

# Australian Capital Territory Chief Health Officer's Report 2010



## ACKNOWLEDGEMENTS

This publication has been prepared by the Epidemiology Branch, ACT Health for the ACT Minister for Health, the ACT Legislative Assembly and the ACT community. The Chief Health Officer, Dr Charles Guest, together with the staff of the Epidemiology Branch, wish to acknowledge the many contributors from the ACT health portfolio, other government agencies, non-government agencies, community group representatives and individuals who have provided their time and expertise in the preparation of this document.

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Please note that the full report can be accessed through the web at: [www.act.gov.au/](http://www.act.gov.au/)

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Dear Minister

I am pleased to present you with this report, which provides an account of the health and wellbeing of the ACT population during the period 1 July 2006 to 30 June 2008, as required under Section 10 of the *Public Health Act 1997*. The Act requires that the Chief Health Officer reports biennially on the following:

- trends and indicators in health status;
- potential public health risks;
- morbidity and mortality;
- notifiable conditions;
- health promotion activities;
- harm minimisation activities;
- access and equity indicators relevant to health;
- social indicators relevant to health;
- health service performance against minimum standards of care;
- intersectoral activities relevant to health; and
- any other matter considered appropriate by the Chief Health Officer.

Section 10 of the Act also requires that you present the report to the Legislative Assembly within 6 sitting days of receiving the report.

Yours sincerely

A handwritten signature in black ink that reads 'Charles Guest'.

Charles Guest  
Chief Health Officer  
30 August 2010

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## Foreword

The ACT Chief Health Officer's Report 2010 covers the two-year period from 1 July 2006 to 30 June 2008. The report provides a profile of the health and well-being of the ACT population, as required under Section 10 of the *Public Health Act 1997*. Under this legislation the Chief Health Officer is required to report biennially on the health of the ACT population to the Minister for Health on specific health related topics. Chapter headings reflect these topics although, in the interests of editorial flow, are not necessarily in the same order as described in the Act.

The Chief Health Officer's Report aligns with key strategic documents that outline the population health approach to improve the health status of the ACT population by minimising public health risks and promoting and protecting the health of the ACT population. This approach recognises that many of these factors are outside the direct control of the health system and relies on a strong commitment to practical partnerships.

The information presented in this report shows that generally the health status of the ACT population is stable or improving with few indicators showing unfavourable trends. Improving healthy behaviour continues to be a challenge but will provide future opportunities for health gains. Life expectancy remains high in the ACT and is expected to continue to increase over the next ten years. When asked about their health, the majority of people in the ACT rate their own health as being 'very good' or 'excellent'. Chronic diseases have emerged as a significant health concern in the ACT as they have in all developed countries, accounting for a high proportion of deaths, disability and illness.

Data have been analysed from a range of sources including: mortality and hospital records, notifiable disease data, screening program and immunisation registers, survey data, published statistical reports and journal articles. Where the required information for the reporting period is not yet available, is not considered reliable, or was not collected, the most recent and reliable information available has been presented.

This report includes results from the ACT General Health Survey (ACTGHS), which commenced in 2007. These results complement results from other sources and provide a greater understanding of health issues in the ACT population than was possible before the Survey began. Results from 2007 and 2008 are presented in this report.

In the ACT, comparison of population health data should be interpreted with caution as ACT has a small population base and numbers of cases are often low, particularly for rarer health events which in turn can cause rates to fluctuate considerably from year to year. The reliability of survey estimates is also a concern for the ACT, again largely due to our small population.

The statistical methodology section in the appendices outlines how results were compared, how significance testing was undertaken and the methods for assessing reliability of data from different sources.

The format of the ACT Chief Health Officer's Report has changed in 2010 from previous years in response to readers' comments. The report is more concise and will have a stronger web presence with links to relevant information. As in other years, readers are encouraged to contribute to future reports by completion of the evaluation form.

Charles Guest

## Summary

The Australian Capital Territory Chief Health Officer's Report 2010 has been prepared to meet the requirements of the *Public Health Act 1997*, for the reporting period 1 July 2006 to 30 June 2008. This report provides an overview of the health of the ACT population over this period.

### AUSTRALIAN CAPITAL TERRITORY - DEMOGRAPHY

The demographic profile of the ACT population is shifting towards an older profile. This shift, along with increases in life expectancy and changes to lifestyle, will result in an increase in the number of people with age-related chronic conditions with a subsequent heavier demand for health services.

### SOCIAL INDICATORS RELEVANT TO HEALTH

Many of the social factors that influence health continue to yield favourable results for the ACT compared to Australia in general. ACT residents have generally higher weekly earnings and education attainment levels than the national average, however this social and economic advantage often masks pockets of disadvantage. Homeless rates, a measure of extreme disadvantage, were estimated to be 4.2 per 1,000 ACT population (ABS Census).

### MORBIDITY AND MORTALITY

#### *Life expectancy*

- Life expectancy in the ACT is high in comparison to other jurisdictions and is expected to increase over the next ten years. In 2007, the ACT recorded the highest life expectancy at birth for males (80.3 years) and females (84.0 years).

#### *Burden of disease and injury*

- Chronic conditions accounted for approximately 80% of the total burden of disease and injury. Cancers (19%), mental disorders (15%), and cardiovascular disease (15%) were the leading disease categories contributing to total burden of disease and injury in the ACT.

#### *Mortality*

- The leading underlying causes of mortality for ACT residents were: cardiovascular diseases (31%), cancer (31%), respiratory disease (7%), accident and injury (7%), mental disorders (5%), degenerative disorders (5%) and diabetes (4%). Chronic diseases were identified as the cause of death for over 80% of ACT residents.
- Mortality rates are falling for many leading health concerns such as cancer, cardiovascular disease and asthma. Approximately a third (34%) of all resident deaths in 2007 were theoretically avoidable indicating that there are further opportunities for health gain.
- The infant mortality rate in the ACT continues to decline. The major causes of infant mortality are now associated with congenital anomalies.
- Suicide age-standardised mortality rates in the ACT fluctuate from year to year due to the small number of suicide deaths. However between 1979 and 2006, mortality rates for suicide have decreased by 1.3% per annum, giving a total decrease of 39.4% over this time period.

#### *Morbidity*

- In 2007-08, the most common long-term conditions reported by ACT residents were: short sightedness/long sightedness, hayfever and allergic rhinitis, diseases of the circulatory system and musculoskeletal conditions. ACT residents were significantly more likely to suffer hayfever and allergic rhinitis and short sightedness than the national population.
- Potentially preventable hospitalisations are those conditions where hospitalisation is thought to be avoidable if timely and adequate non-hospital care had been provided. In 2007-08, ACT had lower age-standardised rates (22.28 per 1,000 population) than national rates (33.13). Half of the total potentially preventable hospitalisations were a result of chronic disease.

## TRENDS AND INDICATORS IN HEALTH STATUS

### ***Mental health***

- In 2007-08, 11.8% of the adult ACT population reported having a mental disorder diagnosed by a doctor.
- Anxiety and depression was the leading specific cause of burden of disease in the ACT with one in ten ACT residents reporting psychological distress at high to very high levels.

### ***Cardiovascular disease***

- In 2007-08, 15.2% of the ACT population reported having a disease of the circulatory system (cardiovascular disease) expected to last or lasting 6 months or more (Australia: 16.4%). This is significantly lower than reported in previous years.
- The age-standardised mortality rates for coronary heart disease (CHD) have been declining for both males and females in the ACT (and Australia), but CHD remains a leading cause of mortality.

### ***Diabetes***

- Diabetes rates have remained relatively unchanged since 2001. In 2007-08, an estimated 3.1% of the ACT population had been diagnosed with diabetes (Australia: 4%). Over 90% of diabetes cases were in persons over the age of 45 years. An ageing population and increasing obesity in the community is expected to increase diabetes prevalence in the future.
- In 2007, 249 (5.5%) of women who gave birth in the ACT had a diagnosis of gestational diabetes, slightly higher than 2003 (3.7%).

### ***Asthma***

- Health status indicators for asthma are showing some encouraging trends. Overall prevalence, hospitalisation rates and mortality rates are declining. In 2007-08, 9.6% (32,300 people) of ACT residents reported having current asthma, a decrease from 2001 (12.3%).
- Regular review of cases by a general practitioner and the use of a written asthma management plan are effective in preventing hospital admissions and attendance at emergency departments for asthma. Around one-third (34%) of people diagnosed with asthma in the ACT had a written asthma plan.

### ***Injury***

- Injury is a leading cause of premature mortality, accounting for an estimated 7% of the total burden of disease in the ACT and Australia. In 2007-08, injuries accounted for more than a quarter (26.8%) of all ACT resident emergency department presentations in the ACT.
- The leading causes of injury-related hospital separations were falls (31%), complications of care (17.4%), road transport injury (13.2%) and intentional self-harm (5.8%).
- Over the period 1999-2000 to 2007-08, there was an increase of 63% in residents 80 years and over and 44% increase in residents aged 65-79 years who were admitted to hospital with a fall-related injury. Injury to the hip and thigh accounted for 30% of all hospitalisations due to falls, for people aged 65 years and over.
- Rates for alcohol-related injuries have also increased in both males and females over the period 1999-00 to 2006-07. Three-quarters of all alcohol-related deaths and two-thirds of all hospitalisations due to injury were for males. 5.2% of hospitalisations due to alcohol-related injury were for persons under 18 years of age.
- Over the period 1999-2000 to 2007-08, there were 1,308 hospitalisations where an injury was recorded as a result of a pedal cyclist accident. Nearly 80% of these hospitalisations were for males and the most common age group was 10-19 years.

### ***Maternal and perinatal health***

- In 2007, 5,419 ACT women gave birth to 5,535 babies, an increase of 8.5% since 2005. Rates of pre-term babies and low birthweight babies were significantly lower in the ACT compared to Australian rates.
- ACT teenagers (less than 20 years) were significantly less likely to give birth (2.6%) compared to teenagers nationally (4.1%). The percentage of women over 35 years of age giving birth for the first time was similar to the rest of Australia.

- Compared to other Australian women, ACT residents who gave birth in the ACT were significantly more likely to have a spontaneous onset of labour and an instrumental birth and significantly less likely to have a caesarean section.

## **NOTIFIABLE CONDITIONS**

### ***Communicable diseases***

- During 2006-08, the Health Protection Service received 5,314 notifications of infectious conditions. Chlamydial infections of the genital tract were the most commonly notified infectious condition (34% of all notifications), followed by campylobacteriosis (16%), influenza A (8%), pertussis (5%), salmonellosis (5%) and gonococcal notifications (1%). There were no measles notifications in the reporting period.
- Chlamydia notifications continue to increase steadily, with an overall increase of almost 20% in the reporting period. An increased awareness of, and testing for, the disease is likely to be a major factor in the steady increase of notifications since 1999.
- In line with national trends, there were 346 notifications of influenza A in 2007 (a peak year), an increase from total notifications in 2006.
- Outbreaks of gastrointestinal illness have decreased, with 46 outbreaks reported in 2006 decreasing to 17 in 2008.

### ***Cancer***

- As the ACT population ages, cancer will continue to be a leading cause of morbidity and mortality and a major contributor to the total burden of disease in the ACT.
- During 2002-06, there was an average of 1,253 new cases per year (53% males and 47% females) of cancer diagnosed in ACT residents. The most common cancers were: breast cancer (16.4%), cancer of the prostate (15.7%), colorectal cancer (13.4%), skin melanoma (10.6%), and lung cancer (6.9%).
- There has been a decrease in the age-standardised incidence rate of lung cancer in males and cervical cancer in females since 1985 in the ACT. These decreases are a result of public health interventions such as reduction in risk factors (e.g. smoking) and early detection and treatment (screening).
- During 2002-06, there was an average of 203 cancer-related deaths each year (52% males and 48% females). The most common causes of cancer-related deaths in males were lung cancer (18.2% of all deaths), followed by colorectal cancer (14.9%), and prostate cancer (13.5%). The most common causes of cancer-related death in females were breast cancer (18.6% of all deaths), followed by colorectal cancer (13.5%), and lung cancer (12.6%).
- Survival analysis showed that overall cancer survival improved over the two five-year periods from 66% (1995-99) to 69% (2000-04). In particular, female breast cancer showed a statistically significant increase in five-year relative survival over the two five-year periods.

## **POTENTIAL PUBLIC HEALTH RISKS**

In the ACT, approximately one-third of the overall disease burden can be attributed to known risk factors. Opportunities for improving the health of the ACT population are largely dependent on reducing the impact of known risk factors such as: smoking, alcohol and other drug abuse, poor nutrition and lack of physical activity. In 2008, ACT residents rated better than Australians as a whole for most risk factors. Some key findings include:

### ***Smoking***

- There has been little change in smoking rates since 2004-05 in ACT adults and one in ten (12.5%) mothers smoked during pregnancy - this proportion rose to over 50% in Aboriginal and Torres Strait Islander mothers.
- Smoking rates in ACT secondary school students (12-17 years) are decreasing.

### ***Risky alcohol consumption***

- Levels of risky alcohol (long-term harm) consumption in both adult males and females have reduced to below national rates. However there has been no change in drinking trends in ACT secondary school students (12 to 17 years).

### ***Illicit and other drug use***

- There has been a decrease in illicit drug use since 2001 in both the ACT and Australia. In 2007, 13.8% of ACT residents aged 14 years and over reported using an illicit drug in the previous 12 months, a decline of 23% since 2001. This decrease was driven primarily by the decrease in cannabis use which reduced by more than one-third since 2001.
- Levels of illicit substance use among secondary school students aged 12-17 years have declined over time, driven mainly by a decline in cannabis use. In 2008, tranquilisers were the most commonly used illicit or other drug (19.4%), followed by inhalants (17.7%) and cannabis (13.2%). In the ACT, approximately 3.3% of students reported recent use of methamphetamines.

### ***Physical activity***

- While the numbers of ACT adults meeting national guidelines for physical activity are showing an upward trend, ACT secondary school students (12-17 years) are showing no evidence of improvement between 2005 and 2008.

### ***Nutrition***

- In 2007-08, 7.2% of ACT adults were eating sufficient vegetables on a daily basis (in accordance with national guidelines). This represented a statistically significant decrease in vegetable consumption since 2004-05 when 10.4% reported consuming sufficient vegetables.
- In 2007-08, 48.9% of ACT adult males and 59% of ACT adult females reported eating sufficient fruit on a daily basis in accordance with national guidelines. This represented an increase in fruit consumption since 2004-05 when 45.1% of males and 57.3% of females reported eating sufficient fruit.
- Trends in fruit, vegetable and cereal consumption for ACT secondary school students (12-17 years) did not change between 2005 and 2008. In 2008, 41.7% of all students reported eating at the dietary guidelines for minimum daily serves of fruit, 22% the minimum daily serves of vegetables, and 18% the minimum serve of cereals.

### ***Healthy weight***

- 57.8% of ACT adults and 21.7% of children were overweight or obese in 2007-08. This was less than the national average (61.3% adults, 24.9% children).
- Only 8% of persons who reported that they had been diagnosed with diabetes reported to be losing any weight, despite 76% being overweight or obese.

### ***Sun protection***

- In 2007-08, approximately two-thirds of adults aged 18 years and over reported that they usually or always adhere to some form of sun protective behaviour. The most common form was wearing sun glasses (63%), followed by wearing a hat (58%), seeking shade in the sun (54%) and using spf 30 sun protection (48%).
- Sun protective behaviours are declining among ACT secondary school students (12-17 years). In 2008 43.7% of secondary students used spf30 (1996: 67.1%) and 29% of students wore a hat (1996: 53%).

## **ACCESS AND EQUITY INDICATORS**

### ***Access to health services***

- In 2007-08, the most common health service attended by ACT residents was a GP, with 95% reporting having done so in the previous 12 months and more than a third (36.2%) in the previous 4 weeks.
- Most residents rated the care they received at health facilities as being excellent, very good or good. The most common difficulties reported were: waiting times to see a GP (14%), obtaining access to specialist services (3.2%), cost of healthcare services (2.8%), and shortages of GPs in the area (2.3%).

### **Aboriginal and Torres Strait Islander people**

- The most frequently reported long-term health conditions reported by ACT Aboriginal and Torres Strait Islanders were: eye or sight problems (37.9%), asthma (18.0%) and ear and hearing problems (14.5%).
- Aboriginal and Torres Strait Islander people in the ACT were equally likely to be overweight or obese as non-Aboriginal or Torres Strait Islander people, equally likely to report risky/high risk alcohol use and equally likely to consume less than the recommended number of serves of fruit and vegetables each day.
- In 2007-08, smoking rates (36.2%) were higher than in the general population. Over half (52.9%) of ACT resident Aboriginal and Torres Strait Islander women who gave birth during 2007 reported that they smoked during pregnancy, compared to 12.1% of the general population.

### **HEALTH PROMOTION**

ACT Health is responding to the increasing burden of chronic diseases in the community and on the health system, by focusing health promotion initiatives towards a preventative health agenda. The agenda focuses on initiatives that will tackle those risk factors that contribute to poor health such as; smoking, physical inactivity, poor nutrition, alcohol and other drug use and their determinants. Health promotion strategies that encourage healthy choices along with early detection and treatment of chronic diseases, are key to improving the health of the ACT population.

### **HEALTH SERVICE PERFORMANCE**

The efficient performance of health services and their ability to respond to community needs is crucial to ensuring a healthy community. Despite the numerous achievements during the 2006-08 period, there are opportunities for strengthening health system performance most notably through improving access to services.

- Long waits are experienced by many people seeking emergency department and elective surgery services, as well as consultations with medical practitioners.
- The ACT, like other jurisdictions, has ongoing difficulties in attracting trained health staff. In 2007-08, the ACT had a lower full time workload equivalent GP rate (67 per 100,000 population) than the national average (88.1). ACT public hospitals had a slightly higher rate of full time equivalent nursing staff than the national average, but had slightly lower rates of diagnostic and allied health staff, domestic and other staff.

### **INTERSECTORAL ACTIVITIES**

During 2006-08, the ACT Government developed a number of strategies and plans to address many of the health issues that are identified in this report. Addressing these issues and in particular those relating to socio-economic and environmental factors requires developing strong cross-sectoral partnerships with those agencies responsible for services such as: housing, education, family services, disability, environmental management and planning, and between clinicians, community and consumer groups.

### **HEALTH AND THE ENVIRONMENT**

ACT residents enjoy good quality water, air and food. Between 2006 and 2008, there has been steady improvement in some areas of environmental health management in the ACT. These include the implementation of the ACT *Radiation Protection Act 2006*, improvements in food safety and in reducing the level of tobacco use through new tobacco control initiatives.

### **IMMUNISATION**

Immunisation is the main primary prevention strategy for the control of communicable diseases. As well as the launch of the *ACT Immunisation Strategy 2007-2010*, a range of vaccination programs were implemented in 2006-08 in the ACT. They included programs for influenza, human papillomavirus (HPV) and rotavirus.

Immunisation coverage for children in the ACT was well above the national average during 2006-08. Coverage rose significantly between 2006 and 2008 for children aged 12-15 months and remained

relatively stable for children at age 24-27 months and 72-75 months. In 2008, average coverage rates were 93.6% (12-15 months), 94.5% (24-27 months) and 86.2% (72-75 months).

### **POPULATION HEALTH SCREENING**

ACT residents are participating in national screening programs at levels equal to or better than national averages.

- Breast screening participation rates for ACT women remained between 55-60% for most years during 1996-2006, lower than the target participation rate of 70% but consistent with national results.
- Cervical screening participation rates were 62% in 2008, slightly higher than the national average.
- Colorectal screening participation rates (National Bowel Cancer Screening Program) in 2008 were significantly higher than the national average.

# 1. The Australian Capital Territory

The Australian Capital Territory (ACT) is the smallest state or territory in Australia, covering approximately 2,400 sq km in area. The ACT is surrounded by the state of New South Wales (NSW) (Figure 1) with the majority of the population residing in Canberra, which covers an area of approximately 806 sq kms. The ACT is situated on the traditional lands of the Ngunnawal people.

Canberra is the major health referral centre for the Greater Southern Region of NSW. ACT Health plans, manages and delivers public sector health services to both ACT residents and residents in the NSW surrounding region. The total population catchment is estimated to be about 500,000 persons.

The estimated resident population of the ACT was 339,761 persons at 30 June 2007. The Territory's population is projected to reach 520,800 persons by 2056, representing an increase of approximately 53% over the projection period 2007-2056. Natural increase is expected to contribute approximately 73% of this growth (births minus deaths) while migration attributes approximately 27% of the increase.

The total fertility rate (babies born per woman) in the ACT is slowly increasing. In 2008, the total fertility rate was 1.76, slightly lower than the national rate (1.97).

The ACT is expected to experience significant changes in its demographic profile. Between 2007 and 2056:

- The number of persons aged 85 years and over will increase by about 509%, reaching 22,500 in 2056. This ageing is typical of projections elsewhere in Australia and the western world.
- The number of persons aged 65 years and over is projected to increase by approximately 214%.
- The number of working age population aged 35 to 64 years is projected to increase by approximately 43%.
- The number of younger working age population aged 18 to 34 years is projected to increase by approximately 33%.
- The number of children aged 14 years and under, is projected to increase by approximately 43%.

The estimated resident Aboriginal and Torres Strait Islander population in the ACT in 2001 was 3,900, accounting for 1.2% of the total ACT population. By June 2006 the ACT Aboriginal and Torres Strait Islander population was estimated at 4,282, of whom 65% were under 30 years of age. In addition, there were approximately 3,000 Aboriginal and Torres Strait Islander people living in the surrounding region who may access ACT health services.

The demographic profile of the population and projected demographic shifts has implications for health and planning in the ACT. An important implication of the shift towards an older population is an expected increase in the number of people with age-related chronic conditions and a subsequent increase in demand for health services.



Figure 1: Maps of the Australian Capital Region including Canberra districts & surrounding NSW.



Source: ACT Planning and Land Authority 2003

## 2. Social indicators relevant to health

Social determinants of health are the economic and social conditions under which people live and work that can impact on their health. Social disadvantage is associated with potentially avoidable poor health outcomes, and in the ACT, indicators of material disadvantage have been linked to poorer health status, lower levels of service utilisation and service access.<sup>1,2</sup>

Many of the social factors that influence health are more favourable in the ACT compared to Australia in general. In 2008:

- The unemployment rate for the ACT (2.3%) was lower than the national rate (4.1%) and income levels were high in comparison to Australian levels. The mean equivalised disposable weekly household income (\$786) was well above the national income (\$678).<sup>3</sup> The proportion of people working in the lowest skill occupations was 12.4% compared to 18.3% nationally.<sup>4</sup> ACT residents received less income support (aged pension, disability pension, single parent support) than other Australians, but they received similar support in the areas of Youth Allowance and Austudy.<sup>4</sup>
- Education levels in the ACT were high in comparison to Australian levels. In 2008, 42% of ACT adults had tertiary qualifications (Australia: 26%) and ACT school students continued to have higher year 12 retention rates (85%) than nationally (75%), although these rates have shown no improvement since 2000 (87%) despite an increase in the national rate.<sup>4</sup>
- ACT (and national) family structures comprised about three persons per family. Single parent families with children under 15 years of age comprised 20.1% of ACT families with children (Australia: 21.7%).<sup>4</sup> Of persons aged 65 years and over, 24.1% lived alone (Australia: 25%).
- ACT residents reported high levels of social capital indicating good social and support networks, but were less likely to have had contact with family in the past week than other Australians. ACT residents were more likely to have communicated with friends and family via the internet or mobile phone in the last 3 months than adults nationally.<sup>5</sup>
- Safety from crime and physical or threatened violence is important to wellbeing. In 2006, adults aged 18 years or more in the ACT were less likely to feel unsafe or very unsafe at home alone after dark than adults nationally.<sup>5</sup> They were also less likely to be the victim of physical or threatened violence in the previous 12 months, but were more likely to be the victim of an actual or attempted break-in in the previous 12 months.<sup>6,7</sup>
- The ACT continues to have the highest proportion of private health insurance holders in the country (55.3% in 2008), reflecting the Territory's relatively high socio-economic status.

Socio-Economic Indices for Areas (SEIFA) 2006 compiled by the Australian Bureau of Statistics give an indication of an area's relative advantage and disadvantage in relation to income, educational attainment, employment and skill of occupation based on information collected in the 2006 Census (ABS). Overall ACT residents rank above the national average for most socio-economic indicators based on broad geographic levels such as statistical sub-divisions (SDDs) and even statistical local areas (SLAs).

The relatively high SEIFA indices at the broad geographic levels for the ACT reflect the socio-economic homogeneity of the ACT's urban planning and design, which can mask pockets of disadvantage. Analysis of census data at the smaller collection district level shows that the ACT has five collection districts (CDs) falling within the bottom 5% of Australian rankings for relative social disadvantage with two of these ranking in the bottom 1%. These areas typically feature high levels of public tenement housing and generally accommodate people in receipt of social welfare.

