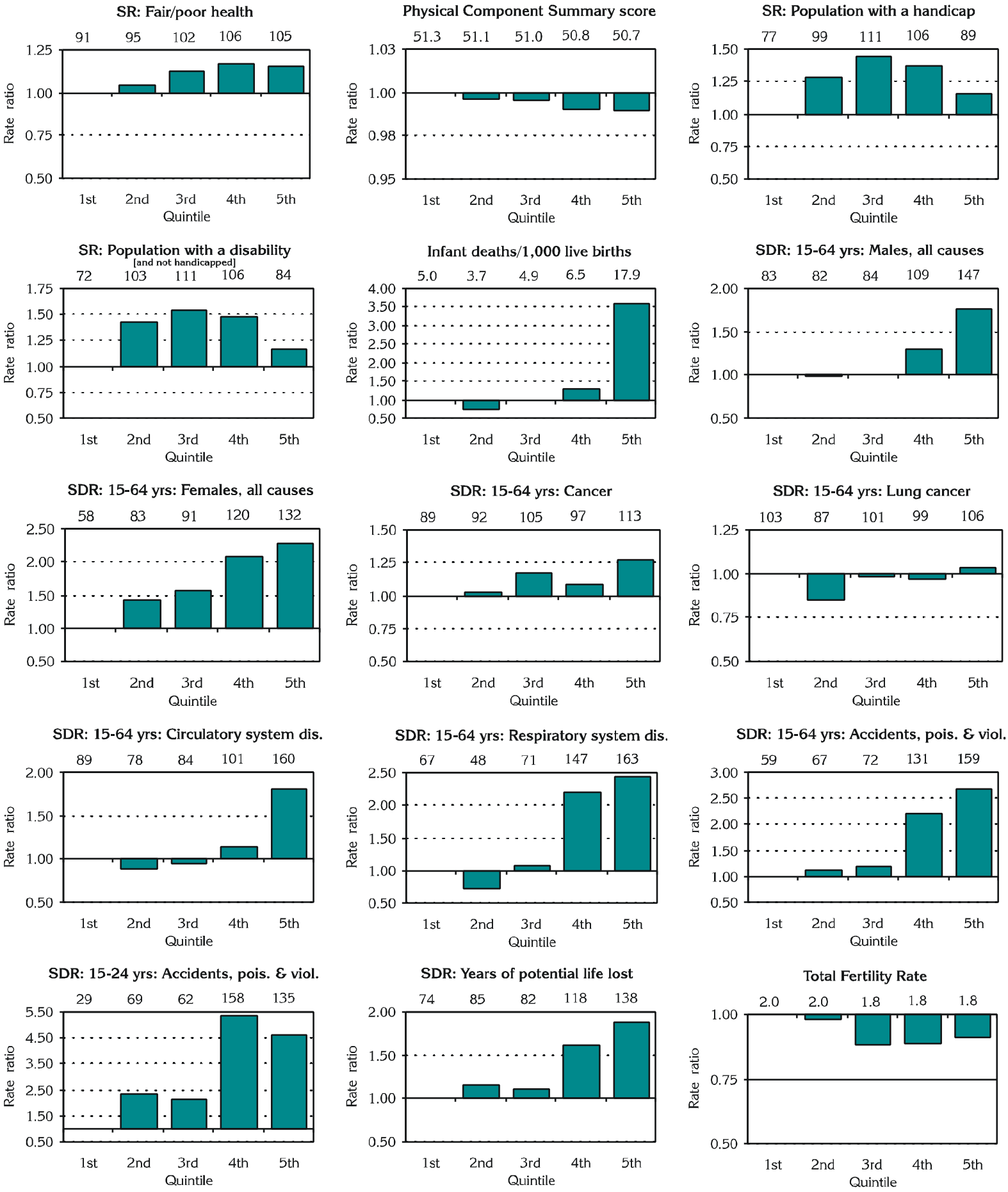
Infant death rates (infant deaths per 1,000 live births) in **Canberra-Queanbeyan** are shown by quintile of socioeconomic status of area for both 1985-89 and 1992-95. There is a gradient evident in the data for the earlier period, from the lowest rate in the high socioeconomic areas in Quintile 2 (an infant death rate of 6.6) to the highest rate in the lowest socioeconomic status areas (Quintile 5, with an infant death rate of 14.4). There is a higher rate, of 8.3 infant deaths per 1,000 live births, in Quintile 1. Infant death rates are lower in 1992-95 than in 1985-89 for each quintile, with the exception of Quintile 5. The largest percentage declines were in Quintiles 1 and 2 (down by 39.5 and 43.2 per cent, respectively), while an increase of 24.2 per cent was recorded in Quintile 5. This has resulted in the differential in the infant death rate between Quintile 1 (the most advantaged areas) and Quintile 5 (the most disadvantaged areas) doubling, from 1.74 times higher in the most disadvantaged areas in 1985-89 to 3.57 times higher in 1992-95.

The graph for males shows that the strong gradient evident in death rates in 1985-89 remains in 1992-95, despite overall lower death rates. In fact, the differential in death rates for male residents of **Canberra-Queanbeyan** aged from 15 to 64 years between Quintile 1 (the most advantaged areas) and Quintile 5 (the most disadvantaged areas) increased, from 1.53 times higher in the most disadvantaged areas to 1.94 times higher. The percentage decline in death rates between the two periods is similar across Quintiles 1, 2 and 4, with a larger decrease in Quintile 3 and smaller decrease in Quintile 5.

Death rates for female residents of **Canberra-Queanbeyan** aged from 15 to 64 years are lower (around half) those for males, cover a smaller range, and have a smaller differential between Quintile 1 (the most advantaged areas) and Quintile 5 (the most disadvantaged areas). As shown in **Figure 9.4**, the rates in the later period are lower than in the earlier period for each quintile. The percentage decreases in death rates for females between the two periods were largest in Quintiles 3 (40.2 per cent)and 2 (38.9 per cent), while the smallest was recorded in Quintile 4 (11.1 per cent). For females, the differential in death rates between Quintile 1 (the most advantaged areas) and Quintile 5 (the most disadvantaged areas) while lower than that for males, also increased, from 1.34 times higher in the most disadvantaged areas in 1985-89 to 1.45 times higher in 1992-95.

The graph for deaths of people aged from 15 to 64 years, the combination of the male and female data, shows similar gradients to those discussed above. The differential in death rates between Quintile 1 (the most advantaged areas) and Quintile 5 (the most disadvantaged areas) increased from 1.45 times higher in the most disadvantaged areas in 1985-89 to 1.78 times higher in 1992-95.

Figure 9.2: Health status differentials by quintile of socioeconomic disadvantage of area, Canberra-Queanbeyan



Note: Quintile of socioeconomic disadvantage of area is based on the ABS SEIFA Index of Relative Socio-Economic Disadvantage. Data for years of potential life lost are for the population aged from 15 to 64 years

Source: Compiled from project sources

Figure 9.3: Health service utilisation differentials by quintile of socioeconomic disadvantage of area, Canberra-Queanbeyan