Homelessness, a measure of extreme disadvantage, is difficult to identify. Information collected from the 2006 Census (ABS) estimates that the rate of homeless people was 4.2 per 1,000 ACT population on Census night.<sup>8</sup>

### 3. Morbidity and mortality

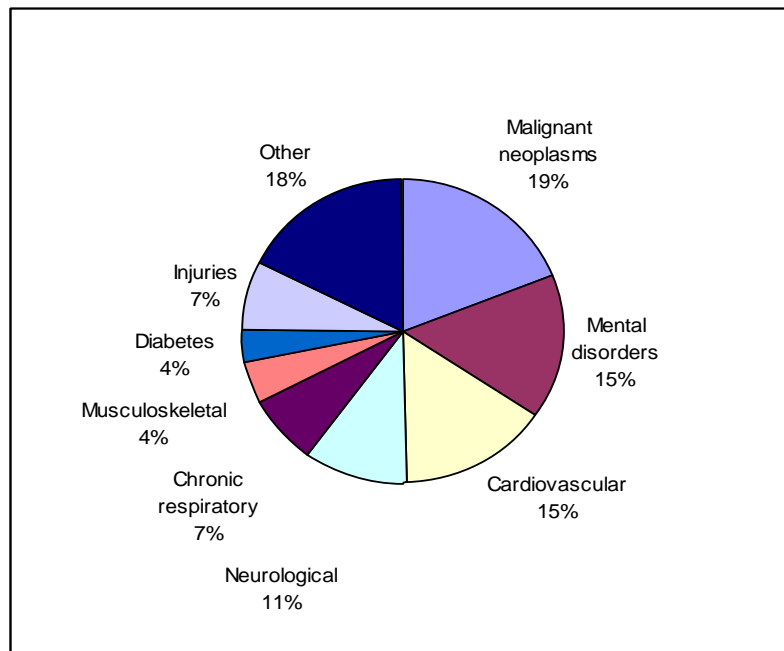
Studies show that self-rated health is a strong and independent predictor of subsequent illness and premature death. In the 2008 ACT General Health Survey (ACTGHS), 82.4% of adults over 16 years reported their health as excellent, very good or good.<sup>9</sup>

#### 3.1. Burden of disease

The key indicator used to measure the burden of disease and injury is the disability-adjusted life year (DALY). It describes the amount of time lost due to both fatal and non-fatal events or the years of life lost due to premature death coupled with years of “healthy” life lost due to disability. The most recent Burden of Disease Study was undertaken in 2003.<sup>10</sup>

The estimated total burden of disease and injury in the ACT was 29,455 DALYs in 2003. Cancers (malignant neoplasms) (19%), mental disorders (15%), and cardiovascular disease (15%) were the leading disease categories contributing to total burden of disease and injury (Figure 2). Overall, chronic conditions accounted for approximately 80% of the total burden of disease and injury both in the ACT and Australia. Disease burden from chronic diseases is expected to increase over the next decade, largely due to an ageing population and changes in lifestyle.

**Figure 2: Total burden of disease and injury by major categories, ACT, 2003.**



Source: AIHW 2007, *The burden of disease and injury in Australia 2003*. PHE 82, 2007. Canberra.

The leading specific causes of the total burden of disease and injury in the ACT were: *anxiety and depression* (9.3% of the total burden), *chronic heart disease* (8.1%), *stroke* (3.9%), *type 2 diabetes* (3.5%) and *asthma* (3.3%). Together, these five conditions accounted for more than a quarter (28.1%) of the burden in the ACT in 2003. *Anxiety and depression* and *chronic heart disease* were the two most common causes of burden of disease in both males and females in the ACT.

The Australian Institute of Health and Welfare (AIHW) identified a number of largely preventable risk factors that impact adversely on the incidence and prevalence of many chronic conditions (Table 1). In the ACT approximately one third of the overall disease burden can be attributed to these risk factors, of which tobacco use contributes 7%.

**Table 1: Burden of disease (DALYs) attributable to known chronic disease risk factors by sex, ACT, 2003.**

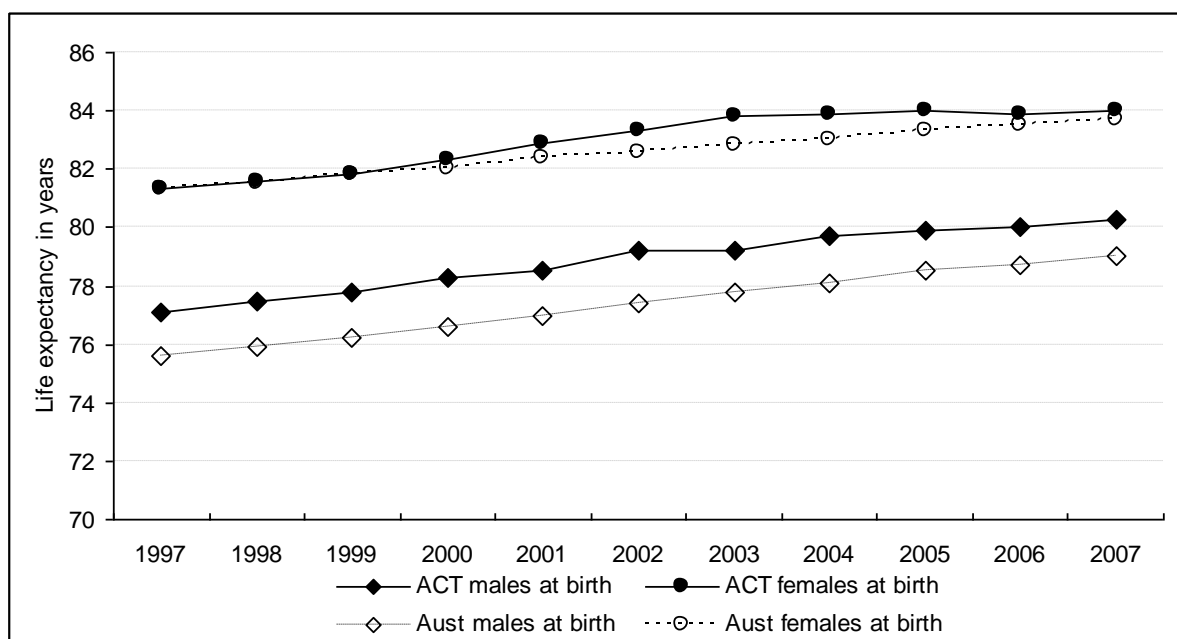
Risk factor	Male	Female	Total	% all causes
Tobacco	1,174	764	1,938	7
High blood pressure	995	889	1,884	6
High body mass	944	842	1,786	6
Physical inactivity	801	846	1,647	6
High blood cholesterol	825	672	1,497	5
Alcohol	525	119	644	2
Low fruit and vegetable intake	337	177	514	2
Air pollution - short term	37	38	75	0
Particulates	19	18	37	0
Ozone	18	19	37	0
Air pollution - long-term	92	90	182	1
<b>TOTAL DALYs from all causes</b>	<b>14,847</b>	<b>14,608</b>	<b>29,455</b>	<b>37</b>

Source: AIHW 2007, *The burden of disease and injury in Australia 2003*. PHE 82, 2007. Canberra.

### 3.2. Life expectancy

Life expectancy has increased steadily in Australia since the early 1900s and is now one of the highest in the world. Life expectancy in the ACT is high in comparison to other jurisdictions and is expected to increase over the next ten years. In 2007, the ACT recorded the highest life expectancy at birth for males (80.3 years) and females (84.0 years). Although life expectancy in females has remained fairly constant since 2004, life expectancy in males continues to rise (Figure 3).

**Figure 3: Life expectancy by sex, ACT & Australia, 1997-2007.**



Source: ABS 2008, *Deaths, Australia, 2007*, cat. no. 3302.0, ABS, Canberra.

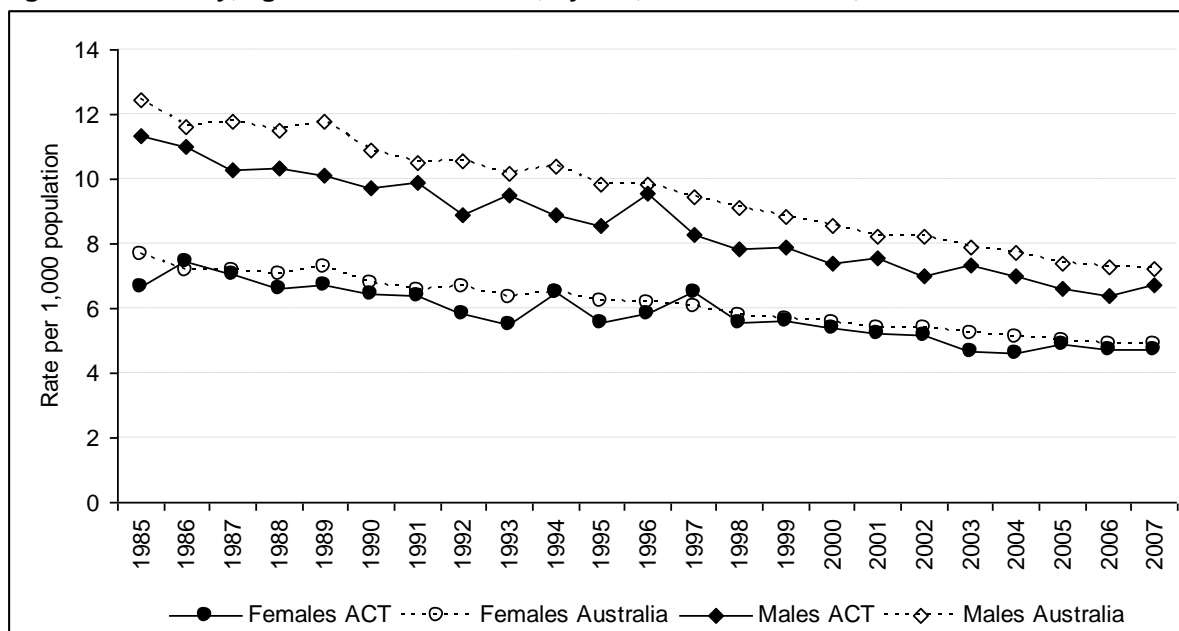
### 3.3. Mortality

In 2007, there were 1,597 death registrations for persons whose usual state of residence was the ACT. The median age at death was 79 years of age. There has been an increase in the number of registered deaths over the past ten years due to an increasing and older population.

Adjustment for the size and age distribution of the population, shows that the age-standardised death rate actually decreased between 1995 and 2003 and has remained steady at about 5.6 deaths per 1,000 standard population since 2003.

The decline in age-standardised death rate is more pronounced in males than females and largely reflects advances in health care technologies, therapies and disease prevention measures, especially for those conditions where male rates have historically exceeded female rates (e.g. chronic diseases such as cardiovascular disease and lung cancer).

**Figure 4: Mortality, age-standardised rates, by sex, ACT & Australia, 1985-2007.**



Sources: ABS 2007, data cubes table 2 death rates, summary, states & territories, 1995-2007, cat. no. 3302.0, ABS, Canberra; AIHW 2005, State & territory general record of incidence of mortality (GRIM) books, AIHW, Canberra.

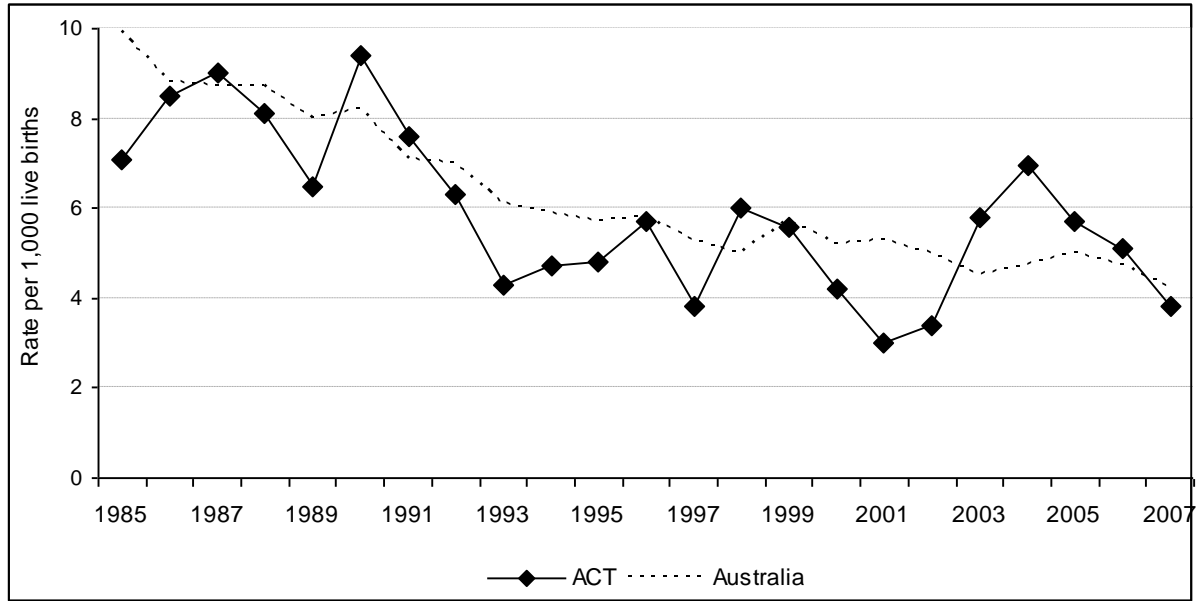
In 2007, the leading underlying causes of mortality for ACT residents were: cardiovascular diseases (31%), cancer (31%), respiratory diseases (7%), accident and injury (7%), mental disorders (5%), degenerative disorders (5%) and diabetes (4%). Chronic diseases were the cause of death in over 80% of deaths in the ACT.<sup>11</sup>

The level of avoidable mortality in a population indicates the theoretical scope for future health gain through disease prevention and management. An avoidable death is defined in this report as a death at age less than 80 years that could have been avoided given current understanding of causation, prevention strategies and disease management. Approximately a third (34%) of all resident deaths in 2007 were theoretically avoidable.

Premature deaths are those deaths that occur before 80 years of age. In 2007, 51% of all deaths registered for ACT residents were premature, a slight decrease since 2005 (53%).

Infant deaths are defined as deaths that occur before one year of age. The infant mortality rate in the ACT continues to decline, largely due to advances in antenatal and neonatal care, and education and disease prevention activities. The number of infant deaths in the ACT is low, and as a result mortality rates can fluctuate with only small changes in numbers and should be interpreted with caution. The main cause of infant mortality in the ACT was congenital abnormalities.<sup>11</sup>

Figure 5: Infant mortality rate, ACT & Australia, 1985-2007.



Source: ABS 2006, data cubes table 2 death rates, summary, states & territories, 1995-2005, cat. no. 3302.0, ABS, Canberra.

### 3.4. Morbidity

Although the level of ill health in the population at any one time is not known, survey results provide insights into the level of morbidity associated with long-term or chronic conditions. Estimates derived from the 2007-08 Australian Bureau of Statistics National Health Survey (ABS NHS) show that ACT respondents reported similar levels of long-term conditions to respondents nationally and that rates have not changed significantly over time.

In 2007-08, the most commonly reported long-term conditions were: short sightedness/long sightedness, hayfever and allergic rhinitis, diseases of the circulatory system and musculoskeletal conditions (Table 2). ACT residents were significantly more likely to suffer hayfever and allergic rhinitis and short sightedness compared to the national population.

**Table 2: Selected long-term conditions (%), ACT residents, 2004-05 & 2007-08.**

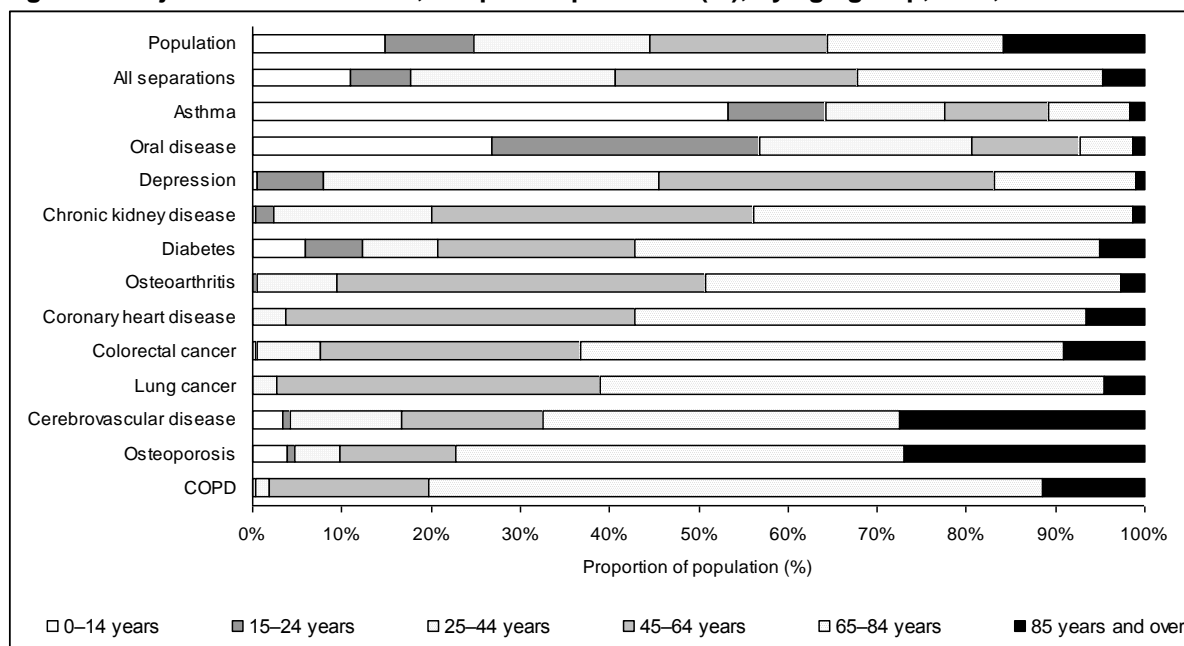
	2004-05	2007-08	Aust. 2007-08
Short sightedness	26.7	25.9	22.7
Long sightedness	25.0	23.1	25.6
Hayfever & allergic rhinitis	21.6	21.0	15.1
Diseases of the circulatory system	18.9	15.2	16.4
Backpain/problems neck/disc disorders	14.2	13.9	14.4
Arthritis (including osteoarthritis)	13.0	13	15.2
Mental & behavioural problems <sup>(a)</sup>	13.8	11.8	11.2
Deafness (complete/partial)	8.7	8.2	10.2
Asthma	10.2	9.6	9.9
Diabetes/high blood sugar	3.2	3.1	4.0
Osteoporosis	2.9	2.9	3.4
Bronchitis/emphysema	2.1	1.8	2.4
Cancer	1.7	1.9	1.6

Source: ABS National Health Survey 2004-05, 2007-08: Summary of results, State tables, cat. no. 4368.0.

Note: (a) Includes depression

Hospitalisations provide an insight into the level of severity of ill-health in as much as the person requires hospital admission. Hospitalisation data in 2007-08 show that hospitalisations due to certain diseases varied across the life course (Figure 6). Persons 45 years and over were most likely to be hospitalised as a result of chronic obstructive pulmonary disease (COPD), osteoporosis, cardiovascular disease, cancer and diabetes. Those under 45 years were more likely to be hospitalised as a result of asthma, oral disease and depression.

**Figure 6: Major chronic diseases, hospital separations (%), by age group, ACT, 2007-08.**



Source: ACT Health Admitted Patient Care Collection, confidentialised unit record file, 2007-08.

Potentially preventable hospitalisations are those conditions where hospitalisation is thought to be avoidable if timely and adequate non-hospital care had been provided. Although the ACT has lower rates than the national average (Table 3), these rates have not changed significantly since 2002-03. In 2007-08, half of the total potentially preventable hospitalisations were due to chronic diseases in both the ACT and Australia.

**Table 3: Potentially preventable hospitalisations for chronic conditions, age-standardised rates, ACT & Australia, 2006-07 & 2007-08.**

	2006-07		2007-08	
	ACT	Aust	ACT	Aust
<b>Select chronic conditions (a)</b>				
Diabetes complications	5.28	10.43	5.48	10.58
Congestive cardiac failure	1.91	1.94	1.76	1.95
Chronic obstructive pulmonary disease	1.65	2.56	1.54	2.69
Asthma	1.15	1.79	0.97	1.44
Angina	1.14	1.79	1.13	1.69
Hypertension	0.20	0.29	0.13	0.27
<b>Total chronic conditions<sup>(c)</sup></b>	<b>11.43</b>	<b>19.05</b>	<b>11.09</b>	<b>19.24</b>
<b>Total potentially preventable hospitalisations<sup>(c)</sup></b>	<b>22.16</b>	<b>32.49</b>	<b>22.28</b>	<b>33.13</b>

Source: AIHW Australian Hospital Statistics.

Notes: (a) Conditions are defined using ICD-10-AM codes as defined in Australian Hospital Statistics.

(b) Rate per 1,000 population was directly age-standardised to the Australian estimated resident population as of 31 December 2006.

(c) Totals exclude multiple diagnoses for the same separation within the same group.



## 4. Trends and indicators in health status

Trends and indicators in health status are profiled for: mental health, cardiovascular disease, diabetes, asthma, musculoskeletal disorders, and injury. In addition, key indicators in health status for maternal and perinatal health and dental health are provided. Further information on health indicators is available in Chapter 5 (Notifiable conditions) and Chapter 15 (Summary tables).

### 4.1. Mental health

Mental and behavioural disorders include depression, anxiety, dementia, substance use disorders and psychotic disorders such as schizophrenia. People with moderate to severe forms of these disorders are often subjected to social isolation, poor quality of life and increased mortality.<sup>12</sup>

These disorders were responsible for 15% of the total burden of disease and injury in the ACT in 2003, compared to 13.3% nationally.<sup>13</sup> The main contributors to this disease burden were: anxiety and depression (60%), substance use disorders (14%), and personality disorders (11%). Seven per cent of the burden from mental disorders was due to mortality, most of which involved fatal outcomes associated with substance abuse.<sup>13</sup>

#### 4.1.1. Morbidity

In 2007-08, 11.8% of the adult ACT population reported having a mental disorder that had been diagnosed by a doctor (Australia: 11.2%). Overall, reported rates of mental and behavioural problems have decreased since 2004-05 (13.8%) (Table 15-6).<sup>14</sup> Specific disorders included mood disorder (7.8%), anxiety disorder (3.6%) and other mental and behavioural disorders (5.0%).

Persons who reported having been diagnosed with a mental health problem in the previous 12 months were significantly more likely than the rest of the ACT adult population to report: risky alcohol drinking (35.3%: 31.2%), current smoking (22.1%: 13.9%), and inadequate physical activity levels (48.3%: 41.9%). Of those who were diagnosed in the previous 12 months with a mental health disorder 41.8% were currently receiving treatment (results from ACTGHS).

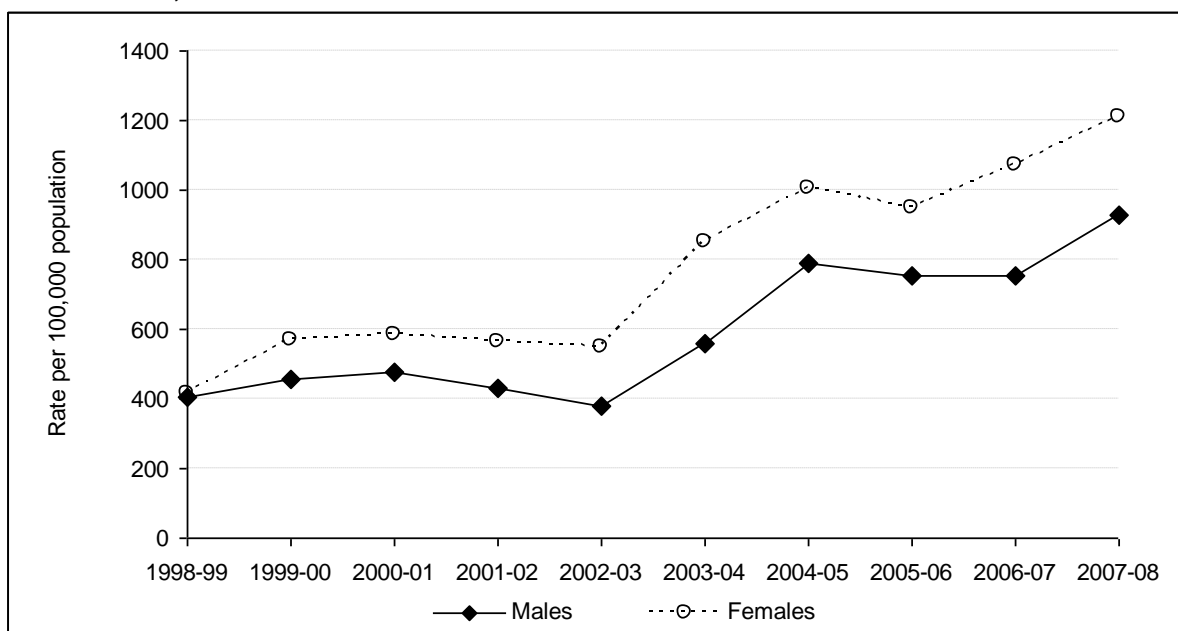
Psychological distress has a major effect on the ability of people to work, study and manage day to day activities, and can contribute to the development of mental health disorders. In 2007-08, 11% of the ACT population reported symptoms of high to very high psychological distress over the previous four weeks<sup>4</sup> using the Kessler Psychological Distress Scale (K10).<sup>15</sup> Information collected through the ACT GHS shows that:

- Females were more likely to report symptoms of high to very high psychological distress than males.
- Young people (13.7%) age 18 to 24 years were more likely than other age groups to report high to very high psychological distress.
- 36.9% of women and 16.3% of men who reported high to very high levels of psychological distress attributed their stress to physical problems either most of the time or all of the time.
- 59.4% of those reporting high to very high psychological distress, reported reduced activities of at least 1 day in the previous four weeks due to this condition, with 20.8% reporting reduced activities for more than a week as a result of the condition.

In 2007-08, there were 3,520 hospital separations for ACT residents with a primary diagnosis of mental or behavioural disorder. Of these, 35% involved a diagnosis of mood (affective) disorder, 24% had a diagnosis of neurotic, stress related or somatoform disorders, 18% had psychotic disorders such as schizophrenia, and 16% had a mental disorder due to substance use.

Age-standardised hospital separation rates for mental and behavioural disorders have been rising in the ACT since 1998 for both males and females (Figure 7). This increase is primarily associated with an increase in private hospital admissions for mood (affective) disorders and neurotic, stress related or somatoform disorders. The increase in private hospital admission rates coincides with the expansion of mental health services in the private sector.

**Figure 7: Mental or behavioural disorder hospital separations, age-standardised rates, by sex, ACT, 1998-99 to 2007-08.**

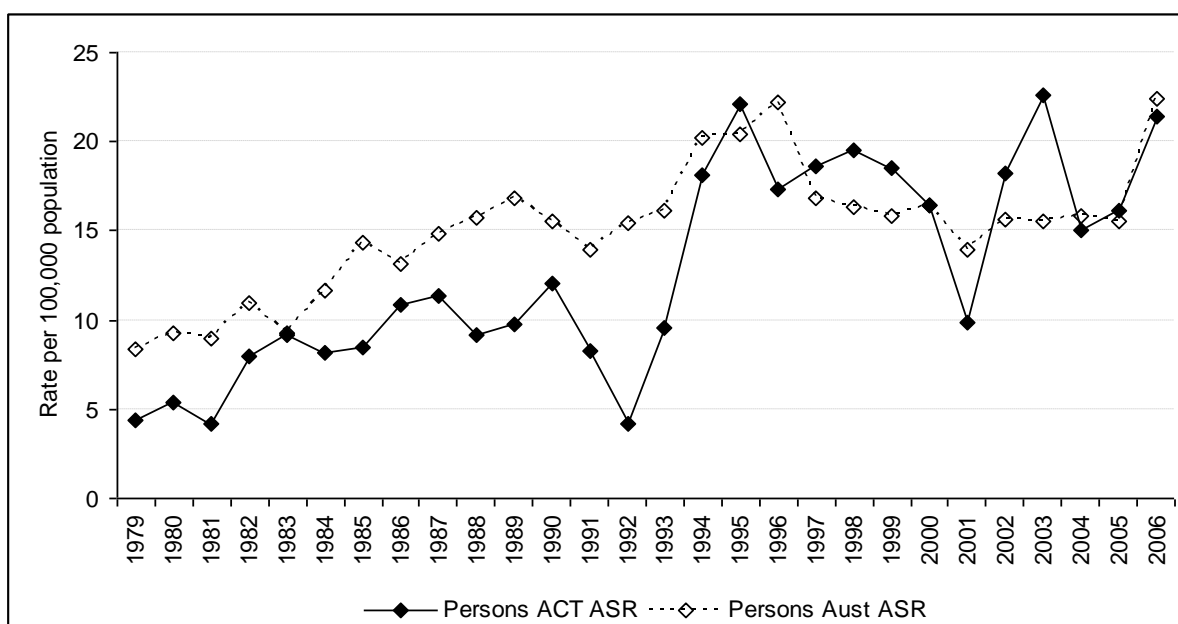


Source: ACT Health. Admitted Patient Care Data Collection, confidentialised unit record files, 1998-2008.

#### 4.1.2. Mortality

During 2007, 85 (5%) death registrations in the ACT were attributable to mental or behavioural disorders (24 males and 61 females). The average age at death was 83.9 years.<sup>16</sup> Dementia was reported as the cause of death for over 80% of these deaths.<sup>17</sup> The age-standardised mortality rates for mental and behavioural disorders fluctuate in the ACT due to small numbers, but have been increasing in both the ACT and Australia for both males and females largely due to the increasing proportion of deaths due to dementia in older persons (Figure 8).

**Figure 8: Mental & behavioural disorder mortality, age-standardised rates, ACT & Australia, 1979-2006.**



Source: AIHW 2008. State & Territories GRIM (General Record of Incidence of Mortality) Books. AIHW, Canberra.  
 Note: ASR denotes age-standardised rate.

The age-standardised mortality rates for suicide in the ACT fluctuate from year to year due to the small number of suicide deaths. Between 1968 and 2006, mortality rates for suicide decreased by 1.3% per annum, giving a total decrease of 39.4% over this time period. Suicide rates for ACT males are consistently higher than for ACT females. ACT suicide rates are similar to those for Australia. In 2006, ACT males had a lifetime risk of dying from suicide of 1 in 111 and the risk for ACT females was 1 in 223.

## 4.2. Cardiovascular disease

Cardiovascular disease relates to diseases of the heart and blood vessels. Within this broad group, coronary heart disease (CHD) is the leading cause of disease burden, followed by stroke. The burden of disease due to CHD was higher in males while the burden of disease due to stroke was higher in females. Nearly 80% of total cardiovascular disease burden was due to mortality.<sup>13</sup>

### 4.2.1. Morbidity

In 2007-08, 15.2% of the ACT population reported having a disease of the circulatory system expected to last or having lasted for 6 months or more (Australia: 16.4%).<sup>18</sup> This is significantly lower than reported in 2004-05 (18.9%).<sup>19</sup> The ACT had the lowest percentage of people reporting CHD disease (1.7%) of all the states and territories.<sup>20</sup>

Results from the 2007-08 ACTGHS showed that:

- Persons who had ever been told they had cardiovascular disease were significantly more likely (than those not told) to be overweight or obese (66%:49.8%) and less likely to report adequate levels of physical activity (45.1%:57.7%).
- 26.2% of all respondents reported to have ever been told they had high blood pressure and of these 57% reported still having high blood pressure, of which 90% were currently on medication for the condition.
- 21.4% of all respondents reported ever having been told that they had high cholesterol. Of these, 64.2% reported still having high cholesterol and only 46.2% were either on medical treatment or making some lifestyle change to lower their cholesterol.

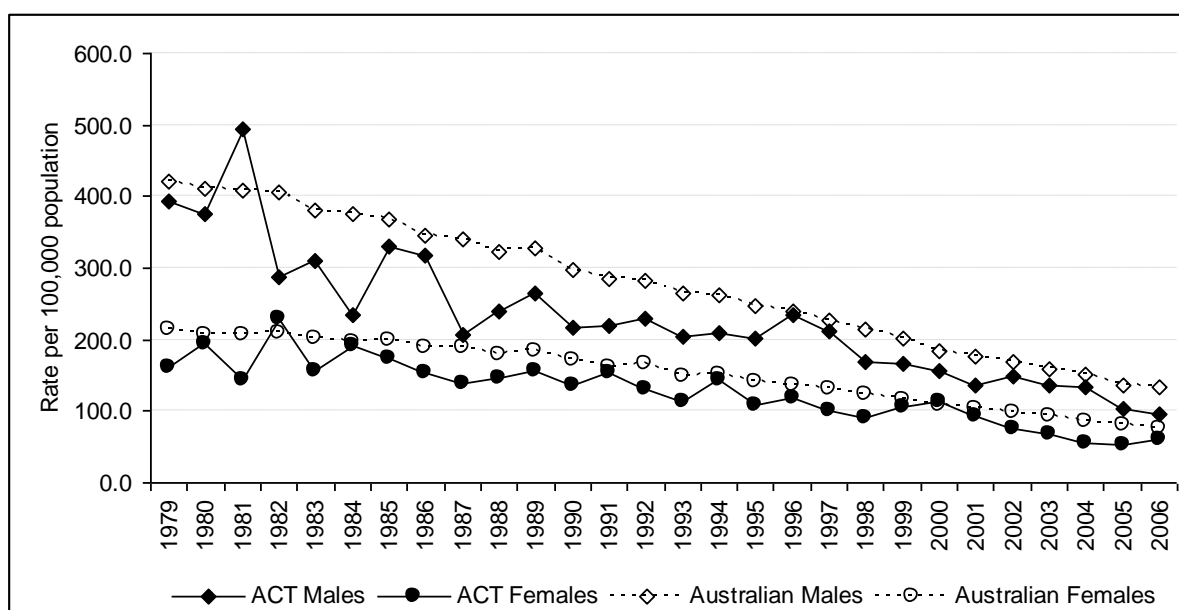
ACT age-standardised hospital separation rates for CHD have changed little since 1998 for both males and females. In 2007-08, the standardised separation rates for females (340 per 100,000 population) were less than half that for males (847 per 100,000 population). The most common procedures performed for cardiovascular disease in ACT hospitals included: coronary angiography, coronary artery bypass grafting and coronary angioplasty.

### 4.2.2. Mortality

During 2007, 494 (31%) of all deaths were due to cardiovascular disease. Of these, 45% were due to CHD and 25% due to cerebrovascular disease. The average age at death for cardiovascular disease was 72.8 years for males and 82.1 for females. Age-standardised rates were higher in males (195.7 per 100,000 population) compared to females (160.3). Males were more likely to die from CHD than females (ratio 1.38:1) and females were more likely to die from cerebrovascular disease than males (ratio 1.86:1).

Although age-standardised mortality rates for coronary heart disease have declined for both males and females in ACT and Australia (Figure 9), CHD remains a leading cause of mortality both in the ACT and Australia. The decline has been more marked in males than females.

**Figure 9: Coronary heart disease mortality, age-standardised rates, by sex, ACT & Australia, 1979-2006.**



Source: AIHW 2008. State & Territories GRIM (General Record of Incidence of Mortality) Books. AIHW, Canberra.

### 4.3. Diabetes mellitus (diabetes)

Diabetes is a progressive chronic disease that contributes to significant illness, disability and premature mortality. It contributes approximately 4% of the total disease burden.<sup>21</sup>

#### 4.3.1. Morbidity

In 2007-08, an estimated 3.1% of the ACT population had been diagnosed with diabetes (Australia: 4%) and males were slightly more likely to be affected than females.<sup>18</sup> These rates have remained relatively unchanged since 2001. The prevalence of diabetes increases with age with over 90% of cases reported in persons over the age of 45 years.

Self-reported estimates of diabetes generally underestimate the true prevalence of diabetes.<sup>22</sup> The Australian Diabetes, Obesity and Lifestyle Study (AusDiab study) conducted in 1999-2000 identified people with diabetes by blood test. Results showed that in 2000, 7.2% of the people surveyed who were over 25 years of age had diabetes and a further 16.4% had impaired glucose tolerance, and were at high risk of developing diabetes in the future.<sup>23</sup> Projections indicate that by 2020, there will be between 15,000 and 22,000 people with diabetes in the ACT, an increase of approximately 50% from 2005 estimates.

Most of this increase is expected to be driven by increases in the prevalence of overweight and obesity, which currently accounts for about 41% of type 2 diabetes in Australia, along with associated changes in dietary patterns and physical activity levels.<sup>24</sup> Therefore, prevention initiatives aimed at reducing the prevalence of diabetes risk factors present an important opportunity to reduce future prevalence of the disease.

Gestational diabetes occurs during pregnancy and is a health risk for both the mother and the developing foetus. Although gestational diabetes usually abates following birth, both mother and baby remain at an increased risk of developing type 2 diabetes later in life. In 2007, 249 (5.5%) women gave birth in the ACT with a diagnosis of gestational diabetes, slightly higher than in 2003 (3.7%).<sup>25</sup>

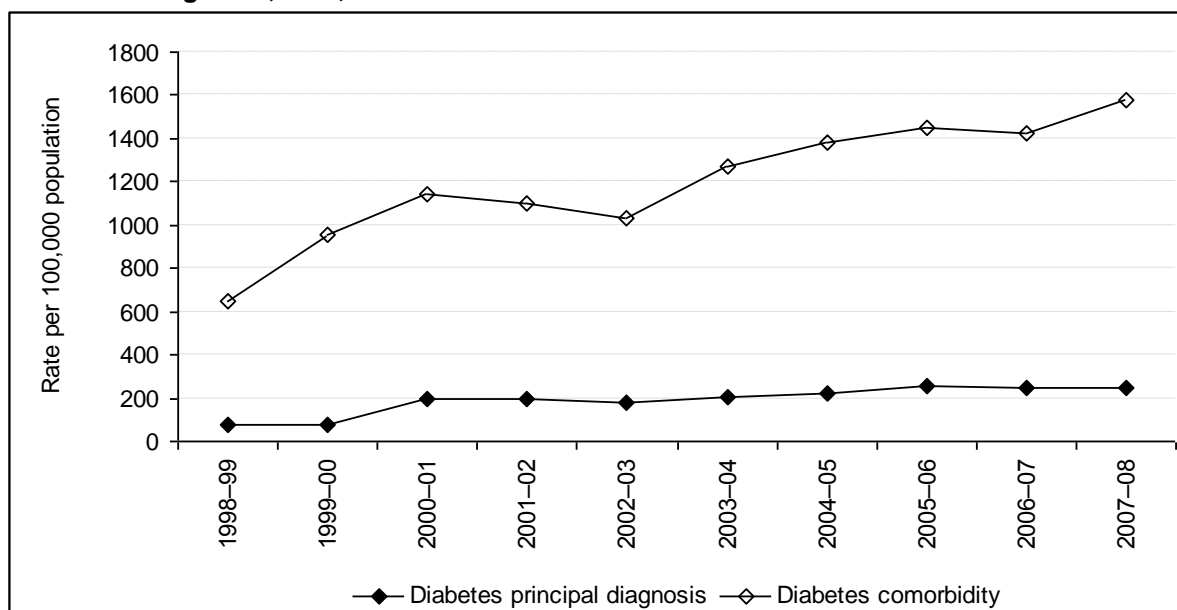
In terms of diabetes management, results from the 2007-08 ACTGHS show that:

- 57% of persons reporting to have diabetes reported to be on a special diet, 31.8% reported to be exercising on most days, 23.3% reported to be having injections and 47.2% were on tablets.
- Only 8% reported to be losing any weight, despite 76% being overweight or obese.

As diabetes is a chronic progressive disease, the disease burden is better reflected in service utilisation information. The ACT hospital separation rate for ACT residents where the primary diagnosis on the hospital record is diabetes, has remained relatively constant since 2000-01. However, separation rates for other conditions where there is a secondary diagnosis of diabetes, have increased (Figure 10).

In 2007-08, of those separations with a principal diagnosis of diabetes, the most common secondary diagnoses (co-morbidities) were: circulatory system disorders (16%), endocrine disorders (11%), digestive system disorders (10%), cancer (7%), respiratory disorders (7%), injury and poisoning (7%) and genitourinary conditions (6%).

**Figure 10: Diabetes hospital separations, age-standardised rates, by principal or secondary diagnosis, ACT, 1998-99 to 2007-08.**



Source: ACT Health. Admitted Patient Care Collection, confidentialised unit record file, 1999-2008.

#### 4.3.2. Mortality

In 2007, there were 51 ACT resident deaths with diabetes recorded as the underlying cause of death (18.8 deaths per 100,000 population).<sup>26</sup> There have been no major changes in the age-standardised death rate from diabetes since 1980. However, diabetes is often a contributing factor in a number of deaths, particularly where the underlying cause of death is reported as cardiovascular or renal disease. The cause-of-death statistics do not distinguish between the various forms of diabetes.

### 4.4. Asthma

Australia has one of the highest prevalences of asthma in the world with approximately 40% of all Australians having respiratory symptoms consistent with asthma at some time in their lives. Asthma accounts for approximately 3% of the total burden of disease in the ACT compared to 2.4% nationally (2003). Asthma was the leading specific cause of disease burden in children under 15 years.

#### 4.4.1. Morbidity

In 2007-08, 32,300 (9.6%) ACT residents had current asthma.<sup>20</sup> This is a decrease from 2001 (12.3%).<sup>27</sup> Estimates show that there are differences in the prevalence of asthma between population groups. Children (0-14 years) and young people (15-24 years) have the highest prevalence rates, with under 15 year males having higher rates than under 15 year females. However, females aged 15 years and over have higher prevalence rates than their male counterparts.<sup>19</sup>

The Kindergarten Screen Survey, run annually by the ACT Health Academic Unit of General Practice and Community Health, found that on average 10.5% of children in each year's cohort were reported

by their parents as having asthma in the three years 2006-08 and of these, 35% used inhaled corticosteroids.

Smoking and being overweight are common among people with asthma. Results from the 2007-08 ACTGHS show that:

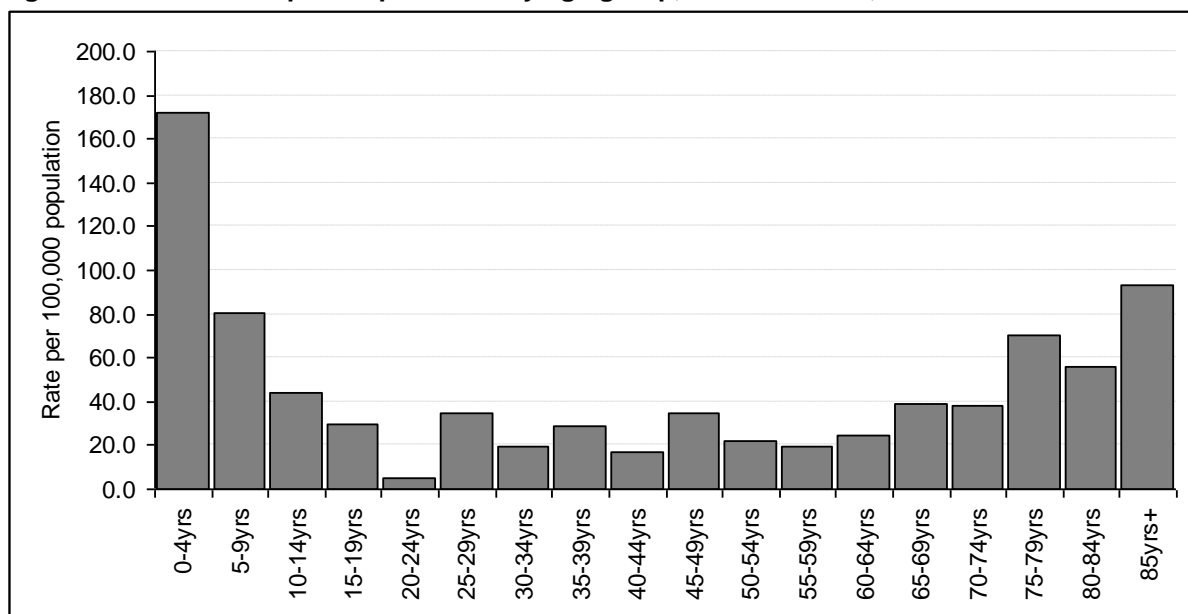
- 9.5% adults (18 years or over) with asthma were also current smokers.
- 67.5% were sedentary or had low exercise levels.
- 53.2% were overweight or obese at the time of survey.
- 16% of adults with asthma reported that this condition interfered with their daily living.

Regular review by a general practitioner and the use of a written asthma management plan are effective in preventing hospital admissions and attendance at emergency departments for asthma. Results from the 2007-08 ACTGHS indicate that around one-third (34%) of people with asthma in the ACT had a written asthma plan.

Hospitalisation data show a decline in the number of separations with a principal diagnosis of asthma between 1996-97 and 2007-08 at a rate of 1.9% per annum. In 2007-08, asthma separations for ACT residents accounted for less than 1% of all hospitalisations in ACT hospitals. This decrease may reflect the continuing improvement of asthma management in the community.

Hospitalisation rates are not evenly dispersed across the population. Serious asthma morbidity is more common among children and people over 75 years of age (Figure 11). Hospital separation rates are highest for children, with infants and very young children (0-4 years) accounting for almost a quarter (24.7%) of all asthma separations from ACT hospitals by ACT residents in 2007-08.

**Figure 11: Asthma hospital separations by age group, ACT residents, 2007-08.**

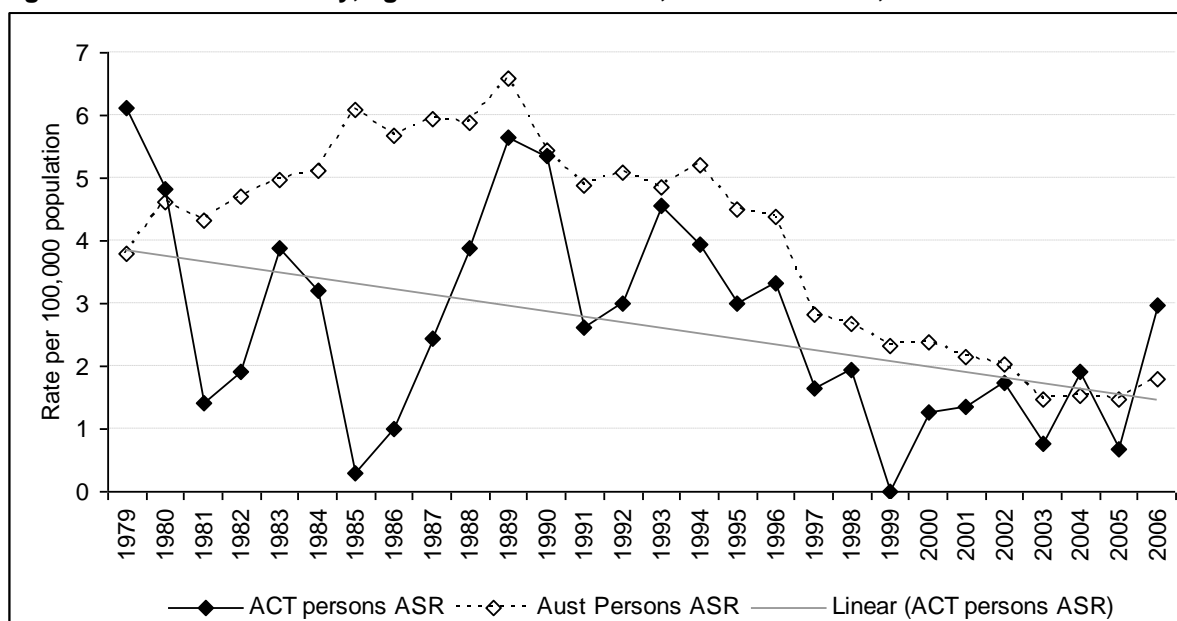


Source: ACT Health. Admitted Patient Care Data Collection, confidentialised unit record file, 2007-08.

#### 4.4.2. Mortality

There has been an ongoing decline in the Australian asthma mortality rate over the last two decades and although ACT rates have fluctuated (due to low numbers of cases) there has been a downward trend (Figure 12).<sup>19</sup> There were nine deaths due to asthma in 2006, decreasing further in 2007.

**Figure 12: Asthma mortality, age-standardised rates, ACT & Australia, 1979-2006.**



Source: AIHW 2005. State & Territories GRIM (General Record of Incidence of Mortality) Books. AIHW, Canberra.

Notes: (a) ASR denotes age-standardised rate.

(b) Asthma death based on underlying cause of death, ICD-10 codes J45 & J46.

## 4.5. Musculoskeletal disorders

Although most musculoskeletal conditions rarely result in death they are a leading cause of disability and contribute to 5% of the total disease burden in the ACT. Musculoskeletal disorders include: osteoarthritis, rheumatoid arthritis, osteoporosis and a number of less prevalent conditions some of which are a result of injury trauma.

### 4.5.1. Morbidity

In 2007-08, 28.3% of the ACT population had a condition of the musculoskeletal system and connective tissue that was expected to last for 6 months or more (Australia: 31%). The most common conditions reported were back problems (14.2%) and arthritis (13%).<sup>20</sup>

Of those persons reporting a long-term condition of arthritis or osteoporosis:

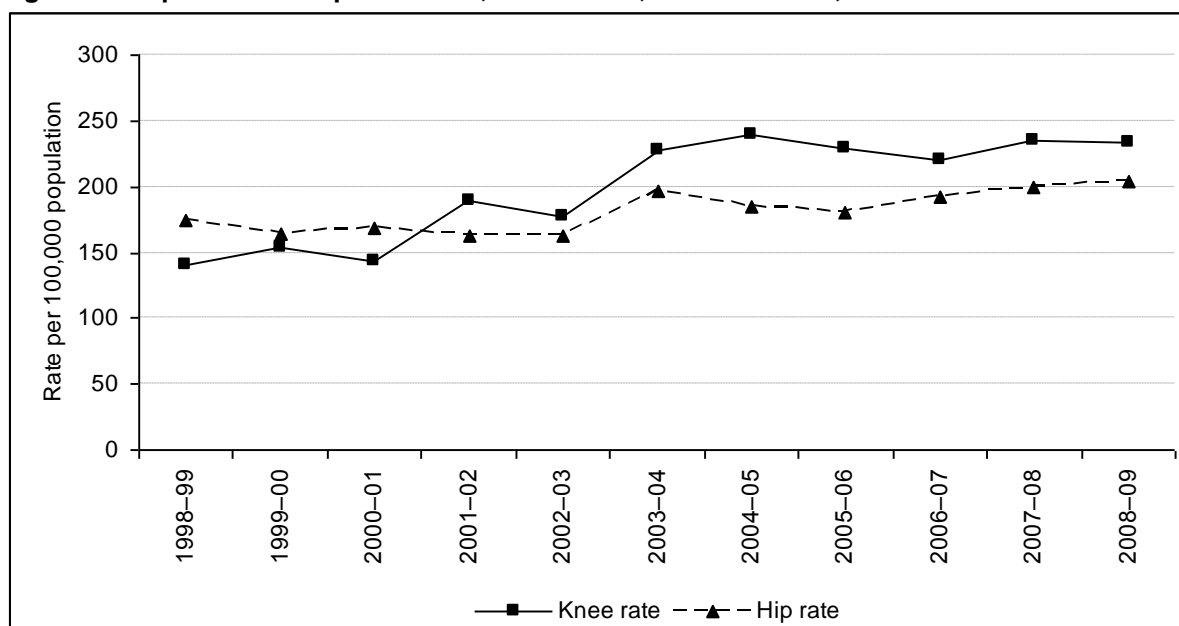
- 58% were taking medications, mainly vitamin and mineral supplements (48.1%);
- 35% reported they had discussed self management with a GP or specialist;
- 20% reported to exercise most days; and
- 7.9% reported losing weight.

In 2007-08, 6% of all hospitalisations for ACT residents (2,662 males and 2,618 females) had a primary diagnosis related to a musculoskeletal condition. There were also a further 8,392 separations with a secondary diagnosis related to musculoskeletal conditions. ACT residents aged 50-59 years were most likely to be hospitalised with a primary diagnosis of arthritis.