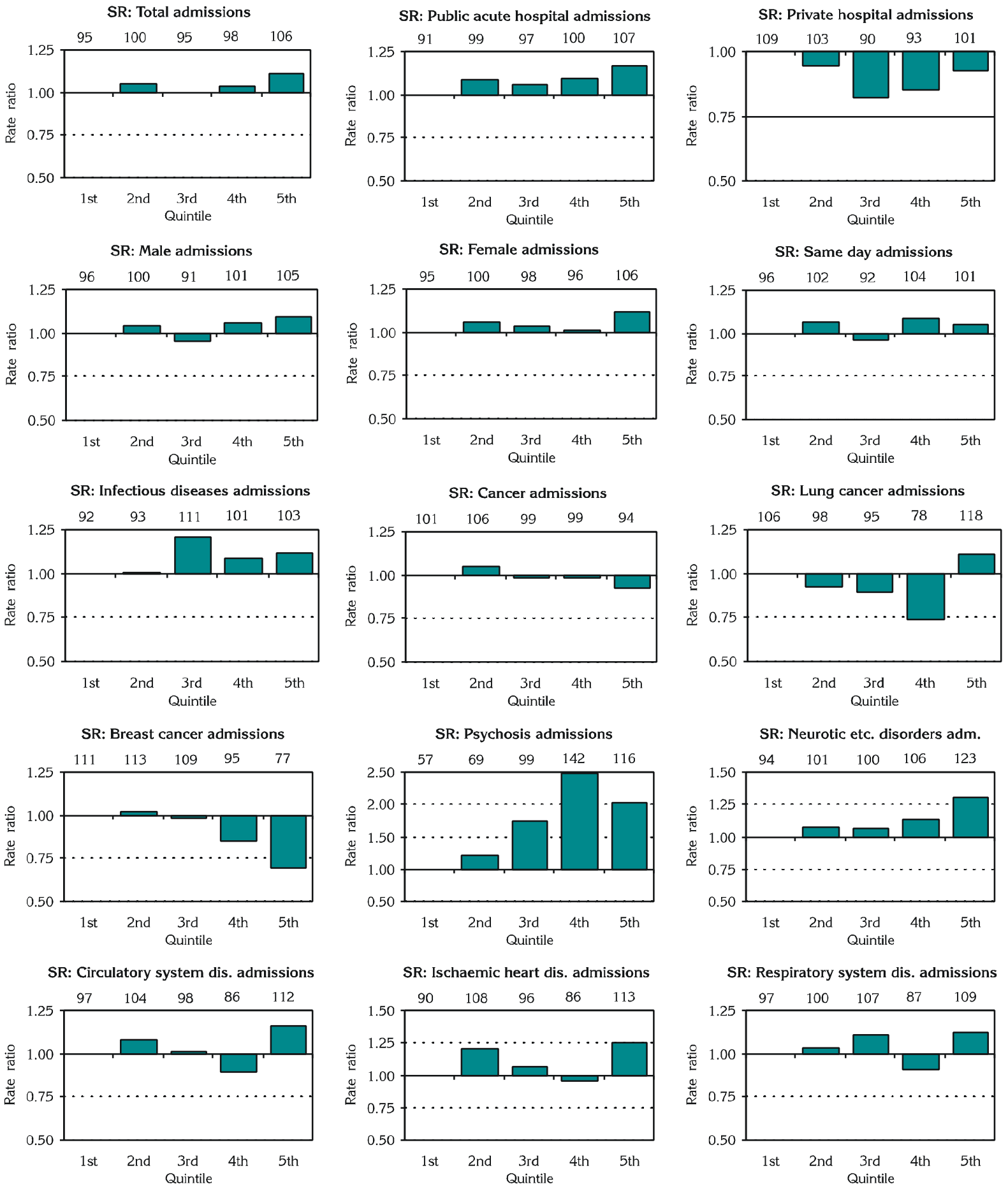
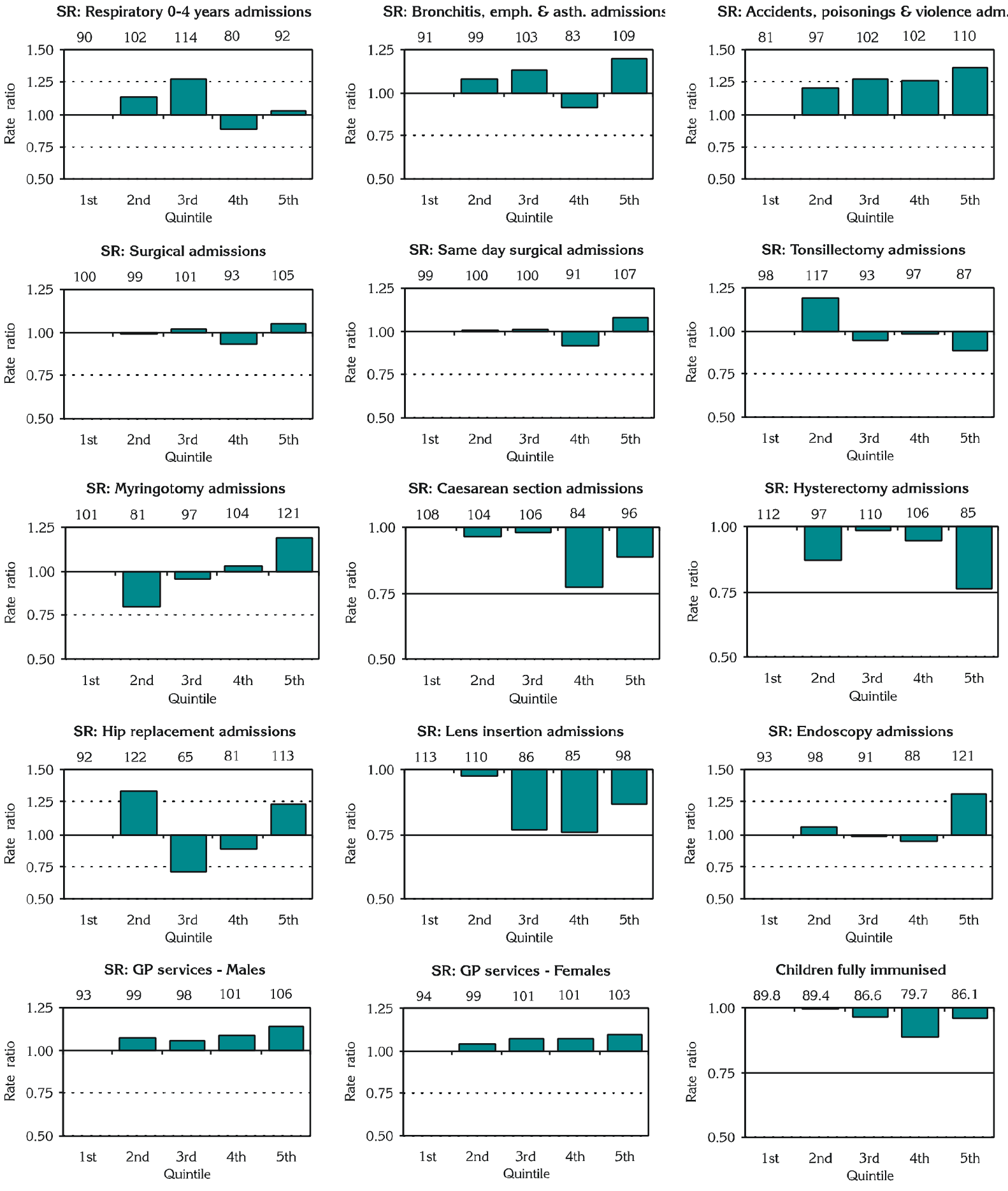