Hospitalisation rates with a primary diagnosis of a musculoskeletal disorder have increased for both males and females over the period 1999-2000 to 2007-08 in the ACT. It is likely that these increases are in part due to advances in treatment and also general improvements in the availability of orthopaedic services in the ACT.

Significant advances have been made in hospital treatment of advanced arthritis. Joint replacement surgery is considered the most cost effective approach to treating severe arthritis of the hip or knee. Over the 1998-2008 period there was an increase in the crude rates of hip and knee joint replacements, and this trend is expected to continue (Figure 13).

**Figure 13: Hip and knee replacements, crude rates, ACT residents, 1998-2008.**



Source: ACT Health. Admitted Patient Care Data Collection, confidentialised unit record file, 1998-2009.

Note: Includes patients with more than one procedure over the time period.

#### 4.5.2. Mortality

In 2007, there were 13 deaths directly attributable to musculoskeletal disorders, accounting for less than 1% of all deaths in the ACT. The mean age of death was 81 years. The age-standardised mortality rate for musculoskeletal conditions in 2007 was 4.8 per 100,000 population (Australia; 4.6).

## 4.6. Injury

Injury is a leading cause of premature mortality, accounting for an estimated 7% of the total burden of disease in the ACT and Australia.<sup>10</sup> Injuries can result in a range of physical and mental disabilities that can impact on longer-term quality of life. Strategies to prevent injury provide an opportunity to reduce the burden due to premature mortality, chronic disability and associated health system costs.

#### 4.6.1. Morbidity

In 2007-08, there were 5,876 injuries resulting in hospitalisation in the ACT. The age-standardised rates of hospital separations with injury as a primary diagnosis have shown little change since 2005-06. The leading causes of injury-related separations were: falls (31%), complications of care (17.4%), road transport injury (13.2%) and intentional self-harm (5.8%). Of these:

- hospitalisations due to falls injury were more likely in females (39%) than males (25%);
- hospitalisations due to transport accidents were more likely in males (16%) than females (9.6%); and
- hospitalisations due to intentional self harm were more likely in females (10%) than males (2.5%).

In 2007-08, ACT residents aged 14-29 years were most likely to be hospitalised due to injury and were involved in: 38% of transport accidents, 66% of injuries due to assault, and 46% of intentional self-harm injuries.

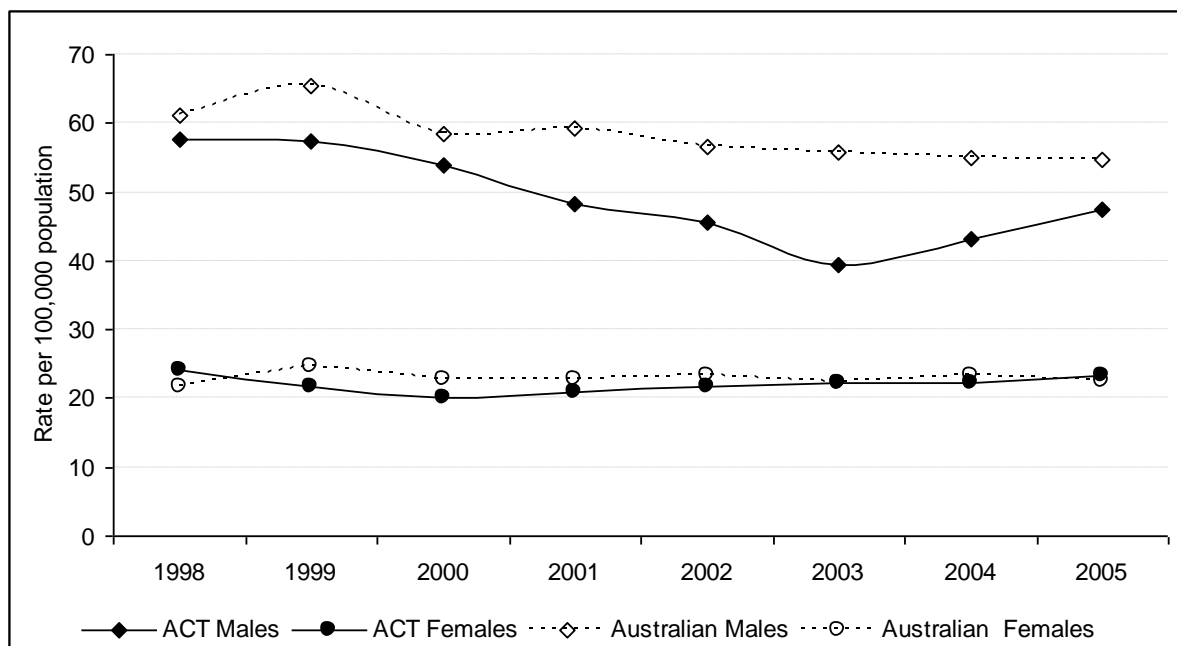
Most injuries present to emergency departments and are not admitted into hospital. In 2007-08, there were 22,821 ACT residents (males: 60.1%; females: 39.9%) who presented with an injury to ACT hospital emergency departments. Injuries accounted for more than a quarter (26.8%) of all ACT resident emergency department presentations in the Territory.



#### 4.6.2. Mortality

In 2007, there were 114 injury related deaths in the ACT, with 66% being for males. Mortality rates from injury have decreased for males since 1998, but rates for females have remained unchanged. ACT injury-related mortality rates are consistently lower than national rates (Figure 14). In 2007, the leading underlying causes of injury-related mortality in the ACT continued to be: intentional self-harm (27.2%), falls (19.3%), road transport injury (16.7%), and accidental poisoning (12.3%).

**Figure 14: Injury-related mortality (a),(b),(c), age-standardised rates, by sex, ACT & Australia, 1998-2006.**



Source: ABS deaths data 1997-2006. Confidentialised unit record file; ABS 1998-2006.

Notes: (a) Injury-related deaths were identified using ICD-10 codes V01-Y98.

(b) ACT rates standardised to the 2001 Australian population for comparison with published national rates.

(c) Because of the small number of deaths each year in the ACT & annual fluctuations in the rates, three-year moving averages have been presented for the ACT, so the year '2005' is based on death registrations for the years 2004-06.

#### 4.6.3. Selected causes of injury

##### Falls injury

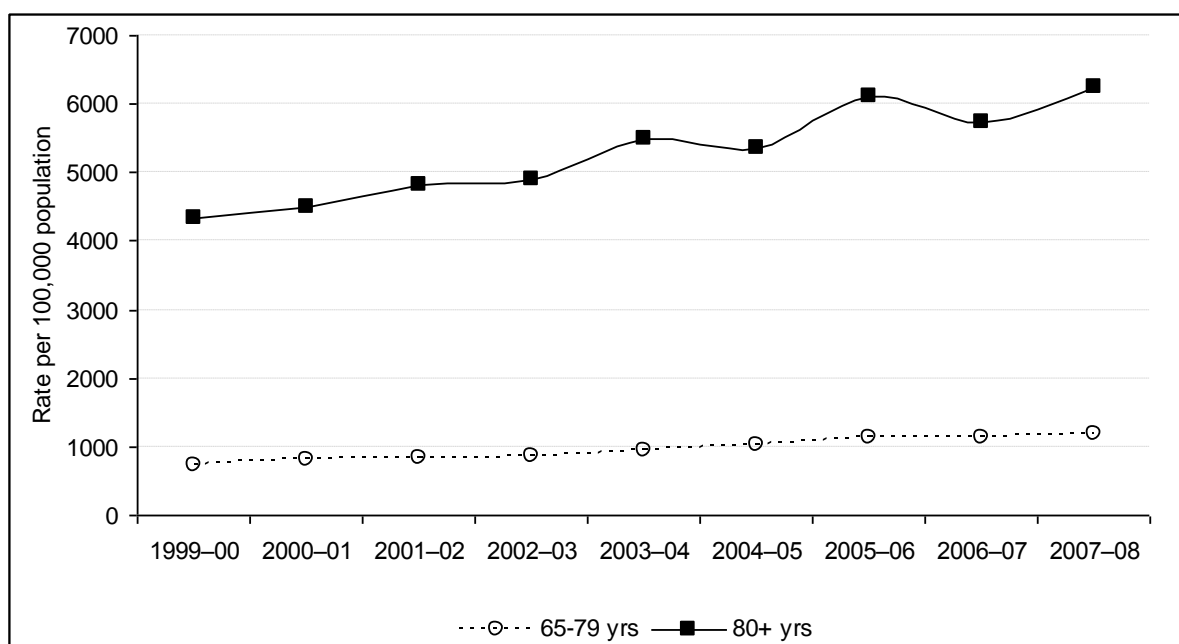
Falls are a leading cause of musculoskeletal trauma in the elderly and can lead to adverse long-term outcomes. Results from the 2007-08 ACTGHS show that 26.6% of ACT residents aged 65 years and over had a fall in the previous 12 months, with 7% of these requiring medical attention. Over one-quarter of residents aged 65 years and over reported having a fear of falling and 30% reported taking measures to minimise the risk of falling such as re-arranging home furniture, lighting and furnishings (30%), installing handrails (18%) and doing more exercise (2%).

In 2007-08, there were 794 ACT residents aged 65 years and over who were hospitalised as a result of a fall-related injury. The age-specific hospital separation rate involving an injury due to falls has increased significantly over the period 1999-2000 to 2007-08. These changes represent an increase of 63% in residents 80 years and over and a 44% increase in residents aged 65-79 years (Figure 15).

The most common injuries sustained as a result of a fall for people aged 65 years and over were injuries to the hip and thigh (30%), injuries to the head (20%), injuries to the abdomen, lumbar and pelvis (11%), and injuries to the elbow and forearm (10%).

In 2006, there were 23 deaths recorded in persons aged 65 years and over where a fall was recorded as either an underlying or contributing cause.

**Figure 15: Injury due to falls, hospital separations by age group, ACT residents, 1999-2000 to 2007-08.**

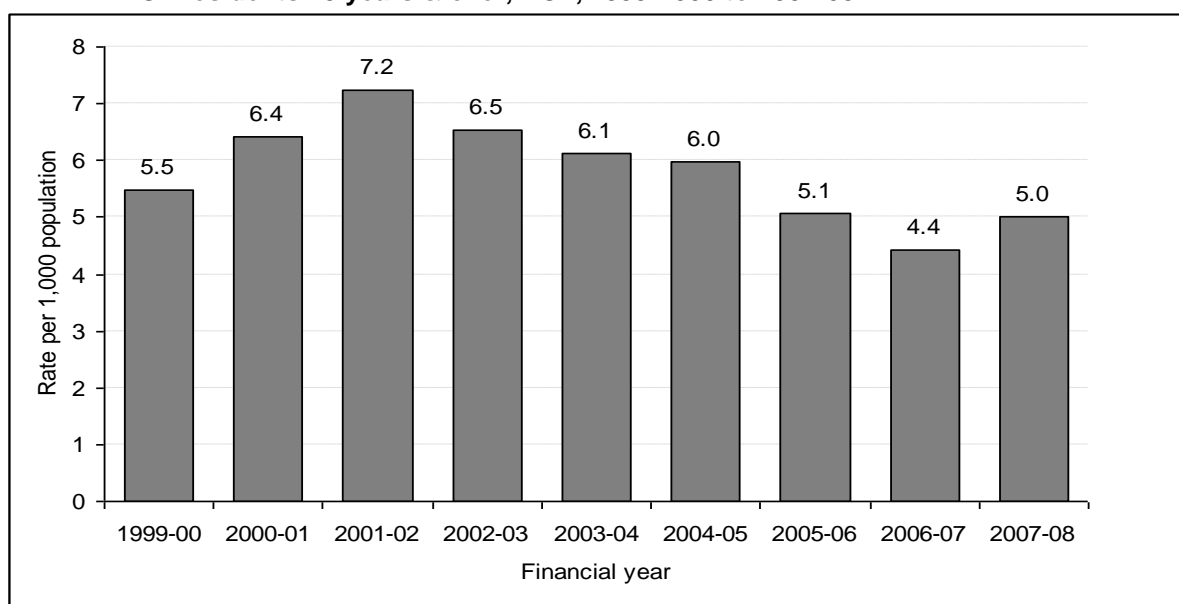


Source: ACT Health. Admitted Patient Care Data Collection, confidentialised unit record file, 1999-2008.  
 Note: Falls related hospitalisations are based on separations with a primary diagnosis of an injury with a secondary diagnosis of external cause for falls (ICD-10-AM codes S00.0 to T98.99 and W00.00 to W19.99). Statistical discharges & transfers have been excluded.

Rates of neck of femur (hip) fractures are an important indicator of serious injury due to falls in the elderly. In 2007-08, the hospital separation rate for these fractures was 5.0 per 1,000 ACT residents aged 75 years and over (Figure 16).

Although hospitalisation rates of fall-related injury in the elderly have increased over the last decade, the rates of more serious injury due to falls (fractured neck of femurs) have declined.

**Figure 16: Hip (neck of femur) fracture due to falls, hospital separations, age-specific rates, ACT residents 75 years & over, ACT, 1999-2000 to 2007-08.**



Source: ACT Health. Admitted Patient Care Data Collection, confidentialised unit record file, 1999-2000 to 2007-08.  
 Note: Falls related NOF fracture hospitalisations are based on separations with a diagnosis of an injury with a secondary diagnosis of external cause for falls (ICD-10-AM codes S70.0 & W00.00 to W19.99). Statistical discharges & transfers have been excluded.

## Road transport injury

Road transport accidents are a major cause of injury-related hospitalisation and mortality. In 2005, the estimated cost to the ACT community as a result of road crashes was \$180 million.<sup>28</sup> In 2006-07, 539 road crashes led to serious injury (age-standardised rate of 154 per 100,000 population). The ACT standardised rate for serious injury due to a road crash was slightly lower than national rates.

The ACT recorded higher rates of serious injury to pedal-cyclists compared to national rates (Table 4). Over the period 1999-2000 to 2007-08, there were 1,308 hospitalisations where an injury was recorded as a result of a pedal-cyclist accident. The number of hospitalisations doubled over this period with notable increases in persons 30 years and over. Nearly 80% of these hospitalisations were for males and the most common age group was 10-19 years.

The high numbers of injury due to pedal-cycle accident is most likely due to the popularity of cycling and the availability of cycling paths in the ACT.<sup>29</sup> The National Exercise, Recreation and Sport Survey (ERASS) results show that there has been an increase in the number of persons who reported cycling in the ACT at least once in the previous 12 months (16.9% in 2006; 18.2% in 2008).

**Table 4: Serious injury caused by road vehicle traffic crash, age-standardised rates, by road user group, ACT & Australia, 2006-07.**

	ACT	Australia
Car occupant	78	78
Car driver	52	48
Car passenger	21	24
Motorcyclist	35	35
Pedal cyclist	31	23
Pedestrian	5	13
<b>Total</b>	<b>154</b>	<b>157</b>

Source: AIHW: Henley G & Harrison JE 2009. Serious injury due to land transport accidents, Australia 2006-07. Injury research & statistics series no. 53 cat. no. INJCAT 129. Canberra.

Note: Rates per 100,000 population.

In 2007, there were 19 registered deaths for ACT residents with an underlying cause of death due to road transport injury. Trends over time show no significant change in age-standardised mortality rates due to road transport injury. Mortality rates in males due to transport injuries are consistently higher than female rates. Over the period 1998 to 2006, males were 2.4 times more likely to die from a road transport injury than females.

Road transport injury mortality rates are usually lower in the ACT compared to the national average, mainly because of the better road system, the urbanised environment and the relatively modern vehicle fleet in the ACT compared to other jurisdictions.<sup>30</sup>

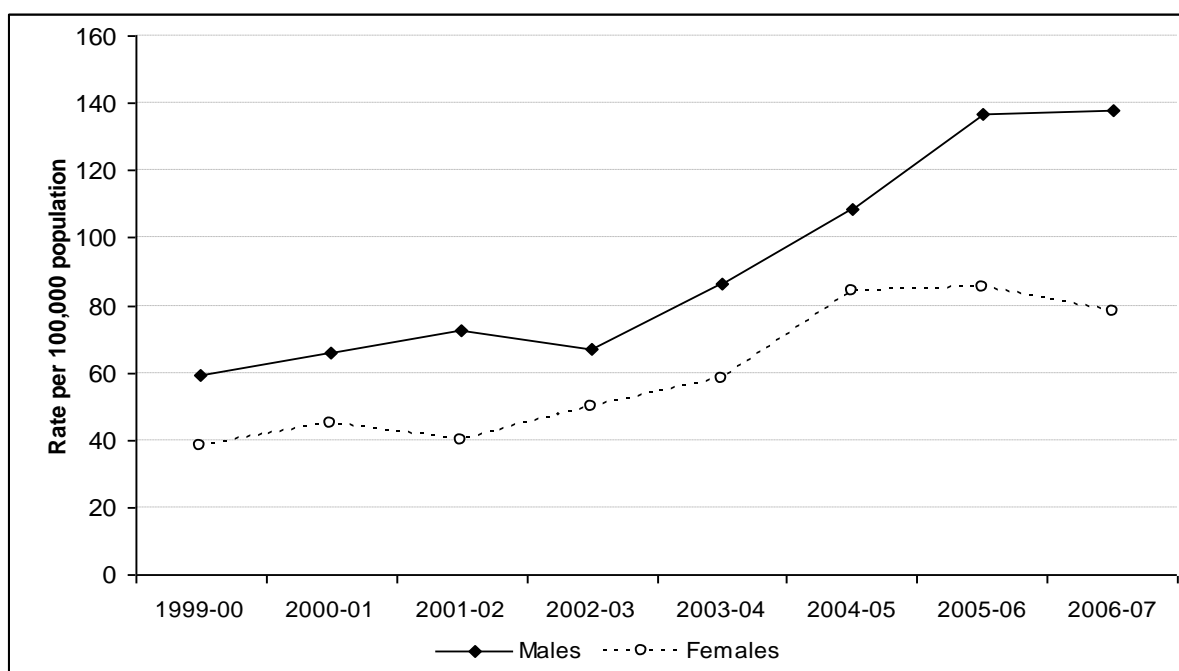
## Alcohol-related injury

The effects of alcohol consumption are estimated to account for 2.0% of the total burden of disease in the ACT.<sup>10</sup> Alcohol-related injuries occur in many situations, including motor vehicle accidents, falls, assault and intentional self-harm. The risk of death or hospitalisation due to injury is increased if alcohol is involved, with this risk being proportional to the number of drinks consumed.<sup>31</sup>

In 2006-07, there were 362 hospital separations due to an injury where alcohol was involved. Of those persons hospitalised, two-thirds (63.5%) were male and 5.2% were in persons under 18 years of age. The main causes of injury where alcohol was implicated were: falls (36%), intentional self-harm (23.4%), assault (15%) and transport accidents (6%).

Over the period 1999-00 to 2006-07, the age-standardised rate for hospitalisations due to alcohol related injury has more than doubled for both males and females (Figure 17).

**Figure 17: Alcohol-related injury hospital separations, age-standardised rates, ACT residents, 1999-2007.**



Source: ACT Health. Admitted Patient Care Data Collection, confidentialised unit record file, 1999-2007.

Note: Alcohol related injury hospitalisations are based on separations with a primary or secondary diagnosis of an injury (S00.00 to T98.99) & also a code for alcohol as a contributing cause (K86.0, E24.4, G31.2, G62.1, G72.1, I42.6, K29.2, K70, T51, F10, X45, X65, Y90-Y91.9, R78, Y150, Z72.1)

Over the period 1997 to 2006 there was an average of 8 injury-related deaths per annum in the ACT where alcohol was recorded as a known contributing factor. Most of these deaths were in males (74.3%) with no apparent age-related trends.

#### 4.7. Maternal and perinatal health

Maternal and perinatal indicators are an important measure of the health of a population. There were 5,419 women who gave birth to 5,535 babies during 2007. This is an increase of 8.5% since 2005. Sixteen per cent of women who gave birth in the ACT were not ACT residents.

Rates of pre-term babies and low-birthweight babies were significantly lower in the ACT compared to the Australian rates.

ACT teenagers (less than 20 years) were significantly less likely to give birth (2.6%) compared with the rest of Australia (4.1%). However, the percentage of women aged over 35 years giving birth for the first time was similar to the Australian percentage.

Compared to other Australian women, ACT residents who gave birth in the ACT were significantly more likely to have a spontaneous onset of labour and an instrumental birth. They were significantly less likely to have a caesarean section.

Results from the 2007-08 ACTGHS indicate that 91% of infants (aged 0 to 2 years) had ever been breastfed. Of these, 63% were breastfed up until 3 months of age, 41% up to 6 months and 19% were breastfed for 12 months or more.

In 2007, 12.5% of ACT mothers reported smoking during pregnancy which is a slight decrease from 15.1% in 2004 and significantly lower than the national 2007 rates (16.1%). Over half (52.9%) of Aboriginal and Torres Strait Islander mothers reported smoking during pregnancy in 2007 (ACT Maternal and Perinatal Data Collection).

## 4.8. Oral health

Oral diseases continue to be among the most costly yet preventable health problems, resulting in high direct and indirect costs to individuals and governments. Although oral conditions comprised less than one per cent of the burden of disease in Australia in 2003, estimates suggest that they accounted for about 6.2% of total health system expenditure in 2003-04.<sup>32</sup> Much of this was spent on dental caries and periodontal disease, which are amenable to prevention through private and public health activities, including having regular dental check-ups.<sup>33</sup>

Dental caries is the most common chronic disease among children in Australia. Modifiable risk factors for dental caries and periodontal disease include: lack of water fluoridation, infrequent dental visits, excess of sweet or sticky foods, medication that alters saliva flow, tobacco smoking, inadequate tooth-brushing or flossing of gums and teeth. Public health programs such as water fluoridation and school dental services are also essential for primary prevention, education and awareness raising.<sup>34</sup>

Combined decay experience from both deciduous and permanent teeth is expressed as the average number of decayed, missing (due to decay) and filled teeth (dmft). The mean dmft in children 4-14 years provides an indication of the total burden of disease among pre-teen children receiving care within ACT Health dental services over the 2006-08 period.

Results show that the presence of clinically detectable decay increases up to nine years and then steadily decreases in the older age groups. These trends are comparable to other states and territories.<sup>34</sup>

The Kindergarten Screen Survey, run by the ACT Health Academic Unit of General Practice and Community Health every year, asks parents about concerns they may have about the health of their children. Over the 2 year period of data collection (2006-08):

- School health nurses found that approximately 8% of the children screened had a dental issue (cavities, discoloured, crooked teeth).
- Approximately 85% of the children found by the nurses to have dental issues were not reported by the parents as having such an issue.

## 5. Notifiable conditions

In the ACT certain infectious diseases and all cases of cancer are notifiable to the Chief Health Officer under the *Public Health Act 1997*. Notifiable conditions are diseases or medical conditions determined by the Minister or declared by the Chief Health Officer. The Chief Health Officer monitors these conditions and advises the Minister for Health of any unusual actions that ACT Health and the ACT Government need to implement to protect the ACT population.

In the event of an outbreak of a disease that is not notifiable, the Chief Health Officer has the power to temporarily designate a non-notifiable disease as a notifiable condition, as in the case of Severe Acute Respiratory Syndrome (SARS).

### 5.1. Communicable diseases

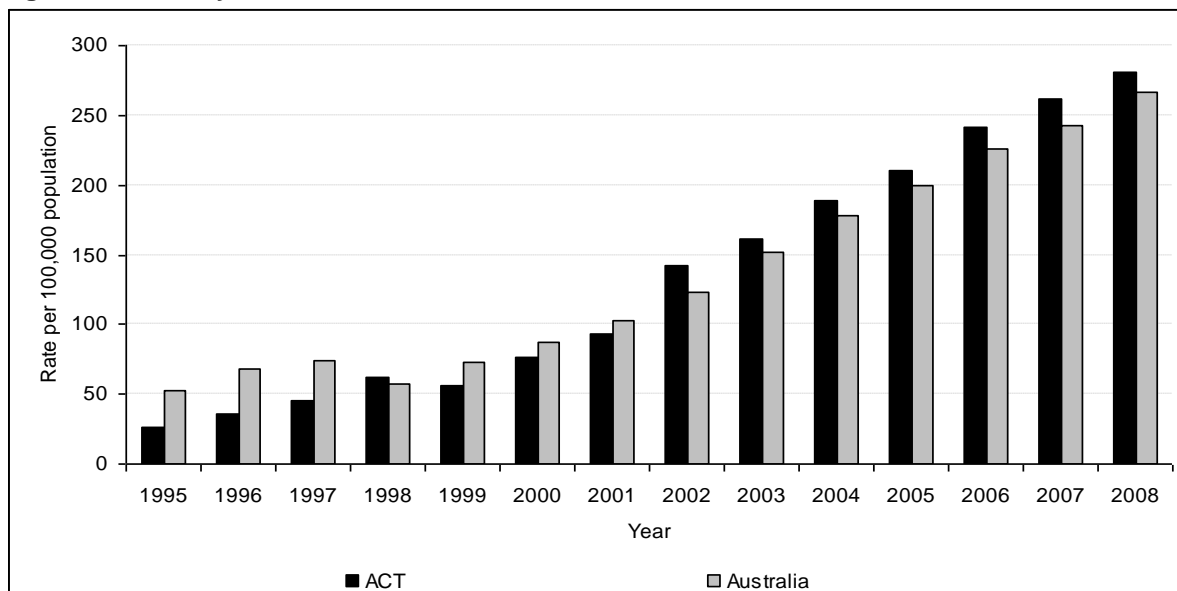
Detection and control of communicable diseases remains a significant public health priority both in Australia and internationally. The ACT Health Protection Service (HPS) within the Population Health Division of ACT Health monitors and implements strategies aimed at reducing the spread of these diseases in the ACT. ACT Health assesses notifications in line with national guidelines to determine whether a public health response is required, such as immunisation or treatment of contacts.

Although the number of notifications received by ACT Health is almost always an underestimate of the number of cases that actually occur, communicable disease notifications provide valuable information on disease patterns in the ACT.

During 2006-08, HPS received 5,314 reports of notifiable infectious conditions. Chlamydial infections were the most commonly notified infectious condition (34% of all notifications), followed by campylobacteriosis (16%), influenza A (8%), pertussis (5%), salmonellosis (5%) and gonococcal notifications (1%). There were no measles notifications in the reporting period.

Chlamydial notifications continue to increase steadily, with an overall increase of almost 20% in the reporting period (Figure 18). An increased awareness of, and testing for, the disease is likely to be a major factor in the steady increase of notifications since 1999.

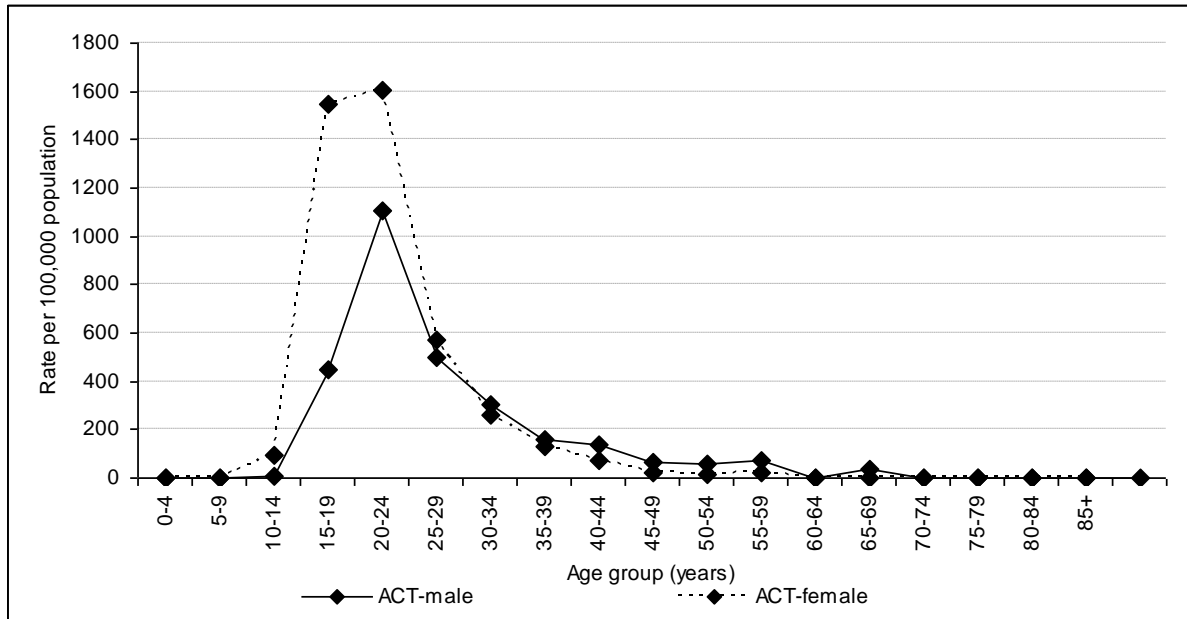
**Figure 18: Chlamydial notification rates, ACT, 1995-2008.**



Source: Notifiable Diseases Surveillance Data, 1995-2008, ACT.

The majority of chlamydial infections occurred in the 19-34 age groups (Figure 19).

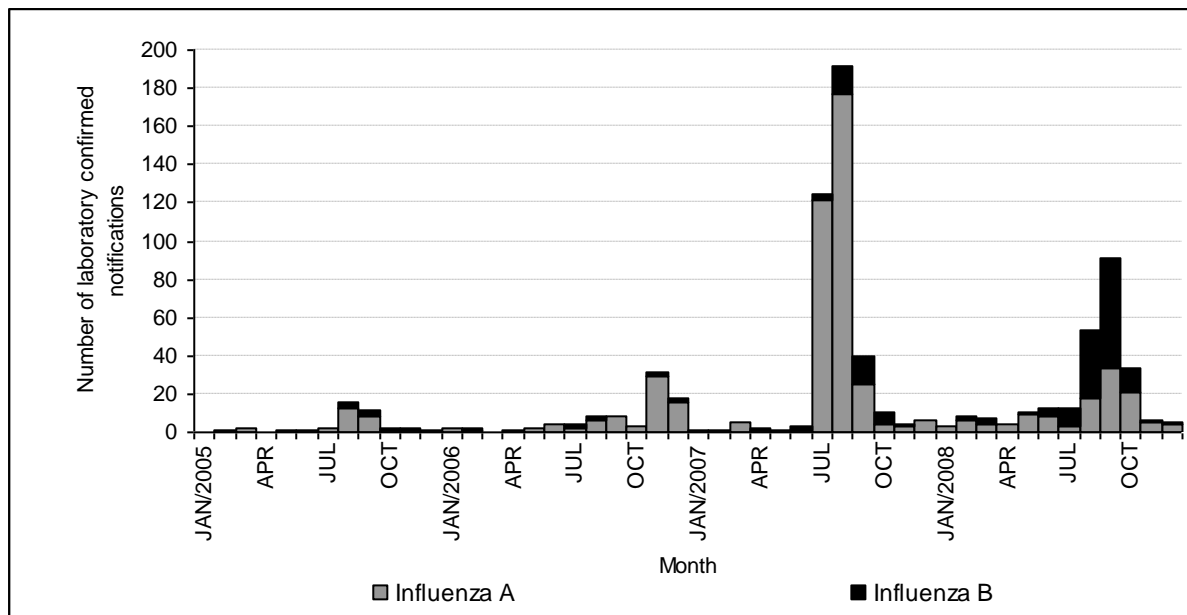
**Figure 19: Chlamydial notification rates, by age, ACT, 2008.**



Source: Notifiable Diseases Surveillance Data, 2008, ACT.

In 2007, there were 346 notifications of influenza A, a total increase of 367.5% from notifications in 2006 (Figure 20). This increase is consistent with national trends indicating that 2007 was a peak year for influenza both in the ACT and in other jurisdictions. HPS responded to two influenza outbreaks in visiting school groups during the reporting period, which involved a large scale multi disciplinary effort between ACT hospitals and the HPS, with the antiviral Oseltamivir (Tamiflu) being administered on site.

**Figure 20: Laboratory-confirmed influenza notifications, ACT, 2005-08.**



Source: Notifiable Diseases Surveillance Data, 2005-08, ACT.

Between 11 Oct and 6 Dec 2006, 55 (42%) residents and 22 (12%) staff in a Canberra aged care facility reported onset of symptoms including cough, fever and runny nose. Of these, 18 affected residents and one affected staff member had laboratory-confirmed influenza A infection. Ten residents died during the outbreak period.

Key features of the outbreak control strategy included: vaccination clinics for staff and residents, enhanced infection control including exclusion of unvaccinated staff and visitors, isolation of cases, restricting resident transfers and admissions, cancellation of group activities and restrictions for staff on working in other aged care facilities. Oseltamivir (Tamiflu) prophylaxis was provided to asymptomatic staff and recommended to residents' medical practitioners.

ACT Government responded to an emerging threat of pandemic influenza by developing the *ACT Health Management Plan for Pandemic Influenza (ACTHMPPI)* and participating in a cross jurisdictional pandemic influenza outbreak exercise, *Exercise Cumpston*, to test health preparedness for pandemic influenza.

In 2006, there was an increased rate of pertussis notifications, however a problem with the serological testing was identified and some of these were false positives. Epidemics of pertussis occur every three to four years. The number of cases in 2006 was similar to that observed in other peak years in the ACT, such as in 2003. HPS follows up all cases of pertussis to implement public health measures to limit the spread and to identify whether clients meet the case definitions.

The number of newly diagnosed HIV infections remained relatively stable in the ACT. Eight cases were reported in 2006 and 2007 and 13 cases in 2008. ACT rates of newly diagnosed HIV infections remain the second lowest in Australia.

In 2007, there were four notified newly acquired (or 'incident') cases of hepatitis C, a rate of 2.6 cases per 100,000 population. While above the national rate of 1.7 per 100,000 population, this is the third lowest notification rate when compared to the other states and territories.

HPS investigated 100 outbreaks of gastrointestinal illness including eight outbreaks of foodborne disease or suspected foodborne disease and including salmonellosis outbreaks in settings such as restaurants and private residences. Outbreaks of gastrointestinal illness have decreased, with 46 outbreaks reported in 2006, 37 in 2007 and 17 in 2008. HPS also contributed to the investigation of a multi-state outbreak of *Salmonella* Saint Paul involving rockmelons.

The majority of outbreaks of gastroenteritis were caused by viral agents, most likely transmitted via person-to-person spread. These occurred in settings such as child-care centres, aged-care facilities, hospitals, schools and among visiting school tour groups. Of note was a large outbreak affecting 145 children that occurred among several tour groups staying at a Canberra motel complex.



## 5.2. Cancer

Cancer is a major cause of morbidity and mortality in the ACT and is recognised as a major contributor to the total burden of disease in the ACT (19%). Cancer will continue to be a leading contributor to burden of disease as the population ages and advances in treatment and early detection improve survival rates.

Cancer is a legally mandated notifiable disease under the ACT *Public Health Act 1997*. The ACT Cancer Registry collates information on cancer in ACT residents and reports biennially on the incidence and mortality of cancer in the ACT,<sup>35</sup> in addition to providing information to the National Cancer Statistics Clearing House to develop national statistics for cancer in Australia.

### 5.2.1. Incidence

During 2002-06, there was an average of 1,253 new cases of cancer diagnosed each year in ACT residents (53% males and 47% females). The overall crude rate was 406.3 per 100,000 population for males and 358.4 per 100,000 for females.

The most common cancers were: breast cancer (16.4%), cancer of the prostate (15.7%), colorectal cancer (13.4%), skin melanoma (10.6%), and lung cancer (6.9%).

The most common cancer in males was prostate cancer, followed by colorectal cancer, skin melanoma and lung cancer. The risk of a male being diagnosed with cancer before the age of 75 years was 1 in 3 and the median age at diagnosis was 65 years.

The most common cancer in females was breast cancer, followed by colorectal cancer, skin melanoma, and lung cancer. The risk of a female being diagnosed with cancer before the age of 75 years was 1 in 4 and the median age at diagnosis was 60 years.

Over the period 1985 to 2006 there was a significant decrease in the age-standardised incidence rate of lung cancer in males and cervical cancer in females.

At the end of 2005, there were 2,311 males and 2,242 females living in the ACT who had a diagnosis of cancer within the previous five years. Prostate and female breast cancers were the most prevalent types of cancer.

### 5.2.2. Mortality

During 2002-06, there was an average of 203 cancer-related deaths each year (52% males and 48% females). The overall crude mortality rate was 133.2 per 100,000 population for males and 113.2 for females.

The most common causes of cancer-related deaths in males were lung cancer (18.2% of all cancer-related deaths in males), followed by colorectal cancer (14.9%), and prostate cancer (13.5%). The risk of a male dying from cancer before the age of 75 years was 1 in 9. The most common causes of cancer-related death in females were breast cancer (18.6% of all cancer-related deaths in females), followed by colorectal cancer (13.5%), and lung cancer (12.6%). The risk of a female dying from cancer before the age of 75 years was 1 in 12.

Age-standardised mortality rates in males decreased significantly at an average of 1.4 per cent per year from 1985 to 2006, largely due to a significant decline in lung cancer mortality rates in males. Overall age-standardised mortality rates in females did not show a clear trend despite a significant decline in cervical cancer mortality rates.

### 5.2.3. Cancer survival

The first cancer survival analysis of information held in the ACT Cancer Registry showed that over the 1995-2004 period, overall cancer survival improved over the two five-year periods from 66% (1995-99) to 69% (2000-04).<sup>36</sup> In particular, female breast cancer showed a statistically significant increase in five-year relative survival over the two five-year periods.

## 5.2.4. Selected cancers

### Breast cancer

Breast cancer is the most common cancer occurring in females, and the highest cause of cancer related death in women both nationally and in the ACT. Over the 2002-06 period, the risk of developing breast cancer before the age of 75 years was 1 in 10 for ACT females. The median age at diagnosis was 57 years.

Over the 2002-06 period, there was an average of 205 new cases of female breast cancer diagnosed each year in the ACT, the crude rate was 123.5 cases per 100,000 females. Highest rates were in the 65-69 year age group.

Increases in the age-standardised incidence of breast cancer in the ACT during the mid 1990s appear to be linked to the introduction of population-based mammogram screening in 1993, especially in relation to the trends among the target group (50-69 years) (Figure 21).

Since 2002, there has been no significant change in age-standardised incidence rates of breast cancer in the ACT and no significant difference between ACT and national age-standardised rates of breast cancer other than in 2004 when ACT breast cancer age-standardised rates were significantly higher than national rates.

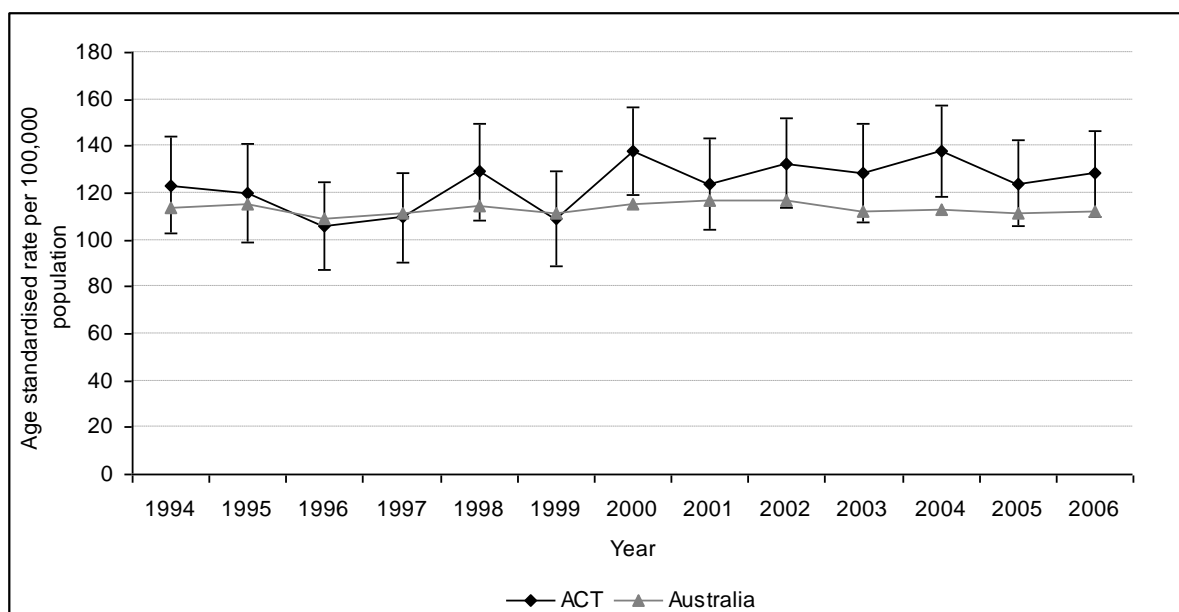
The risk of a woman dying from breast cancer before the age of 75 years was 1 in 61 in the ACT. The median age at death was 63 years.

Over the 2002-06 period, there was an average of 35 breast cancer related deaths in women each year in the ACT. The crude mortality rate was 21 deaths per 100,000 ACT women.

Since 1994 there has been a downward trend of 2.3% per year in age-standardised mortality rates, but this was not statistically significant probably due to low numbers of deaths in the ACT.

Survival estimates of breast cancer have significantly improved over the two five-year periods 1995-99 and 2000-2004. Five-year survival estimates of ACT women (91%) were higher than for their national counterparts.

**Figure 21: Breast cancer incidence in females, age-standardised rates, ACT & Australia, 1994-2006.**



Source: ACT Cancer Registry. AIHW, Cancer Monitoring Unit.

Notes: Age-standardised rate per 100,000 women using Australian Standard Population 2001.  
95% confidence intervals for ACT rates only.  
Mandatory cancer notifications commenced in 1994.

## **Prostate cancer**

Prostate cancer is the most common cancer in males, and the third most common cause of cancer related death in males both nationally and in the ACT. Over the 2002-06 period, the risk of developing prostate cancer before the age of 75 years was 1 in 8 for ACT males. The median age at diagnosis was 66 years.

In 2002-06, the crude rate of prostate cancer in the ACT was 121.7 cases per 100,000 males. Trends over time show that the age-standardised incidence rate increased significantly by 19 per cent per year from 1985 to 1995. This upward trend in incidence has been attributed to diagnostic testing using Prostate Specific Antigen Test (PSA). This results in earlier diagnosis of clinically silent prostate cancers. Similar trends were noted in NSW.

Over the 2002-06 period there were 146 deaths due to prostate cancer (average of 29 deaths per year) in the ACT. The risk of dying from prostate cancer before the age of 75 years was 1 in 62 and the median age at death was 79 years. The age-standardised mortality rate has not changed significantly over time.

The 5-year survival rate for prostate cancer in the ACT remained unchanged at 92% for both periods in 1995-99 and 2000-04.

## **Mesothelioma**

Malignant mesothelioma is a cancer of the outer covering of the lung or abdominal cavity. It is frequently associated with past exposure to asbestos and has no direct relationship to tobacco smoking. Mesothelioma is a cancer that can occur 20 to 40 years after exposure to asbestos. This cancer is rare in the ACT with a total of 22 new cases reported in the five year period between 2002 and 2006. The age-standardised incidence rate of mesothelioma in the ACT was 1.6 new cases per 100,000 population in 2002-06 (Australia: 2.8 new cases per 100,000).

The risk of being diagnosed with mesothelioma in the ACT before the age of 75 years was 1 in 455 in men and 1 in 2,552 in women.

Due to the low incidence of mesothelioma, deaths due to this cancer are also rare. In 2002-06 there were 22 deaths in the ACT. The age-standardised mortality rate of mesothelioma in the ACT was 1.5 deaths per 100,000 population (Australia: 2.5 deaths per 100,000).

The 5-year survival for people with mesothelioma was 14% for cases diagnosed between 1995 and 2004 in the ACT.

## 6. Potential public health risks

During 2006-08, prevention of ill health was a priority issue on the ACT health agenda. The escalating burden of chronic and potentially preventable diseases and the increased demand on healthcare by an ageing population, demonstrate the need for prevention through the reduction of the prevalence of health risk factors in the population.

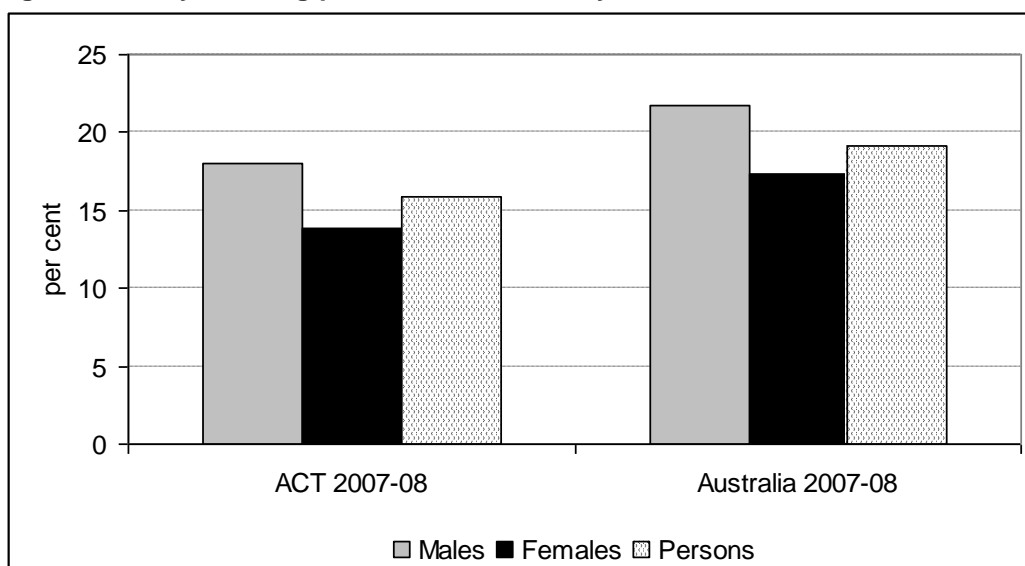
Strategies to prevent chronic disease emphasise prevention and management of modifiable risk. There are a number of known risk factors for ill health and to a large extent, health is an outcome of lifestyle choices, such as achieving adequate exercise, a healthy diet, moderation in consuming alcohol and not smoking. To choose healthier lifestyles, opportunities and resources to make those choices should be available.

Overall, the ACT compares favourably against the national average for most risk factors (Table 15-11).

### 6.1. Smoking

In 2007-08, 15.9% of ACT residents aged 18 years and over were daily smokers, slightly lower than the Australian average (19.2%) (Figure 22). Rates of smoking in the ACT remain lower than national rates.<sup>19</sup>

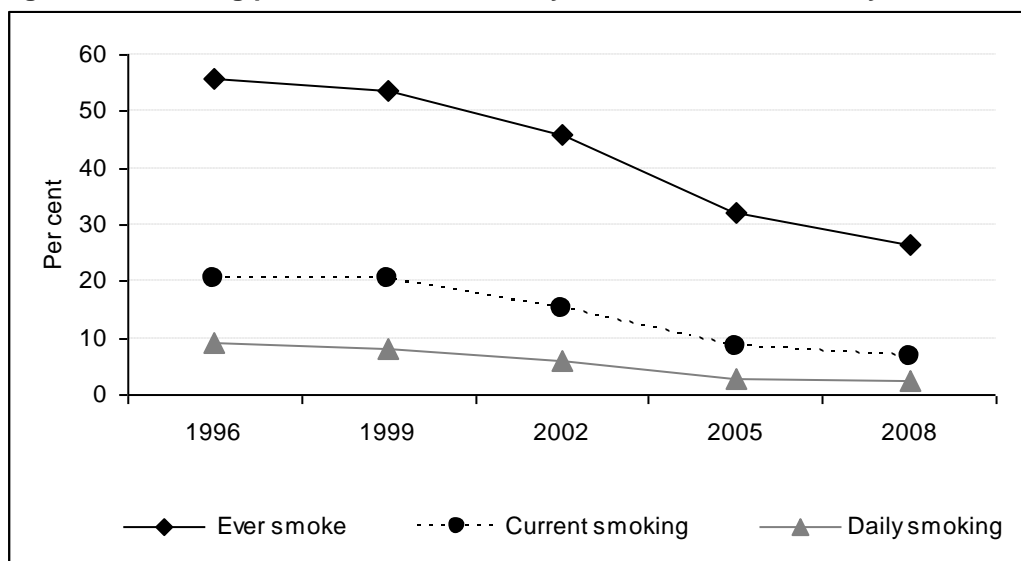
**Figure 22: Daily smoking prevalence, adults 18 years & over, ACT & Australia, 2007-08.**



Source: 2007-08 National Health Survey, Summary of results, ACT tables, ABS, cat. no. 43620.

There has been a decline in reported rates of smoking in ACT secondary school students aged 12 to 17 years. In 2008, 6.7% reported being current smokers and 2.5% reported being daily smokers in the Secondary School Alcohol and Drug Survey (ASSAD) (Figure 23).

**Figure 23: Smoking prevalence in secondary school students, 12-17 years, ACT, 1996-2008.**

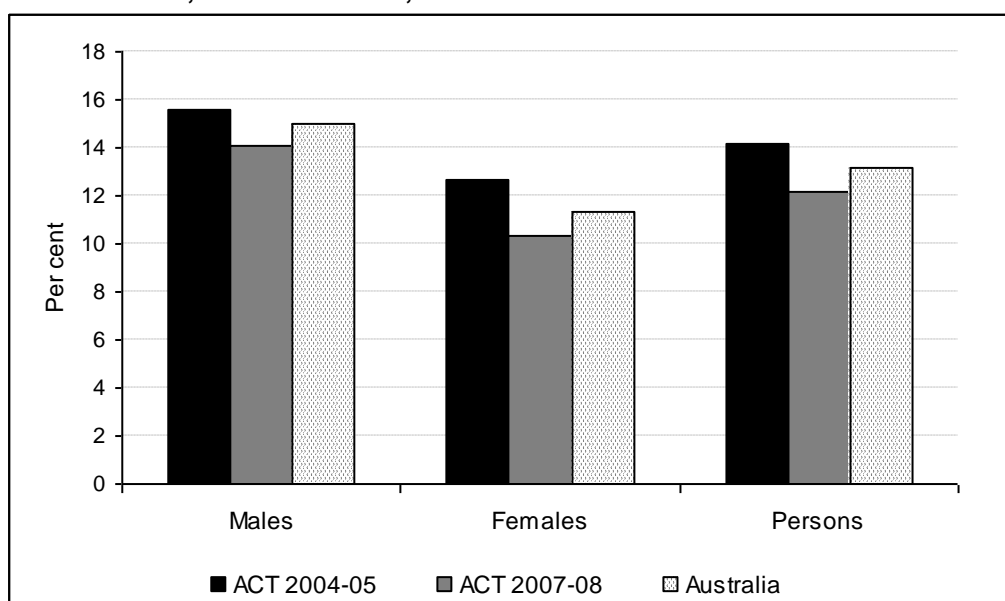


Source: ACT Health. ASSAD, confidential unit record files, 1996-2008.

## 6.2. Risky alcohol consumption

In 2007-08, 12.2% of ACT residents aged 18 years and over drank at levels that risked long-term harm, as defined by the NH&MRC<sup>37</sup> (Figure 24). Rates of drinking at levels that risk long-term harm have not significantly changed in either males or females over time.