Figure 9.3: Health service utilisation differentials by quintile of socioeconomic disadvantage of area, Canberra-Queanbeyan ... *cont*



Note: Quintile of socioeconomic disadvantage of area is based on the ABS SEIFA Index of Relative Socio-Economic Disadvantage.
Source: Compiled from project sources

There is no gradient evident by socioeconomic status of area of residence for premature deaths from cancer in the earlier period, although this had changed by 1992-95. Although death rates in each of the quintiles is lower in the later period, the largest decreases occurred in Quintile 2 (down by 40.7 per cent), with slightly smaller decreases in Quintiles 1 and 2. Death rates in Quintile 5 dropped by a lower 28.6 per cent, with the smallest decline recorded in Quintile 4, down by 16.8 per cent. The differential in death rates between Quintile 1 and Quintile 5 increased from 1.01 times higher in the most disadvantaged areas in 1985-89 to 1.16 times higher in 1992-95.

The differential in death rates between Quintile 1 and Quintile 5 for premature deaths from lung cancer in **Canberra-Queanbeyan** over the period 1992-95 is larger than for all cancers (3.07 compared with 1.16). The increase in the differential from 1.47 in 1986-89 to 3.07 in 1992-95 is also greater (108.5 per cent compared with 15.3 per cent) and is the second largest for the causes studied. Rates of death for lung cancer for residents of the areas in Quintile 1 decreased by almost two thirds (65.5 per cent) between 1985-89 and 1992-95, just over twice the decrease in Quintile 5. The smallest decline in death rates was recorded in Quintile 3, down by 13.5 per cent.