**Figure 24: Alcohol consumption levels that risk long-term harm, adults 18 years & over, by sex, ACT & Australia, 2004-05 & 2007-08.**

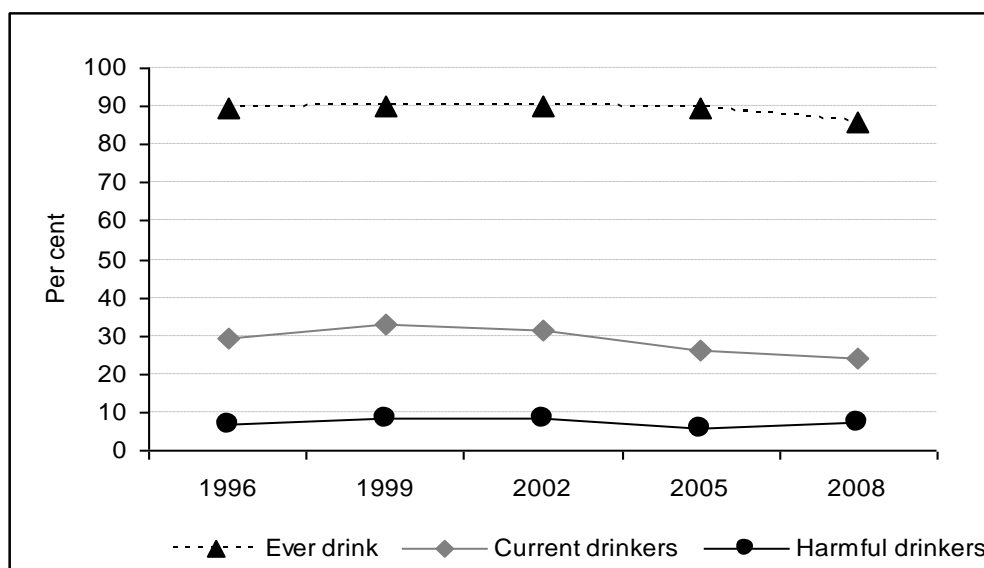


Source: 2007-08 National Health Survey, Summary of results, ACT tables, ABS, cat. no. 43620.

Notes: Levels risking long-term harm: for males, consumption of 29 or more standard drinks per week and for females, consumption of 15 or more standard drinks per week. A standard drink is 10 grams of pure alcohol.<sup>37</sup> These guidelines were updated in 2009 by the NH&MRC<sup>31</sup> and the new ones will be used in future publications.

Drinking trends for ACT secondary school students aged 12 to 17 years have not changed (Figure 25). In 2008, 24.2% of students were current drinkers (1996: 29.1%) and 7.1% of students reported drinking at harmful levels.

**Figure 25: Alcohol drinking prevalence in secondary school students, 12-17 years, ACT, 1996-2008.**



Source: ACT Health. ASSAD, confidential unit record files, 1996-2008.

Over the period 1997 to 2007 there was a total of 149 deaths where the primary cause of death was directly related to alcohol consumption. Of these deaths more than 70% were related to alcoholic liver disease. There were an additional 141 deaths where alcohol consumption was recorded as a contributing cause. Of these deaths, 26% were coded with conditions of the cardiovascular system as the underlying cause and 25% were related to an accident or injury.

### 6.3. Illicit and other drug use

In 2007, 13.8% of ACT residents and 13.4% of Australian residents aged 14 years and over used an illicit drug in the previous 12 months.<sup>38</sup> The most common illicit drug used by both ACT and Australian residents was cannabis (ACT:9.1%, Aust:9.1%), followed by ecstasy (ACT:4.7%, Aust:3.5%) and methamphetamine (ACT:2.3%, Aust:2.3%). Poly-drug use is the norm among people who inject illegal drugs and who use 'ecstasy-related' drugs.

Males were slightly more likely than females to have used an illicit drug in the previous 12 months. The distribution across different age groups indicates that people under the age of 25 years were more likely to have used illicit drugs compared to older people. Cannabis use was more common among persons under 39 years of age both nationally and in the ACT. ACT residents, (particularly males; 6.4%), were more likely to use ecstasy in the previous 12 months compared to the whole of Australia (3.5%).

There has been a decrease in illicit drug use since 2001 in both the ACT and Australia. In the ACT the proportion of residents reporting to have used any illicit in the previous 12 months dropped by 23%, (2001: 18.1% to 2007: 13.8%). This decrease has been driven primarily by the decrease in cannabis use which has reduced by more than one-third over the period 2001 (14.4%) to 2007 (9.1%).

The use of ecstasy has remained stable over the 2001-07 period, although higher than national rates (ACT:4.7%, Aust:3.5%). In contrast, the pattern of methamphetamine use has decreased by 48% over this time period for the ACT (2001:4.5% to 2007:2.3%).

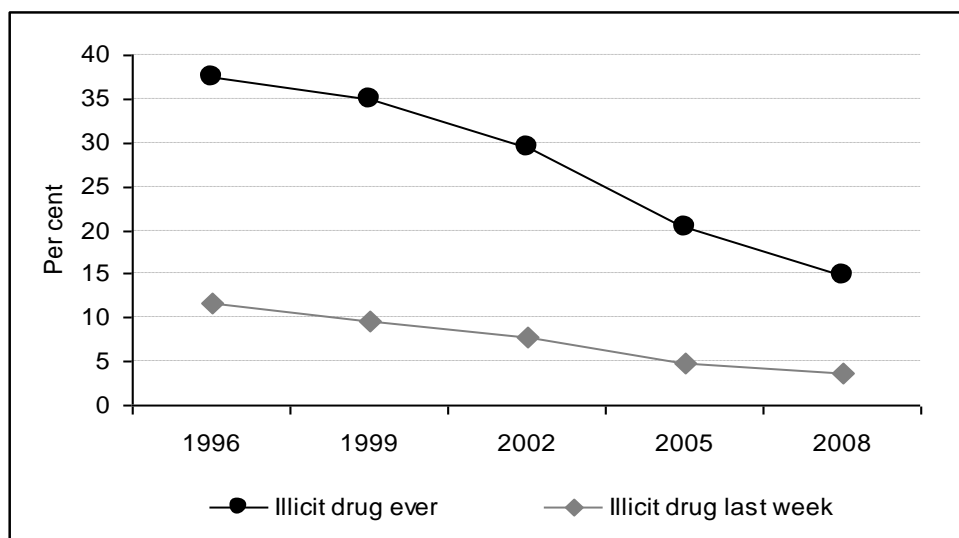
Heroin, ecstasy, cannabis and methamphetamine are said by users to be 'easy' to 'very easy' to obtain in the ACT, while cocaine availability remains low. The most accessible illicit drug is cannabis and the most accessible other drugs are painkillers/analgesics with an estimated 17.1% and 15.4% of the population respectively being offered or having the opportunity to use these drugs for non-medical purposes in the preceding 12 months.

On most indicators, the prevalence of harm related to psychoactive substances in the ACT is stable or falling. Overdose is a major health threat to people who consume drugs. The ACT Ambulance Service

attended 689 overdose incidents in 2007, with pharmaceutical drugs and 'polypharmacy' accounting for the majority, and heroin for 16%.

Among adolescents in the ACT, there is evidence that levels of illicit substance use have declined over time (Figure 26). Estimates from the ASSAD surveys show that levels of reported lifetime use of 'any illicit drug', multiple substances, inhalants such as glue or liquid white-out, cannabis, hallucinogens, opiates and cocaine by ACT secondary students 12-17 years significantly decreased between 1996 and 2008. This trend was primarily driven by a decline in cannabis use. The only exceptions to this trend were an increase in tranquilliser use (ever used for other than medical reasons) from 15.1% in 2002 to 19.4% in 2008, and the use of ecstasy which has remained unchanged over the period 1996 to 2008 (Table 15-13).

**Figure 26: Illicit drug use prevalence in secondary school students, 12-17 years, ACT, 1996-2008.**



Source: ACT Health. ASSAD, confidential unit record files, 1996-2008.

In 2008, tranquillisers were the most commonly used illicit substance, with 19.4% of ACT students reporting having used tranquillisers at least once in their lifetime, followed by inhalants (17.7%) and cannabis (13.2%) (Table 15-13). In the ACT, approximately 3.3% of students reported recent use of methamphetamine.

## 6.4. Physical activity

The national guidelines for physical activity recommend levels of activity deemed healthy.<sup>39</sup> The percentage of ACT residents 18 years and over who were sufficiently physically active in 2007-08 (ACTGHS) was 57% (males:61.7%, females:52.5%). Comparable data for Australia was not available at the time of this publication

Since 2005, physical activity levels in ACT secondary school students aged 12 to 17 years (ASSAD) have remained unchanged, with only 15.6% in 2008 reporting to participate in physical activity at levels that meet national guidelines (2005:13.9%).

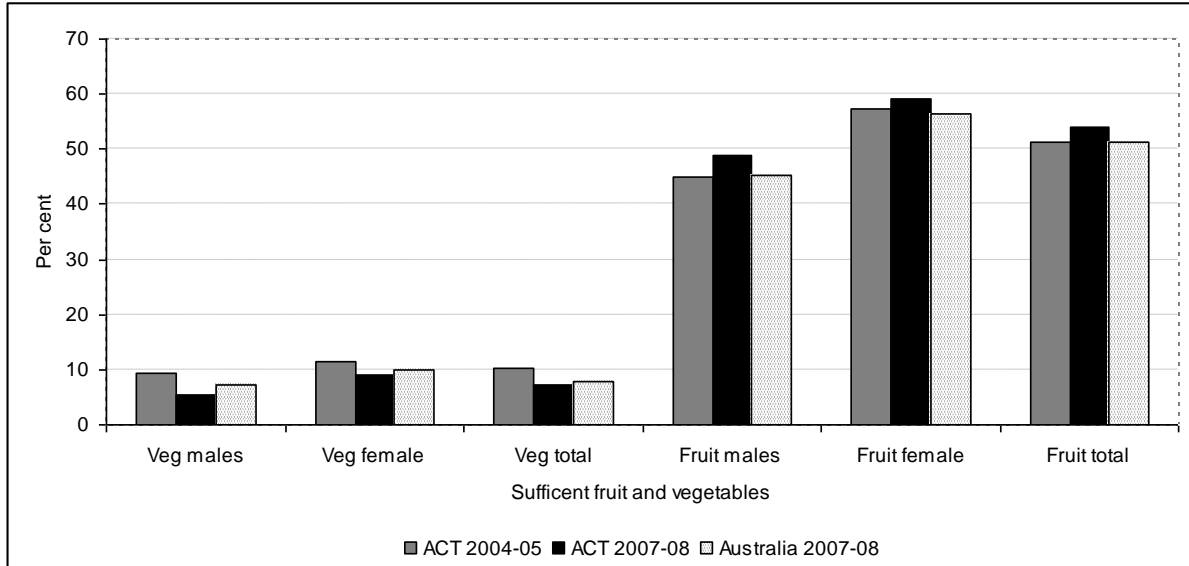
## 6.5. Vegetable and fruit consumption

In 2007-08, based on survey results, 7.2% of ACT adults were eating sufficient vegetables on a daily basis (in accordance with national guidelines<sup>40</sup>). Males (5.3%) were less likely to report this than females (9%). Both ACT males and females were less likely to eat sufficient vegetables in comparison to the whole of Australia (Aust.males:7.3%, females:10.1%). There has also been a statistically significant decrease in vegetable consumption since 2004-05 when 10.4% reported consuming sufficient vegetables (males: 9.3%, females: 11.5%).

With regards to fruit consumption, 48.9% of ACT adult males and 59% of ACT adult females reported eating sufficient fruit on a daily basis (in accordance with national guidelines<sup>40</sup>). This was slightly more

than males (45.2%) and females (56.3%) in the rest of the country and also represented an increase in fruit consumption since 2004-05 when 45.1% of males and 57.3% of females reported eating sufficient fruit (Figure 27).

**Figure 27: Vegetable and fruit consumption, adults 18 years & over, by sex, ACT & Australia, 2004-05 & 2007-08.**



Source: 2007-08 National Health Survey, Summary of results, ACT tables, ABS, cat. no. 43620.

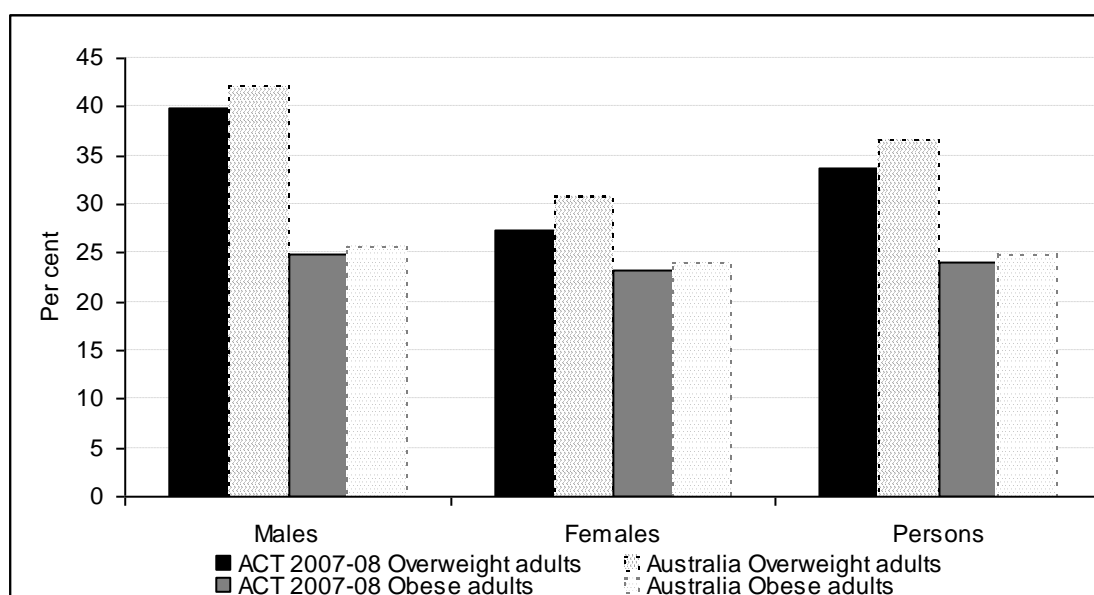
Results of the 2008 ACT ASSAD survey show that trends in fruit, vegetable and cereal consumption have remained the same in 2008 compared to 2005 for students aged 12 to 17 years. In 2008, 41.7% of all students reported eating at the dietary guidelines for minimum daily serves of fruit; 22% reported eating the minimum daily serves of vegetables; and 18% the minimum serves of cereals.

## 6.6. Overweight and obesity

In 2007-08, 57.8% of ACT adults and 21.7% of ACT children were either overweight or obese (ABS NHS). Adult males were more likely to be overweight or obese (64.8%) than adult females (50.5%). Both ACT adults and children were less likely to be overweight or obese than their Australian counterparts (Aust. males:67.7%, females:54.9%, children:24.9%). Comparisons with earlier time periods are not available as previous data are based on self-reported height and weight, whereas data collected in 2007-08 are based on measured height and weight (Figure 28).



**Figure 28: Overweight and obesity, adults 18 years and over, by sex, ACT & Australia, 2004-05 & 2007-08.**



Source: 2007-08 National Health Survey, Summary of results, ACT tables, Australian Bureau of Statistics, cat. no. 43620.

Note: Body Mass Index (BMI) category definitions are: Overweight are people with a BMI score of between 25.0 and 29.9. Obese are scores of 30.0 and above.

The rate of overweight and obesity in children of different age-groups varies and is difficult to compare. This variation can be due to developmental changes such as pre-pubescent weight gain, but also due to different data collection methods. For example, data on ACT kindergarten children and year 6 primary school children are based on measured height and weight. In contrast data collected from the ASSAD is based on self-reported height and weight which is less reliable and subject to response biases that lead to under-reporting.

Surveys suggest that:

- 17% of kindergarten children in the ACT in 2008 were overweight or obese (*ACT Kindergarten Screening Program*). This rate has not changed since 2007 (16.7%).
- 24.8% of children in year 6 in ACT primary schools were either overweight or obese in 2006 (*ACT Year 6 Physical Activity and Nutrition Survey*).
- 19.5% of ACT secondary school students aged 12-17 years were overweight or obese (ASSAD) in 2008.

## 6.7. Sun protection

In 2007-08, approximately two-thirds of adults aged 18 years and over reported that they usually/always adhere to some form of sun protective behaviour. The most common form of sun protection reported was wearing sun glasses (63%), followed by wearing a hat (58%), seeking shade in the sun (54%) and using spf 30 sun protection (48%). Comparatively few (12.1%) reported to adhere to all four of these sun-protection behaviours. There are no comparable data for Australian adults or for previous time periods.

Survey results from ACT secondary school students 12-17 years (ASSAD) also indicate that:

- Sun protective behaviours have declined since 1996. In general, males were more likely to report wearing protective clothing but females were more likely to report wearing spf 30.
- Spf 30 use among secondary students has declined from 67.1% in 1996 to 43.7% in 2008.
- There has been a decrease in students wearing a hat from 53% (1996) to 29% (2008) and wearing clothing covering most of their body 27.3%(1996) to 20.2%(2008)(Table 15-13).

## 7. Harm minimisation activities

Harm minimisation is a philosophy that underlies many health promotion programs, particularly those focussing on alcohol and other drug use. These programs aim to reduce the harmful effects of some behaviours. The ACT Government is committed to supporting harm reduction principles to minimise the transmission of Blood Borne Viruses (BBVs) and Sexually Transmissible Infections (STIs).

ACT Health released *HIV/AIDS, Hepatitis C Sexually Transmissible Infections: A Strategic Framework for the ACT 2007-2012* in September 2007. The Framework identifies local priorities, actions and strategies to improve outcomes against notifiable blood borne viruses and sexually transmissible infections. *The ACT Alcohol, Tobacco and other Drug Strategy 2004-08* provides an approach for harm minimisation activities for the ACT.

A number of harm minimisation activities occurred over the 2006-08 period including the development and implementation of a number of alcohol and drug programs, infection control, and activities aimed at improving sexual health.

### 7.1. Alcohol and drugs

Harm minimisation relating to alcohol, tobacco and other drug use aims to improve health, social and economic outcomes for the community and individuals by encompassing a wide range of approaches, including supply, demand and harm reduction strategies.

The ACT Department of Education and Training (DET) and ACT Health jointly fund a drug education officer who provides professional learning for teachers within schools to ensure that the drug education component of the curriculum is delivered effectively and to support students to make well-informed health decisions in their lives in relation to alcohol and other drug use.

The *Police Early Diversion Program* provides for those who have been apprehended by the police for possession of a small amount of illicit drugs (or licit drugs used illicitly). Rather than charge the client, police can divert them to the health sector. The client is referred to the *Alcohol & Drug Program Diversion Service* for assessment and then referred to an approved ACT agency for treatment (education, counselling, withdrawal, pharmacotherapy or residential rehabilitation).

The ACT Government has in place both pre and post sentencing treatment options for those charged with alcohol and other drug (AOD) related offences. The goals are to reduce recidivism during the bail period, and to engage the client in treatment. It is therefore designed as an immediate, short-term intervention when a client first appears before the Court or as part of the imposed sentence.

#### **Syringe vending machines**

*The Needle and Syringe Program (NSP)* aims to reduce the risk of transmission of blood-borne viruses caused by the sharing of contaminated injecting equipment. Studies show that increases in the funding and provision of NSPs are cost effective and avert additional HCV and HIV infections.

The program provides injecting equipment and education through a range of outlets including pharmacies and 24-hour vending machines. In December 2008, ACT Health further expanded out-of-hours access to sterile injecting equipment including the installation of a syringe vending machine at Winnunga Nimmityjah Aboriginal Health Service. At the end of the 2008 financial year, there were 44 NSP outlets across the ACT, which included the participation of 31 (48%) ACT pharmacies. All ACT syringe vending machines are co-located with secure disposal facilities and operate 24 hours per day.

There was a slight increase in the number of syringes distributed through NSP during the period, but it is not clear whether this reflects an increase in injecting drug use or an increase in safe injecting practices.

### 7.2. Sexual health

Sexual activity can be associated with health risks. Unprotected intercourse can transmit infections such as chlamydial infections, gonorrhoea, HIV, syphilis and other diseases, as well as being associated with an increased risk for specific cancers such as cervical cancer and anal cancer. There is concern that the transmission of STIs has generally risen over the past decade.

The triennial Canberra Gay Community Periodic Survey, funded by ACT Health in 2006 provides information on a range of sexual practices among gay and homosexually active men in Canberra. The 2006 survey showed no significant difference in the 'level of unprotected anal intercourse with a casual partner in the last six months' (2006: 24.6%) compared to previous surveys (2003: 22.8%; 2000: 22.2%). This is an indicator of a sustained safe sex culture in this group. Almost three-quarters of respondents also reported having had a sexual health check-up in the previous 12 months. There was also a significant increase in the proportion of non-HIV positive respondents reporting having had an HIV test in the previous six months.

During the 2006-08 period, a number of ACT Government funded community-based organisations have conducted a range of campaigns aimed towards at-risk communities, promoting safe sexual activity and promoting condom use and sexual health testing.

## 8. Access and equity indicators relevant to health

Different population groups experience inequities in health status and access to health care services. This is particularly relevant to certain groups such as Aboriginal and Torres Strait Islander people and for persons within the correctional system.

Reducing health disparity and improving the health of disadvantaged communities is a key objective of the ACT Government. ACT residents have generally higher weekly earnings and education attainment levels than the national average, and identifying those with social and economic disadvantage is often difficult.

The ACT Government actively involves primary health care providers, consumers and the broader community to participate in the development, planning and evaluation of both current and future health services to ensure access and equity issues are identified.

Over the 2006-08 period there has been considerable development to improve the quality and availability of health-related information on priority groups and the general population. This has involved the continuation of the ACT General Health Survey, the planning of the ACT Inmate Health Survey and improvements to recording of Aboriginal and Torres Strait Islander status across all major datasets.

### 8.1. Access to health services

Australians are generally able to obtain general medical care through the Medicare system. However, issues that can impact negatively on access and equity include GP and specialist shortages, transportation barriers, perceptions of care quality and costs.<sup>41</sup> The ACTGHS provides useful information on factors influencing healthcare access.

In 2007-08, the most common health service attended by ACT residents was a GP, with 95% reporting having done so in the previous 12 months and more than a third (36.2%) reporting seeing a GP in the previous 4 weeks. Thirty-one per cent of respondents reported seeing a specialist in the previous 12 months, 13% reported attending a community health care centre, 11.8% reported spending at least one night in hospital and 10.3% reported attending an emergency department for medical care. Females were more likely than males to have reported attending a health service in the previous 12 months.

Most residents rated the care they received at these facilities as being excellent, very good or good. Emergency department attendance was more likely to be rated fair or poor (24%) compared to other facilities.

Overall, 21.1% believed there were inadequacies in the health services in their local area. Survey respondents were asked about the type of difficulties they encountered getting healthcare. The most common difficulties reported were: waiting times to see a GP (14%), obtaining access to specialist services (3.2%), cost of healthcare services (2.8%) and shortages of GPs in the area (2.3%).

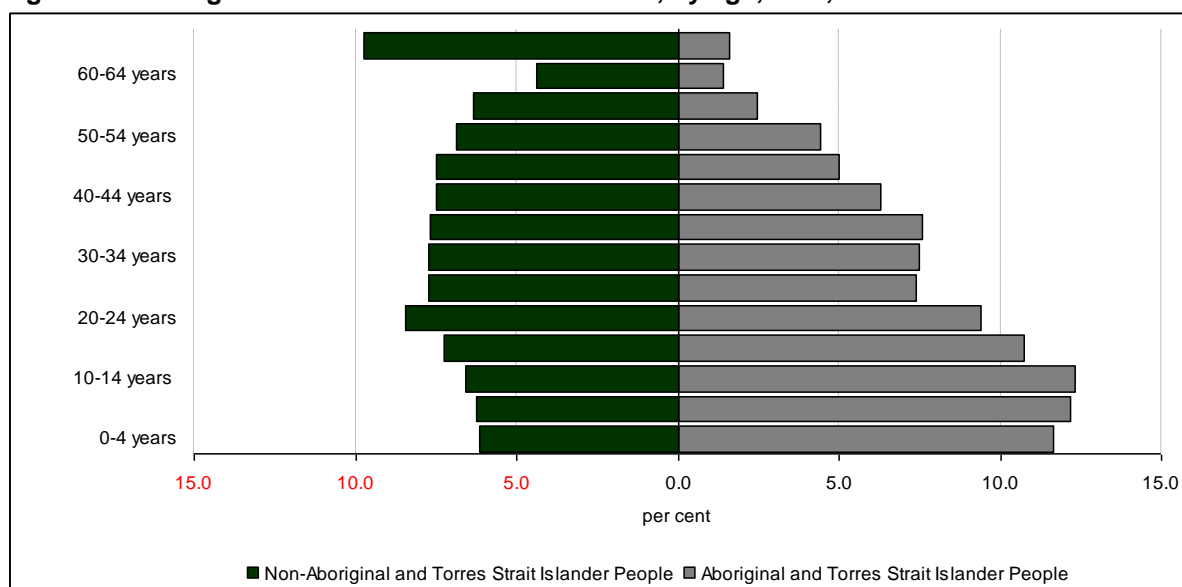
In terms of barriers to health care use: 21% of respondents reported to have delayed using a health service because they couldn't afford it, and 6.7% reported that they were unable to get to the health service. The types of services these barriers related to included: 44% to dentists, 20% to GPs and 19.5% to specialists.

### 8.2. Aboriginal and Torres Strait Islander People

Aboriginal and Torres Strait Islander people experience significantly more ill health than other Australians. They typically have lower life expectancy and experience poorer health across a range of indicators compared to other Australians.