A number of points can be made from an examination of the graph of deaths from circulatory system diseases. For example, overall rates are relatively high (second only to those for all cancers), there is a strong gradient and, despite large reductions in death rates across all areas, the differential in death rates between Quintile 1 (the most advantaged areas) and Quintile 5 (the most disadvantaged areas) increased, from 1.42 times higher in the most disadvantaged areas in 1985-89 to 2.11 times higher in 1992-95.

Although death rates from respiratory system diseases are lower than those recorded for circulatory system diseases, the gradient across the quintiles of socioeconomic status of area of address of usual residence in **Canberra-Queanbeyan** over the period from 1992-95 is particularly strong. In 1985-89, the differential between Quintiles 1 and 5 was 1.55; by 1992-95 this had increased (by 163.6 per cent) to 4.09, the largest increase in the differential for the causes studied.

Death rates of 15 to 64 year old people from the external causes of accidents, poisonings and violence are also highest in the most disadvantaged areas of **Canberra-Queanbeyan**. As with the other variables described above, the differential in 1992-95 is higher than in 1985-89 (up from 1.76 to 2.50). This is a result of the larger declines in death rates in Quintiles 1 (the largest, down by 42.4 per cent), 2 to 4 (of over one third) and the smallest decline, in Quintile 5 (-18.0 per cent).

The last graph in **Figure 9.4** shows details for all other causes of death between the ages of 15 and 64 years. Again, there is a gradient in the SDRs in both periods, although, unlike the situation shown in the all causes and specific causes graphs (above), overall death rates have not shown a substantial decrease. Despite this, the differential in rates between Quintile 1 (the most advantaged areas) and Quintile 5 (the most disadvantaged areas) has declined, from 2.97 in 1985-89 to 2.08 in 1992-95. This is largely a result of the larger decline in death rates in Quintiles 5 (down by 27.1 per cent).

Although not included in **Figure 9.4**, death rates of 15 to 24 year olds from the external causes of accidents, poisonings and violence show a different pattern from those for the 15 to 64 year age group. Rates are highest in Quintiles 2 and 3 in 1985-89, although in 1992-95, following substantial reductions over all the quintiles, the rate in Quintile 5 is highest (at 64.9 deaths per 100,000 population). The differential in rates between Quintile 1 (the most advantaged areas) and Quintile 5 (the most disadvantaged areas) has increased, from 1.71 in 1985-89 to 1.87 in 1992-95: this is largely a reflection of the very small reduction in death rates in Quintile 5 (-8.2 per cent) relative to the reductions in the other quintiles.