The demographic structure and related social characteristics of the ACT Aboriginal and Torres Strait Islander population vary considerably from that of the non-Aboriginal and Torres Strait Islander ACT population (Figure 29). In particular, the Aboriginal and Torres Strait Islander population has a younger age structure and lower socio-economic status, as measured by a range of indices. These differences have important implications for health as the association between age and health service utilisation is well documented, as is the association between social factors and health status.

**Figure 29: Aboriginal & Torres Strait Islander status, by age, ACT, 2006.**



Source: ABS 2006 Census data.

Survey results give some indication of health status. In 2004-05, long-term health conditions were reported by 82.3% of ACT Aboriginal and Torres Strait Islanders, with the age-standardised rates being similar for males and females. The most frequently reported long-term health conditions were eye or sight problems (37.9%), asthma (18.0%) and ear and hearing problems (14.5%).<sup>42</sup>

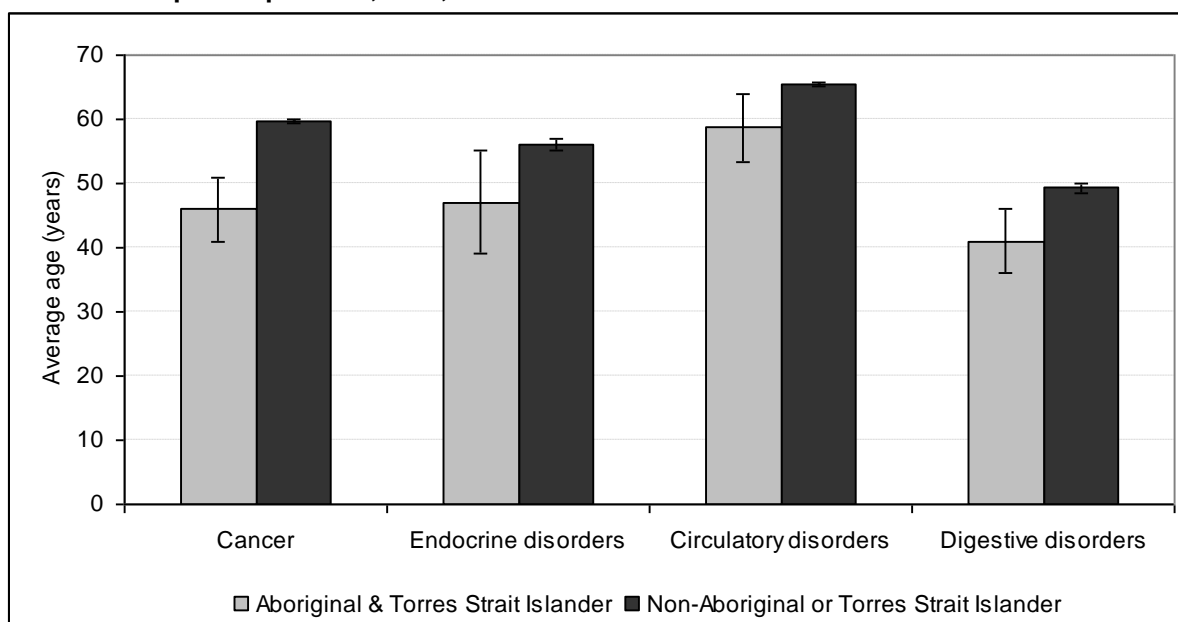
In the 2007-08 survey, 36.2% of Aboriginal and Torres Strait Islander people reported being a current smoker compared to 18.6% in the general population.<sup>18</sup> Just over half (52.9%) of ACT resident Aboriginal and Torres Strait Islander women who gave birth during 2007 reported that they smoked during pregnancy, compared to 12.1% of the general population.

Previous survey results indicate, however, that Aboriginal and Torres Strait Islander people were equally likely to be overweight or obese as non-Aboriginal people, equally likely to report risky/high risk alcohol use and equally likely to consume less than the recommended number of serves of fruit and vegetables each day.

Due to the small number of deaths and the fact that there are major problems in identifying deaths of Aboriginal and Torres Strait Islander people, it is not possible to report confidently on ACT Aboriginal and Torres Strait Islander mortality. Australian data suggest that Aboriginal and Torres Strait Islander people generally have higher death rates in all age groups and for all major causes and they die younger than non-Aboriginal and Torres Strait Islander people.<sup>43</sup>

There were 2,767 hospital separations for ACT residents who identified as Aboriginal and Torres Strait Islander between July 2006 and June 2008. Nearly half of these separations (1,358) were due to factors influencing health status (mainly renal dialysis and chemotherapy). The average age at hospital separation for Aboriginal and Torres Strait Islander residents was consistently lower than that of their non-Aboriginal and Torres Strait Islander counterparts (Figure 30).

**Figure 30: Aboriginal & Torres Strait Islander people, selected chronic conditions, average age at hospital separation, ACT, 2006-08.**



Source: ACT Health, Admitted Patient Care Dataset, 2006-08.

### 8.3. ACT Prison Population

The health of prisoners in Australia has been shown to be poor in comparison to the health of the non-prison population and is characterised by high rates of mental illness, communicable disease and health risk factors.<sup>44,45</sup>

As a population, prisoners have high rates of mortality, Aboriginal and Torres Strait Islander people are over-represented, and prisoners experience significant social and psychological disadvantage in comparison to the non-prison population.<sup>46,47,48</sup>

The ACT's first prison, the Alexander Maconochie Centre (AMC), became operational in 2009. Before that, ACT Health, through the Corrections Health Program, co-ordinated the provision of health services to adults on remand in the Belconnen Remand Centre, the Symonston Temporary Remand Centre and the Quamby Youth Detention Centre. The AMC replaces both the Belconnen Remand Centre and the Symonston Temporary Remand Centre.

The AMC accommodates a wide range of prisoners, both male and female. When fully operational it will accommodate up to 220 sentenced and remand prisoners.

While the health issues associated with the prisoner population are generally well documented, there is no epidemiological database specific to ACT prisoners. Research will be required to determine whether the health needs of the ACT prison population differ significantly from those of prison populations in other Australian jurisdictions.

Health services planning for the AMC is documented in the *ACT Health Adult Corrections Health Services Plan 2008-2012* which was finalised in March 2008. This Plan identifies a framework for the management of the health of remandees and prisoners in detention within the ACT correctional system. The Plan recognises that the health of prisoners in detention is poor when compared to that of the general community and more specifically, prisoners have a high prevalence of communicable diseases, mental illness and health risks related to drug dependence and other dependencies.

## 9. Health promotion activities

Health Promotion seeks to promote and support healthy lifestyles to reduce the burden of preventable disease by enabling people to increase control over the social determinants of health, and thereby improve their health.<sup>49</sup> The key priorities for ACT Health are reducing harm from tobacco, reducing obesity through the promotion of physical activity and healthy nutrition, reducing harm from alcohol, and promoting good mental health. A settings-based approach has been adopted, which offers opportunities for comprehensive interventions aimed at both sustainable health behaviour change and supportive socio-environmental change. Settings include schools, communities, homes and families, and workplaces.

In 2006-08, ACT Health focused on a population health approach to prevention of chronic diseases through risk factor reduction, targeting those initiatives that encouraged healthy nutrition and physical activity, aligning with the Australian Government's *Australian Better Health Initiative* (ABHI).

Promoting physical activity and healthy nutrition through early childhood services is the major focus of the *Kids at Play – Active Play and Eating Well project*. This project is an initiative of the ACT Government through a joint partnership between ACT Health, Territory and Municipal Services (Sport and Recreation) and the Heart Foundation ACT. The project aims to create supportive environments in ACT Early Childhood Services to encourage active play and healthy eating (including breastfeeding), and to promote these activities to families with children aged birth to five years.

The *Measure Up* social marketing campaign is part of the ABHI, a national program supported by the Australian, state and territory governments, which aims to reduce the risk factors for chronic disease such as some cancers, heart disease, and type 2 diabetes. ACT Health implemented a direct mail recruitment campaign to provide ACT residents aged 45-49 years with information and to encourage them to visit their GP for the 45-49 year old MBS health check if they have risk factors. The first phase of the mail out to approximately 9,000 (48 and 49 year olds) was followed by the second phase, to approximately 14,000 (45, 46 and 47 year olds). This was completed in January 2010.

Other achievements which contributed to the *Australian Better Health Initiative* included:

- implementation of the *Go for 2&5*® fruit and vegetable campaign between July 2006 and June 2008, targeting the ACT population who are main food buyers and meal preparers;
- the *Find thirty. It's not a big exercise*® physical activity campaign, launched in the ACT in March 2008, targeting adults who are inactive or insufficiently active for good health. The message strategy of *Find thirty*® aims to counter perceptions that it is difficult to be physically active and to shift people to think that it is easy to find the thirty minutes of moderate-intensity physical activity that adults need everyday for good health;
- partnerships with the Department of Education and Training (DET) that have led to the successful implementation of a school canteen accreditation training course and participation in the development of national school canteen guidelines. (A broader partnership with DET, Nutrition Australia and Belconnen Fresh Food Markets produced the *Fresh Food Markets Tour Manual* teaching resource launched in April 2009);
- promoting appropriate nutrition to children and young people to ensure the health and wellbeing of the Canberra community, now and into the future. Schools form an excellent platform for interventions. *Nourish—the FACTS* guidelines have been developed to guide teaching staff, parents, canteen workers, other school staff and volunteers in school communities to follow better practice in food and nutrition activities; and
- the *Youth smoking prevention program* delivered and evaluated in ACT secondary schools in collaboration with the ACT Cancer Council.

In the period 2006-08 the *ACT Health Promotion Grants Program* administered five annual funding rounds that aimed to fund projects that facilitate healthy lifestyles and create healthy policies and environments. These funding rounds included:

- the *Community Funding Round* that aimed to support activities related to the promotion of good health in general and the prevention of chronic disease. Organisations were funded to develop partnerships that strengthen the capacity of individuals and communities to make healthy choices. The funding round aimed to build the capability of organisations to adopt health promotion principles and practices and deliver a range of health promotion strategies;

- the Health Promoting Schools Funding Round that aimed to support programs in schools that align with the strategic goals of DET. In accordance with the *Australian Better Health Initiative* schools were encouraged to focus on promoting physical activity and healthy eating through the school curriculum;
- the Health Promotion Sponsorship Funding Round that provided a marketing tool to promote healthy messages with sporting, recreation and arts organisations and community events. Smoking reduction through behaviour change and the creation of healthy environments has been the primary aim of sponsorships promoting the *Smokefree* message. In 2007-08, *Go for 2&5@* and *Be Active* messages were added to funding round priorities to support a suite of ACT Health activities to encourage physical activity and healthy nutrition in the community;
- the Falls Prevention in Residential Aged Care Facilities Funding Round that provided assistance to residential aged care facilities working with community organisations to develop, implement and evaluate falls prevention programs in the ACT. The program promotes an evidence-based approach to preventing falls among elderly Canberrans and has produced measurable success to date; and
- the Health Promotion Capacity Building Funding Round that aimed to assist small community and not-for profit organisations to develop their ability to plan and deliver health promotion projects in the future or improve their capacity to deliver current health promotion projects.

The *ACT Health Promotion Grants program* provided a number of grants and sponsorships to community groups, schools, sporting, arts and recreational organisations to implement mental health, physical activity and nutrition related projects through the Community Funding Rounds, the Health Promoting Schools Funding Rounds and the Health Promotion Sponsorships Funding Rounds.

The ACT Health Promotion website ([www.healthpromotion.act.gov.au](http://www.healthpromotion.act.gov.au)) is an online tool which continues to support health promotion workers in the ACT and provides valuable information about the principles of promoting health to support grant applicants to the *Health Promotion Grants Program*.

The 2007 *Health Promotion Awards* recognised a variety of innovative and best practice health promotion projects delivered in the ACT between 2005 and 2007 and celebrated outstanding individual achievements in promoting the health and wellbeing of the ACT community.

ACT Health has invested significant resources into mental health promotion, prevention and early intervention. These included the following programs: *Integrated Perinatal and Infant Care*, *Better General Health for People with Serious Mental Illness*, *Early Rehabilitation Support*, *Children of Parents with a Mental Illness Training Program*, *Workplace Mental Health Promotion*, and community mental health education programs.

ACT Health is currently working with stakeholders to develop a framework for the promotion of mental health and wellbeing for 2009-14. The framework takes a whole of government approach in recognition of the need to address the social and economic determinants of health.



## 10. Health services – performance against minimum standards of care

The monitoring and reporting of health system performance is a key priority for national, state and territory governments. It is crucial for ensuring populations continue to be provided with safe, timely and effective health care, as well as for gauging progress of health initiatives over time and identifying health system gaps or shortcomings which, if rectified, could result in significant health gains in the general population.

The performance of the ACT's health services is reported in a range of documents, including the ACT Health Annual Reports and publications from within ACT Health and agencies such as the Australian Institute of Health and Welfare, the Productivity Commission and the Australian Department of Health and Ageing. These documents cover a wide spectrum of performance indicators. For the purposes of this report, only those indicators relevant to the general health of the population or relating to access and equity are profiled.

### 10.1. Potentially preventable hospitalisations

Potentially preventable hospitalisations (PPHs) are those conditions where hospitalisation is thought to be avoidable if timely and adequate non-hospital care had been provided. ACT rates of PPH have not changed significantly since 2004-05, remaining lower than national rates (Table 5).

In 2007-08, half of the total potentially preventable hospitalisations were due to chronic diseases in both the ACT and Australia. The ACT had an increase in average separation rates for vaccine-preventable conditions as a result of an increase in influenza and pneumonia hospitalisations that coincided with peak levels of influenza in the community.

**Table 5: Potentially preventable hospitalisations, age-standardised rates,<sup>(a)</sup> ACT & Australia, 2004-08.**

	2004-05		2005-06		2006-07		2007-08	
	ACT	Aust	ACT	Aust	ACT	Aust	ACT	Aust
<b>All selected potentially preventable hospitalisations<sup>(b)</sup></b>	19.36	31.54	21.86	31.98	22.16	32.49	22.28	33.13
Vaccine-preventable conditions <sup>(c)</sup>	0.45	0.67	0.43	0.67	0.41	0.59	0.77	0.71
Acute conditions <sup>(d)</sup>	8.76	12.31	10.15	12.85	10.40	13.01	10.51	13.34
Chronic conditions <sup>(e)</sup>	10.21	18.71	11.34	18.62	11.43	19.05	11.09	19.24

Source: AIHW *Australian Hospital Statistics*.

Notes: (a) Rate per 1,000 population, directly age-standardised to the 2001 Australian population.

(b) Excludes multiple-diagnoses for the same separation within the same group.

(c) Vaccine preventable conditions include influenza and pneumonia.

(d) Acute conditions include appendicitis with generalised peritonitis; cellulitis; convulsions and epilepsy; dehydration and gastroenteritis; dental conditions; ear, nose and throat infections; gangrene; pelvic inflammatory disease; perforated/bleeding ulcer; and pyelonephritis.

(e) Chronic conditions include angina; asthma; chronic obstructive pulmonary disease; congestive cardiac failure; diabetes complications; hypertension; iron deficiency anaemia; nutritional deficiencies; rheumatic heart disease (including acute rheumatic fever as well as the chronic disease).

### 10.2. Health insurance

In 2008, the ACT continued to have the highest proportion of private health insurance holders in the country (ACT: 55.3%, Aust.: 44.8%), reflecting the relatively high socio-economic status (Table 15-21). The ACT also has below national average rates of insurance utilisation, with only 5.8% of ACT public hospital patients using private health insurance during their admissions. Overall, 28.3% of all ACT hospital admissions, in both public and private hospitals, recorded a funding source from private health insurance (Table 15-21).

### 10.3. Health workforce

The ACT, like other jurisdictions, has ongoing difficulties in attracting trained health staff. Although it has the second highest rate of employed medical practitioners per 100,000 population in Australia, this includes the large number of hospital medical practitioners required to service surrounding parts

of NSW, as well as those working in non-clinical fields (such as educators and researchers) in large Canberra based organisations.

In 2007-08, the ACT had a lower full time workload equivalent GP rate (67 per 100,000 population) than the national average (88.1) (Table 15-20). ACT public hospitals had a slightly higher rate of full time equivalent (FTE) nursing staff than the national average, but had slightly lower rates of diagnostic and allied health staff, domestic and other staff.

#### 10.4. Public hospital services

The ACT has two large public teaching hospitals which provide emergency department, inpatient and outpatient services to the more than 500,000 people residing in the ACT and surrounding regions of NSW. Both are teaching hospitals of the Australian National University (ANU) Medical School.

The Canberra Hospital (TCH) has over 600 beds and is the major trauma and tertiary care facility providing acute and other specialty care for people of the ACT and South East region. Calvary Public Hospital (CPH) is a major urban hospital with over 220 beds.

Of the 68,086 ACT public separations in 2006-07, 25% were for non-ACT residents, increasing slightly in 2007-08 to 26% of a total of 71,230 public ACT separations. Only 5% of ACT residents access public hospitals outside of the ACT. Together, these two facilities offer a range of health services that cover all but a small number of specialities (such as major burns and organ transplants) for which there is insufficient patient throughput for clinical units to be viable.

A number of widely-accepted performance measures are routinely utilised to gauge the effectiveness and efficiency of Australia's hospitals, as well as to compare how the hospital systems of the states and territories are performing in relation to one another and to the national average.

##### **Relative Stay Index (RSI)**

The Relative Stay Index (RSI) is an indicator of hospital efficiency. It takes into consideration factors such as patients' age and the complexity of their care. The national average RSI is 1, while a figure above or below 1 indicates that a hospital's average length of stay was higher or lower than expected given their patient mix. The ACT's RSI is continuing to decrease, from a high of 1.07 in 2002-03 to 0.90 in 2007-08.

##### **Emergency department waiting times**

ACT emergency department waiting times remain longer than the national average, although the proportion of patients seen within recommended timeframes increased from 54% in 2006-07 to 58% in 2007-08. Semi-urgent (Category 4) and non-urgent (Category 3) patients experienced the longest waiting times, with all of the ACT's most urgent emergency department presentations (Category 1-resuscitation) being seen immediately.

##### **Elective surgery procedures**

The number of elective surgery procedures performed in ACT public hospitals increased by 3% between 2006-07 and 2007-08. Waiting times for elective surgery continue however, to lengthen. In 2006-07, the ACT's median waiting time for elective surgery was 63 days, increasing to 72 days in 2007-08. The corresponding national figures were 32 and 34 days respectively over these 2 years. In both 2006-07 and 2007-08, 30% of elective surgery procedures carried out in ACT public hospitals were for interstate patients, the vast majority of whom came from surrounding regions of NSW.

#### 10.5. Mental health

Community service contacts are clinically significant services provided to clients, or relevant third parties, such as carers, family members or other professionals, by a government-operated specialised mental health service in a community setting (i.e. non-admitted patients in a community-based setting and/or hospital-based ambulatory care setting). They may be face-to-face, telephone, video link or other forms of direct communication.

A high number of community service contacts indicates that clients, their families and carers and other professionals are having more contact with community based mental health services. In 2006-07, the ACT had the highest number of community service contacts per 1,000 population (602.9, compared with 288.0 nationally). Mental Health ACT provided 207,366 community occasions of service in 2006-07 and this figure increased to 208,064 in 2007-08.

Without adequate follow up, mental health patients leaving hospital are especially vulnerable to the risk of relapse or being readmitted. The ACT recorded the highest rate of community follow up for people within the first seven days of discharge from hospital for 2006-07 (73%) compared with other jurisdictions.<sup>50</sup>

## 10.6. Cancer services

The number of cancer cases is predicted to increase by 22% over the 2002-12 period, impacting significantly on future demand for health services, in particular outpatient radiation therapy.

In 2007-08, the Capital Region Cancer Service (CRCS) saw a 13.5% increase in outpatient occasions of service from the previous year. For all services combined, the CRCS provided 45,098 occasions of service in 2007-08 compared to 36,146 in 2006-07. The biggest increase in outpatient services was in the area of radiation therapy (Table 6).

**Table 6: Radiation oncology waiting times, ACT, 2006-08.**

Category	2006-07	2007-08
Urgent (commence treatment within 24-28 hours)	98.4%	100%
Semi-urgent (commence treatment within 4 weeks)	94%	74.4%
Non-urgent category A (commence treatment in 4 weeks)	65.2%	64.5%
Non-urgent category B (commence treatment within 6 weeks)	68.5%	58.4%

Source: Capital Region Cancer Services, administrative data.

In 2006, resourcing for radiation oncology increased to provide expansion of existing services, improving access to radiation oncology services in the ACT and region. This included construction of two new bunkers and the purchase of a third linear accelerator, with a commitment to a fourth linear accelerator in 2012. It is anticipated that the third linear accelerator will lead to an increase in radiotherapy treatments of about 30 per cent. In 2007, construction began on the new Department of Radiation Oncology. Additional outpatient services were provided to NSW patients in outreach oncology clinics through the employment of an additional medical oncology registrar, funded through a grant received from the NSW Cancer Institute.

## 10.7. Residential aged care services

The ACT's provision of community aged care services exceeds the national average for Community Aged Care Packages, Extended Aged Care at Home Packages and Transition Care. The provision of residential aged care however, remains below the rest of Australia. Building on increases over the 2004-05 and 2005-06 periods, a further 157 residential aged care places were made available in the ACT between 30 June 2007 and 30 June 2008 (Table 15-19).

In 2007-08, some major changes were made to the way in which the complexity and care needs of residential aged care patients are determined. Dependency levels were assessed using the Resident Classification Scale (RCS) until March 2008, when the Aged Care Funding Instrument (ACFI) was introduced, allowing for the reporting of information on residents' health conditions.

## 10.8. Patient safety and quality

ACT Health currently reports on three major national patient safety and quality indicators (Table 7). Different performance targets apply to the two public hospitals, in recognition of The Canberra Hospital's role as the major teaching and referral centre for the region. This means that it provides services to the more complex patients and as such is likely to experience higher rates of adverse events than Calvary Public Hospital.

The Canberra Hospital and Calvary Public Hospital rates of unplanned hospital readmissions met the acceptable rates in both 2007 and 2008. Maximum acceptable rates for unplanned returns to the operating room were slightly exceeded by TCH in 2008 and by CPH in both 2007 and 2008.

**Table 7: ACT Health safety & quality indicators (%), June 2007 & June 2008.**

	Unplanned hospital readmissions within 28 days (percentage of separations)		Unplanned Return to Operating Room (percentage of separations)		Hospital Acquired Bacteraemia (rates per 1,000 non-same day occupied bed-days)	
	Year-to-date rate	Target rate	Year-to-date rate	Target rate	Rate	Target rate
<b>June 2007</b>						
TCH	1.12%	2.50%	0.69%	0.70%	0.54%	5.00%
Calvary	1.10%	1.10%	0.38%	0.30%	0.45%	0.90%
<b>June 2008</b>						
TCH	1.08%	2.50%	0.89%	0.70%	0.76%	5.00%
Calvary	0.70%	1.10%	0.31%	0.30%	1.56%	0.90%

Source: ACT Health published and unpublished data - from Health Performance Unit

## 11. Intersectoral activities relevant to health

Improving the health of the population requires shared goals across all sectors to address complex health challenges through an integrated policy response. Incorporating health issues into the policy and program development process of all sectors allows government to address the key determinants of health in a more systematic manner. Such an approach makes healthy choices possible or easier for citizens, makes social and physical environments health-enhancing, and encourages all sectors to be accountable for the health consequences of their policy decisions.

The health portfolio engages in cross-sectoral approaches to better understand and respond to social factors that influence health in the ACT. Improved health outcomes are sought through cross-sectoral partnerships, particularly with agencies responsible for services such as housing, education, justice, family services, disability, environmental management and planning at both a local and national level, in addition to community, non government agencies and consumers. These partnerships take the form of taskforces, working committees and planning groups, targeting specific areas of need.

A key strategy of ACT Health's preventative health initiatives is developing partnerships with government and non-government organisations to deliver health messages to priority groups and the broader community. The ACT government actively involves primary health care providers, consumers and the broader community to participate in the development, planning and evaluation of both current and future health programs.

There were a number of notable intersectoral activities relevant to health over the 2006-08 period. These included:

- *The ACT Aboriginal and Torres Strait Islander Health and Family Wellbeing Plan 2006-2011* is the ACT's response to the requirement of the National Strategic Framework for Aboriginal and Torres Strait Islander Health (NSFATSIH). The Plan was developed collaboratively by the ACT Aboriginal and Torres Strait Islander Health Forum, the primary strategic planning body for Aboriginal and Torres Strait Islander health in the ACT. It consists of members from ACT Health, the Department of Health and Ageing and Winnunga Nimmityjah Aboriginal Health Service (with observers from: Queanbeyan Indigenous Coordination Centre, Gugan Gulwan Youth Aboriginal Corporation and the ACT Division of General Practice).
- In 2006, ACT participated in *Exercise Cumpston*; Australia's largest ever health simulation exercise and one of the largest pandemic influenza exercises held in the world. The Exercise tested the Territory's preparedness for responding to pandemic influenza involving widespread human-to-human transmission of a new strain of the influenza virus and the ability of the Territory to provide a coordinated response across all levels of government. It also provided a significant test of many response elements contained in the *Australian Health Management Plan for Pandemic Influenza* as well as the Territory's pandemic response plans.
- ACT Health and the ACT Department of Education and Training (DET) have worked collaboratively on a number of initiatives to promote healthy eating and physical activity in schools. These included: coordination of school based health and wellbeing activities such as the *Early Childhood (Kids at Play)* and the *Fresh Food Market Tours Manual* and implementation of school canteen guidelines. In addition the development of the *Kids at Play Active Play and Eating Well* project has been developed in partnership with Sport & Recreation Services (TAMS) and the Heart Foundation ACT. ACT Health and the ACT Department of Education coordinated a *'Health Day Out'* - a trial health careers day for 60 Year 9 to 12 students - in 2007 - with the aim of promoting health careers to young people who will be either entering the workforce or undertaking a course of study in the near future. DET also has representation on the Ministerial Advisory Council for Sexual Health, AIDS, Hepatitis and Related Diseases (SHARD).
- A cross government working group convened to implement the COAG *National Action Plan for Mental Health 2006-2011*. The Group was chaired by the ACT Chief Minister's Department and membership included representatives from three Australian Government departments as well as representatives from ACT Departments of Health, Education, Justice and Community Safety, Disability, Housing and Community Services. ACT Health has worked collaboratively with a range of stakeholders to implement the *ACT Mental Health Strategy and Action Plan 2003-2008*, the *ACT Action Plan for Mental Health Promotion, Prevention and Early Intervention 2006-2008* and *Managing the Risk of Suicide 2005-2008*. Membership has included consumers and carers, and

representatives from community and government organisations from both within and outside of the health sector.