Conclusion

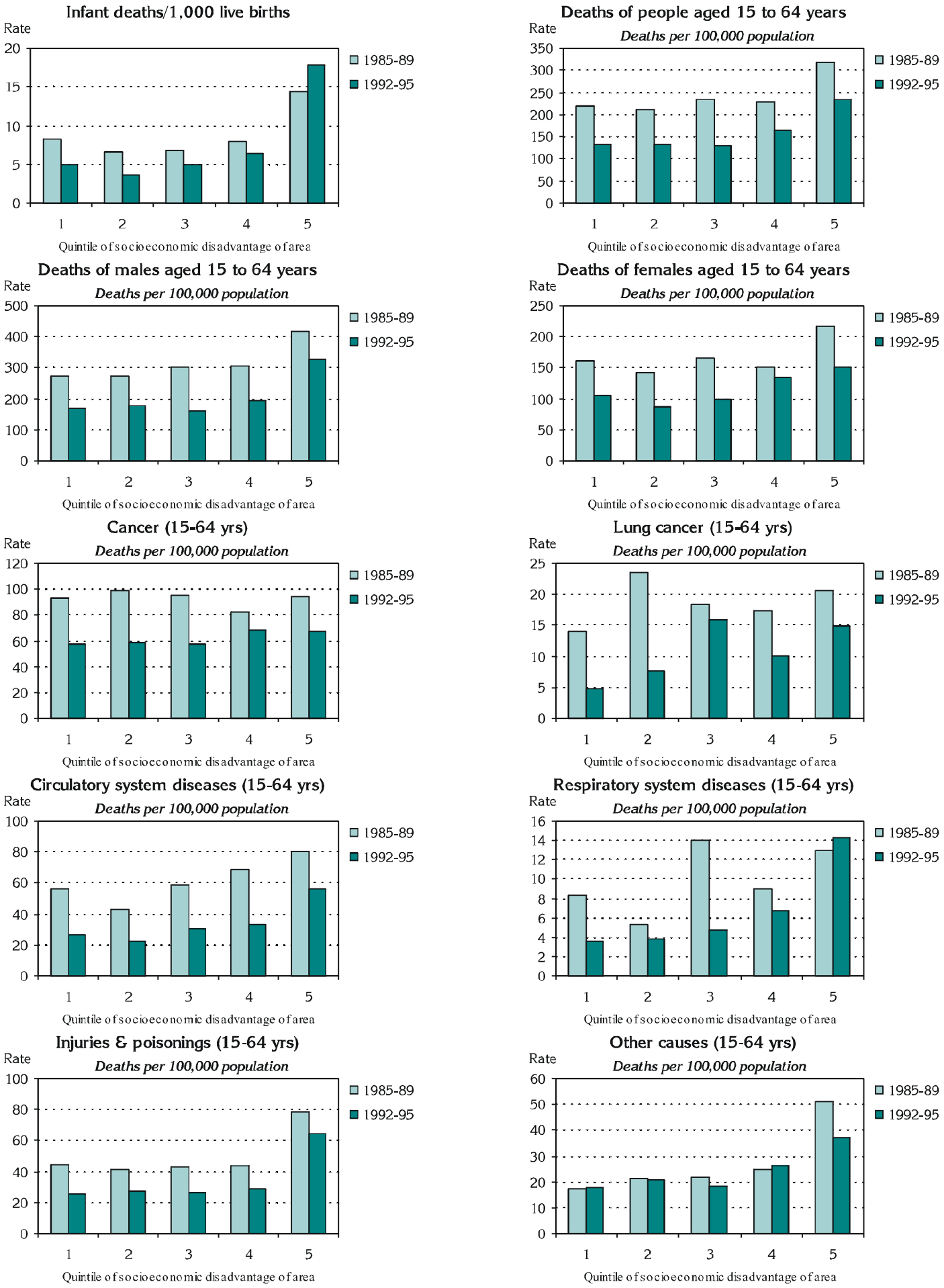
There is clear evidence in the data of an association at the SLA level between high premature death rates (for both deaths from all causes and from most specific causes) and socioeconomic disadvantage, as measured by the IRSD. These associations are generally evident not only between the most advantaged (Quintile 1) and disadvantaged areas (Quintile 5), but also at each of the intervening levels of socioeconomic status (Quintiles 2 to 4) (**Figures 9.2**).

Similarly, there are associations between socioeconomic disadvantage and high rates of use of general medical practitioner services in the major urban centres, and for most of the variables for hospital admission (**Figures 9.3**).

It is also clear that, despite the overall improvement in deaths rates from all causes and for all of the specific causes studied (with the exception of the 'other causes' group) for **Canberra-Queanbeyan** (**Table 9.2**, **Figure 9.4**), these improvements have not resulted in a reduction in the disparities evident in death rates, for all causes and for a number of specific causes, between residents of the most well off areas and those in the poorest areas (**Figure 9.4**).

The information in this atlas adds to a convincing body of evidence built up over a number of years in Australia as to the striking disparities in health that exist between groups in the population. The challenge for policy makers, health practitioners and governments is to find ways to address these health inequities.

Figure 9.4: Change in health status by quintile of socioeconomic disadvantage of area, Canberra-Queanbeyan



Note: Quintile of socioeconomic disadvantage of area is based on the ABS SEIFA Index of Relative Socio-Economic Disadvantage.
Source: Compiled from project sources