- In 2006, the Population Health Division formed a partnership with the ANU and CSIRO in order to establish research collaborations with the objective of exploring interdisciplinary research approaches for understanding and intervening in the obesity epidemic using an ecological landscape-based framework. Key outcomes of this partnership included: three research capability workshops, the development of a conceptual model of obesity based on an interdisciplinary complex systems approach, and an explorative geospatial analysis of ACT obesity data.
- ACT Health worked in partnership with the ACT Corrective Services to repatriate ACT sentenced prisoners to the new Alexander Maconochie facility in the ACT, opened in 2009. Activities included supporting a range of services such as; drug detection, pharmacotherapies program (including methadone maintenance), immunisation programs, and identification of infectious diseases.
- ACT Health in partnership with the National Capital Authority, Environment ACT and Department of Urban Services ensured the quality of recreational waterways are monitored and the public are advised on health aspects of recreational water quality in a timely manner.

## 12. Health and the environment

The Health Protection Service (HPS) of ACT Health is responsible for the continual monitoring of environmental factors that have the potential to influence the health of the ACT population. In addition to this monitoring role, the HPS also develops, promotes and assists with the implementation of appropriate legislation, policies and procedures aimed at minimising the impact of environmental hazards on the health of the ACT community. The HPS undertakes a range of activities in a variety of disciplines including: environmental health, food and water safety, radiation safety, communicable disease control and tobacco control.

### Tobacco control

ACT Health is committed to reducing both the level of tobacco use and the resultant impact of its use on the health of the community. *The National Tobacco Strategy 2004–09* (the Strategy) outlines the resolve of the federal, state and territory governments of Australia to work together in collaboration with non-government agencies on a long-term, comprehensive, evidence-based and coordinated national plan to reduce the health and social costs associated with tobacco use in Australia. Consistent with the Strategy, ACT Health has contributed to the development and implementation of the following tobacco control initiatives:

- banning tobacco vending machines from public places from 1 September 2006. This has limited young people's access to tobacco products without appropriate identification;
- allowing testing for compliance with the sales to minors provisions of the *Tobacco Act 1927* through the introduction of the *Tobacco (Compliance Testing) Amendment Act 2006*;
- prohibiting smoking in all enclosed public places in the ACT from 1 December 2006. This was achieved through consultation with industry and health groups to improve public awareness around the issue;
- developing policy to restrict smoking at Canberra Stadium, Manuka Oval, ACT government schools and other government departments and agencies, from 2008; and
- introducing the Tobacco Amendment Bill 2008 in the Legislative Assembly that includes a prohibition on the display of smoking products at the point of sale in ACT retail businesses.

### Air quality

The presence of pollutants may degrade air quality. Many people, such as those with chronic respiratory conditions, are at greater risk of experiencing adverse health events when exposed to poor quality air.

The HPS monitors the air quality of the ACT, with particular regard to the concentrations of known pollutants including carbon monoxide, nitrogen dioxide, ozone and particulate matter less than 10 (PM10), 2.5 (PM2.5) and 1 micron in diameter. In the 2006-08 period, the concentrations of these pollutants were generally compliant with the standard set out in the Ambient Air Quality National Environment Protection Measure (NEPM) as recommended by the National Environment Protection Council (NEPC). There were no breaches of the NEPM standards for carbon monoxide, nitrogen dioxide or ozone concentrations in 2006, 2007 or 2008.

Weather conditions experienced over the 2006-08 period were relatively severe. The combination of drought, an increase in the number of bushfires across southeast Australia and the use of residential wood-fired heaters during winter months contributed to the ACT having exceeded the NEPM standard for PM10 on a total of 12 occasions in the 2006-08 period. In addition, the concentrations of PM2.5 breached the NEPM advisory standard on a total of 12 occasions during the same timeframe. Dust storms and smoke from regional bushfires or wood-fired heaters appear to have been a major contributing factor in each case.

Overall, the ambient air quality in the ACT is very good. As the population of the ACT increases however, it is anticipated that the concentration of pollutants in the air will also increase. With this in mind, ACT Health continues to strive to maintain high levels of good air quality through monitoring.

## Water quality

In early 2007, the HPS reviewed the Public Health (Drinking Water Quality) Code of Practice 2000 and developed a new guiding document, the ACT Drinking Water Code of Practice (the Code). The Code specifies the technical requirements for the supply, quality, monitoring and reporting of drinking water in the ACT. It also documents the notification procedures the water utility licensee is required to follow in the event of an incident that poses risk to public health.

The review was prompted by the need to make provision to effectively regulate the operation of ultraviolet (UV) disinfection at the Mount Stromlo Water Treatment Plant that treats raw water from the Cotter River catchment reservoirs and the Murrumbidgee River. Murrumbidgee and Cotter reservoir water is typically poorer in quality than water sourced from the Googong catchment. Standard water treatment processes readily remove most pathogens, but two key pathogens – *Cryptosporidium* and *Giardia* – are not as effectively removed by these processes. Both of these pathogens can, however, be neutralised by UV disinfection.

In 2007, the UV system was added as an additional disinfection barrier to the treatment process at Mount Stromlo to further reduce the risk of pathogens entering the ACT drinking water supply. This system has contributed to the augmentation of the ACT's drinking water supply by allowing long-term use of treated water from the Murrumbidgee and Cotter Rivers.

Drinking water in the ACT is regularly tested to ensure high standards of quality. *Escherichia coli* are the organisms used as an indicator of faecal contamination. In the 2006-08, no samples tested contained *Escherichia coli*, evidence of effective decontamination of the ACT drinking water supply.

The ACT lakes and rivers are popular facilities used for primary (swimming) and secondary (e.g. boating, rowing) contact recreational activities. The HPS continues to monitor and provide advice concerning health aspects of recreational water quality and works with the managers of the lakes and rivers to ensure health information relating to ACT recreational waters is disseminated to the public.

ACT waterways have experienced an increase in the frequency and severity of *Cyanobacteria* (commonly known as blue-green algae) blooms. This has been strongly associated with extended periods of drought and high temperatures. In response, the HPS (in consultation with various stakeholders) finalised the *Blue-Green Algae in Recreational Waters Management Strategy* in December 2009 which addresses the public health risks associated with exposure to blue-green algae, and balances this with the needs of recreational users of ACT waterways.

## Food safety

Food-borne illness constitutes a major threat to public health. One of the vectors for transmission of food born illness is food preparation by food businesses for sale or delivery to the public. Australia has adopted an outcomes-based approach to the regulation of food businesses which is enforced by state and territory governments. Federal, state and territory governments are committed to a cooperative, national system of food safety regulation.

The Food Regulation 2002 was amended to facilitate the implementation of food safety programs for food businesses characterised as being of highest risk, commencing 1 June 2007. The amendments detail the functions of food safety auditors, reporting requirements and audit frequency. Food safety programs assist businesses to systematically identify the potential hazards that could occur in food handling and develop appropriate controls. Oyster wholesalers, producers of manufactured and fermented meats and businesses that provide food for service to vulnerable populations are required to have food safety programs.

The aim of food surveillance is to provide adequate information to enable the HPS to develop, target and monitor the outcomes of public health interventions in terms of food safety. The HPS conducted 2006-07 and 2007-08 surveys on 'ready-to-eat' (RTE) foods, aiming to have microbiological evidence of poor food safety practices at targeted food premises. Since the inception of this survey program, a comparison of the previous four years test results indicates a continuing improvement in microbiological quality of the RTE foods in the ACT. Some of the food surveys undertaken by the HPS in the 2006-08 period include:

- participation in FSANZ national food surveys;
- food poisoning investigations follow up;
- sushi survey;
- fried rice survey;



- bakery survey;
- RTE survey;
- pre-packaged salads survey; and
- cooked prawns survey.

### **Radiation safety**

In 2007 the new *ACT Radiation Protection Act 2006* (the RPA) and Radiation Protection Regulation 2007 commenced operation, superseding the *Radiation Act 1983*. A National Radiation Health Council (NRHC) was established to issue licences, register radiation sources, and advise the Minister on radiation protection issues. Enforcement of the RPA remains a function of ACT Health.

The RPA establishes a system to regulate the use of ionising radiation in the Territory, and makes provision for the future regulation of non-ionising radiation. The approach taken in the RPA is based on the National Directory for Radiation Protection (the NDRP) published by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA). The NDRP is a statement of a nationally agreed approach to regulating the use of radiation in Australia.

Since 2007, the NRHC has been developing an amendment to the NDRP to regulate the use of tanning beds and the operation of solariums. If endorsed by the Australian Health Ministers' Conference it will be the first non-ionising radiation source to be regulated under the NDRP and the RPA.

## 13. Immunisation

Immunisation is the main primary prevention strategy for the control of communicable diseases. High levels of vaccinated people in the community act as a "firebreak" in the spread of disease, slowing or preventing transmission to others. As well as the launch of the *ACT Immunisation Strategy 2007-2010* and the implementation of the National Immunisation Program (NIP), new vaccination programs for human papillomavirus (HPV) and rotavirus were implemented in 2006-08 in the ACT.

The *ACT Immunisation Strategy 2007-2010* guides ACT immunisation policy. The strategy targets all age groups, with an emphasis on vulnerable groups within the community, particularly Aboriginal and Torres Strait Islander people.

A key objective of the Strategy is to increase the proportion of immunisations provided to children by General Practice. The shift, from predominantly Maternal and Child Health (MACH) Service immunisation clinics to General Practice, aims to improve immunisation services by improving access, holistic care and rapport with the family's primary health care provider.

In 2007-08, general practices in the ACT administered approximately 57% of immunisations to children less than 7 years (an increase from 37.5% in March 2005), with ACT Health MACH Nurses administering 42% (decrease from 61.5% in March 2005). Hospitals and the Winnunga Nimmityjah Aboriginal Health Service administered the remaining 1%. This shift in the provision of childhood immunisation has been successfully achieved with no long-term decrease in childhood immunisation coverage in the ACT and has allowed the MACH services to focus on the provision of other services, in particular, the provision of care to vulnerable families.

Another objective is to provide comprehensive and timely information on immunisation by producing promotional materials and providing education to providers. HPS contracted a qualified service provider to implement an immunisation education program over a number of sessions, for immunisation providers across all sectors of health care in the ACT. Evaluation of these sessions indicated that they were considered a valuable learning experience by the participants.

### Influenza

HPS distributed over 30,000 doses of influenza vaccine each year for all people 65 years and older and Aboriginal and Torres Strait Islanders over 50 years of age. The ACT collects de-identified data from immunisation providers in an attempt to acquit vaccine supplies and estimate immunisation coverage in this target group.

In 2006, 77.8% of ACT residents aged 65 years and over received influenza vaccination compared to 77.5% nationally. After an influenza outbreak in an aged care facility in 2006, HPS conducted an influenza immunisation campaign throughout ACT's residential aged care sector. This has resulted in an increase in influenza immunisation rates of residents and staff of these facilities (from 75.9% in 2007 to 83.1% in 2008).

### Human papillomavirus (HPV)

The HPV vaccination program commenced in April 2007, providing free HPV vaccines through schools, on an ongoing basis for girls in Year 7 at high school. The vaccine prevents infection of HPV types 16, 18, 6 and 11. (HPV 16 and 18 are responsible for 70% of cervical cancers). The program includes a two-year catch-up for 13-18 year old girls in school and for 18-26 year old females delivered through general practice.

The program has been very successful as seen by the huge demand for the vaccine. In the 2007-08 financial year 58,000 doses of the vaccine were distributed to immunisation providers in the ACT. Data from the 2007 schools program indicate that 82% of girls in year 7 and 79% of girls in years 10, 11 and 12 received the vaccine. As well as reducing the transmission of HPV, this vaccine should in the longer term also reduce the incidence of cervical cancer in females and potentially some related cancers in males.

### Rotavirus

Rotavirus is the most common cause of severe gastroenteritis in infants and young children, causing around half of all hospitalised cases of gastroenteritis in children less than 5 years of age. A national

rotavirus vaccination program commenced in July 2007, providing free vaccines for all children born on, or after 1 May 2007.

### **Childhood immunisation**

Immunisation coverage for children in the ACT was above the national average during 2006-08. Coverage of childhood immunisation in the ACT rose significantly between 2006 and 2008 for children aged 12-15 months and remained relatively stable for children at age 24-27 months. In 2008 the assessment age for cohort three was reduced from 72-75 months to 60-63 months and 72-75 months. In 2008, average coverage rates were 93.6% (12-15 months), 94.5% (24-27 months) and 86.2% (60-63 months).

## 14. Population health screening

Screening facilitates the identification of apparently healthy persons at elevated risk of disease who may benefit from follow-up investigation and care.

Recommendations to introduce screening in Australia are provided by expert committees, generally the National Health and Medical Research Council (NHMRC) or the Australian Health Ministers' Advisory Council (AHMAC), who determine whether benefits would be sufficient to outweigh risks. Only three types of cancer screening have been endorsed by the NHMRC: mammography (breast) screening, cervical screening, and colorectal screening.

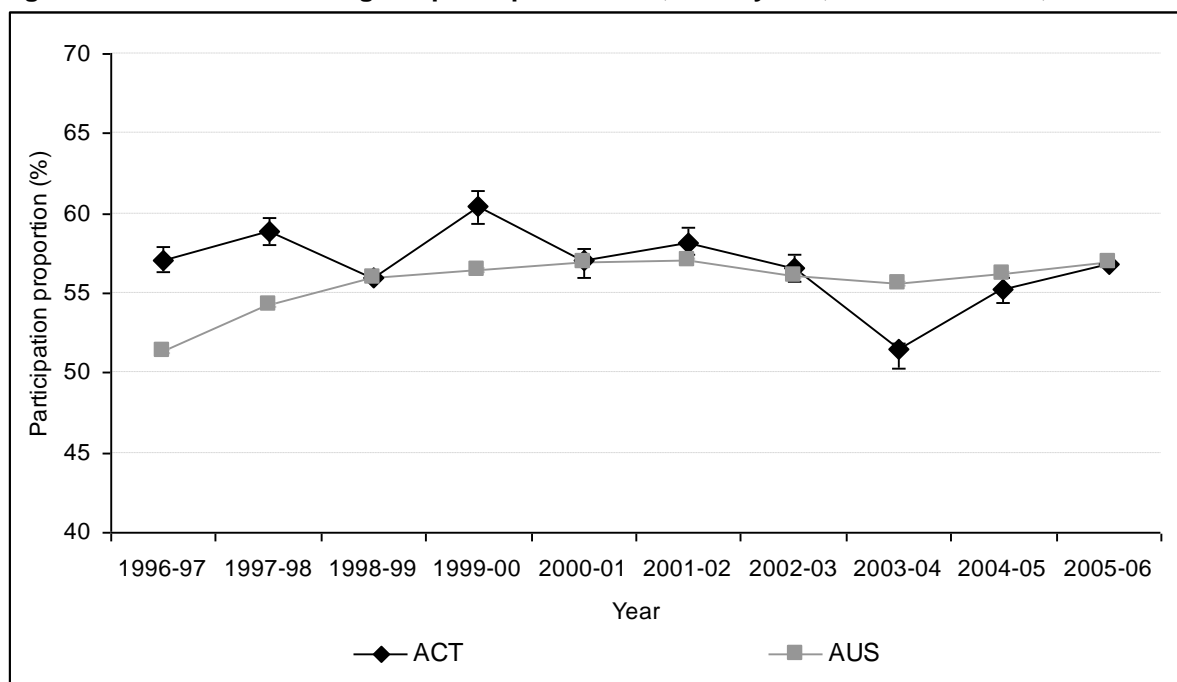
### Breast cancer screening

Breast cancer is the most common female cancer reported to the ACT Cancer Registry and is the leading cause of cancer death in females. The reduction of the death rate in older women aged 50 years or more has been attributed to benefits from screening mammography and related early detection initiatives, together with advances in adjuvant therapies and potentially in surgical management.

The *National Program for Early Detection of Breast Cancer*, now titled *BreastScreen Australia*, was established in 1991 and rolled out in the ACT in 1993. The program provides free biennial mammographic screening and follow-up of any suspicious lesions identified at screening to the point of diagnosis. It aims specifically at asymptomatic women aged 50-69 years of age, with a target participation rate of 70%. However any women aged 40 years and older is able to attend for screening.

The participation rate for ACT women remained between 55-60% for most years during 1996-2006, lower than the target participation rate of 70%. These results are consistent with national results (Figure 31).

**Figure 31: BreastScreen Program participation rates, 50-69 years, ACT & Australia, 1996-2006.**



Source: AIHW BreastScreen Australia Monitoring Reports for information 1996-2006.

Note: Because of the large sample size of the national data, the 95% confidence interval was about 0.1% to 0.2% from the mean proportion, thus it is hardly visible in the above figure.

### **Cervical screening**

Cervical screening has been successful in reducing the incidence of cervical cancer in the ACT. The incorporation of human papillomavirus (HPV) vaccination into the *National Immunisation Program* should reduce the prevalence of cervical abnormalities over time.

The target group for the screening program are all women who have ever been sexually active and who are between 20 and 69 years of age. A total of 36,064 women were screened for cervical cancer in 2008 compared to 36,091 in 2007. In 2008, 1.7% of women screened had either a low grade (0.8%) or high grade (0.9%) abnormality detected in their Pap smear.

The three-year participation rates in the National Cervical Cancer Screening Program 2006-08 for the ACT was 68.6% (Australia:66.3%).

### **Colorectal screening**

Early detection and treatment of bowel cancer improves patient outcomes. Since 2006, the Australian Government has implemented the *National Bowel Cancer Screening program*. This Program aims to reduce the incidence of and mortality due to bowel cancer by screening the most at risk population (persons aged over 50 years) with the aim of detecting bowel cancer in pre cancerous or early stages to maximise the effectiveness of treatment.

The test used for screening purposes is the faecal occult blood test (FOBT), a non-invasive test which detects microscopic amounts of blood in bowel motions. Participants who test positive are then advised to seek further medical advice.

In 2008, ACT residents had a significantly higher participation rate in the national program compared to national rates (ACT:39.1%, Aust:36.6%).

## 15. Summary tables

### ACT profile

**Table 15-1: Population profile, by age group, ACT, 2004-08.**

Population	Units	Age group	2004	2005	2006	2007	2008
Total population (estimated resident)	no.	all	327,475	330,164	334,119	339,761	344,236
ACT - proportion of Australia	%	all	1.6	1.6	1.6	1.6	1.6
Fertility	rate		1.6	1.6	1.7	1.7	1.8
Births (calendar year)	no.		4,126.0	4,230.0	4,544.0	4,689.0	
Infants (as at 30 June each year)	no.	0-<1	4,135.0	4,161.0	4,430.0	4,503.0	4,750.0
Young children (at 30 June)	no.	1-4	16,147.0	16,132.0	16,278.0	17,017.0	17,543.0
Children (at 30 June)	no.	0-14	63,551.0	62,903.0	62,723.0	63,292.0	63,874.0
Children	% pop.	0-14	19.4	19.1	18.8	18.6	18.6
Young people (at 30 June)	no.	15-24	53,432.0	53,904.0	54,250.0	54,522.0	54,302.0
Young people	% pop.	15-24	16.3	16.3	16.2	16.1	15.8
Younger adults (at 30 June)	no.	25-44	101,953.0	102,401.0	103,591.0	105,337.0	106,831.0
Adults (at 30 June)	no.	25-64	180,620.0	182,489.0	185,287.0	188,765.0	191,645.0
Adults	% pop.	25-64	55.2	55.3	55.5	55.6	55.7
Adults (at 30 June)	no.	45-64	78,667.0	80,088.0	81,696.0	83,428.0	84,814.0
Older people (at 30 June)	no.	65+	29,872.0	30,868.0	31,859.0	33,182.0	34,415.0
Older people	% pop.	65+	9.1	9.4	9.5	9.8	10.0
Older people (at 30 June)	no.	65-74	16,472.0	17,055.0	17,616.0	18,427.0	19,214.0
Elderly (at 30 June)	no.	75+	13,400.0	13,813.0	14,243.0	14,755.0	15,201.0
Total population growth	no.	all	1,800	2,700	4,000	6,900	4,500

Sources: ABS 2008, Australian Demography cat. no. 3101.0 & 3101.8.

ACT Maternal and Perinatal Data Collection, confidentialised unit record file, 2004-08.

# Social indicators relevant to health

**Table 15-2: Social indicators relevant to health, ACT & Australia, 2004-08.**

	Units	2004	2005	ACT			Aust
				2006	2007	2008	2008
<b>LIVING ARRANGEMENTS</b>							
<b>Households</b>							
Total households	'000	126	128	130	132	134	8,316
<b>Families</b>							
Total families	'000	86	90	93	94	94	6,011
Families with children aged under 15 years	'000	34	36	36	35	35	2,269
Couple families	'000	70	77	78	80	81	5,039
De facto couple families - of all couple families	%	n.a.	n.a.	16.7	n.a.	n.a.	14.8
Couple-only families - of all couple families	%	46.7	43.3	43.3	43.3	42.8	46.5
Couple with children aged <15 - of all families with children aged <15 yrs	%	76.1	80.4	80.9	81.7	81.9	79.7
Lone-father with child aged <15 - of all families with children aged <15 yrs	%	*3.3	*1.5	*2.3	*2.8	*3.2	2.7
Lone-mother with child aged <15 - of all families with children aged <15 yrs	%	20.6	18.1	16.7	17.0	14.9	17.7
Families with at least 1 child aged <5 - of all families with children <15yrs	%	42.5	42.0	43.2	46.4	45.7	45.4
<b>Persons</b>							
Children aged <15 yrs living in one-parent families - of all children <15 yrs	%	22.0	17.3	17.2	16.8	16.3	18.2
Persons aged 20-24 yrs living with parents - of all persons 20-24yrs	%	40.7	44.0	40.9	41.2	45.3	45.0
Persons aged 25-34 yrs living with parents - of all persons 25-34yrs	%	9.0	11.1	12.4	13.2	15.6	12.0
Persons aged 15-64 yrs who live alone - of all persons 15-64yrs	%	8.0	8.0	8.2	9.4	8.1	8.7
Persons aged 65 yrs & over who live alone - of all persons 65 yrs & over	%	27.7	25.6	23.0	22.4	24.1	25.0
<b>FAMILIES AND WORK</b>							
<b>Couple families with children aged under 15 years(c)</b>							
Both parents employed - of all couple families with children aged <15 yrs (a)	%	68.5	76.6	74.0	71.1	76.0	61.6
One-parent families with children aged <15, parent employed - of all one-parent families w. chn. aged < 15(a)	%	57.9	60.3	75.5	70.2	75.4	58.9
<b>FAMILY FORMATION</b>							
Number of marriages	'000	1.7	1.7	1.6	1.6	1.7	118.8
Crude marriage rate (per 1,000 population)	rate	5.3	5.1	4.9	4.7	4.8	5.5
Marriages, both partners married for the first time - of all marriages	%	67.8	68.8	68.0	68.8	68.8	69.8
Median age of males at first marriage	yrs	29.1	29.4	29.2	29.1	29.4	29.6
Median age of females at first marriage	yrs	27.3	27.5	27.5	27.6	27.7	27.7
<b>Divorce</b>							
Number of divorces	'000	1.6	1.6	1.5	1.3	1.4	47.2
Median duration of marriage until final separation	yrs	9.7	9.5	9.6	9.6	9.8	8.8
Divorces involving children aged under 18 years - of all divorces	%	45.6	52.2	52.2	51.8	48.2	48.8
<b>Fertility(b)</b>							
Births	'000	4.2	4.2	4.5	4.8	4.8	296.6
Total fertility rate (babies per woman)	rate	1.6	1.6	1.7	1.8	1.8	2.0
Births to mothers aged under 20 yrs - of all births	%	2.3	2.6	2.4	2.6	2.0	4.2
Births to mothers aged 35 yrs & over - of all births	%	25.8	23.4	23.6	23.7	26.0	23.0
Births outside marriage - of all births	%	27.8	27.3	27.2	28.4	27.7	34.4
Births outside marriage acknowledged by father - of all births outside marriage	%	91.2	90.7	92.4	91.3	92.0	90.8
<b>CHILD CARE</b>							
Children aged under 3 yrs using formal care - of all children aged under 3 yrs(d)(e)	%	n.a.	40.1	n.a.	n.a.	*32.9	30.3
Children aged under 3 yrs using informal care - of all children aged under 3(e)	%	n.a.	46.0	n.a.	n.a.	*26.5	29.9
Children aged 3-4 yrs using formal care - of all children 3-4yrs (d)(e)	%	n.a.	58.6	n.a.	n.a.	60.1	43.2
Children aged 3-4 yrs using informal care - of all children aged 3-4 yrs (e)	%	n.a.	35.3	n.a.	n.a.	40.5	32.5
Median weekly hours of care received by children aged under 3 yrs - formal and informal combined(d)	hrs	n.a.	17	n.a.	n.a.	35	15
<b>COMMUNITY</b>							
Persons aged 18 yrs & over - donated money to an organisation in previous 12 months	%	n.a.	n.a.	85.1	n.a.	n.a.	76.9
Persons aged 18 yrs & over - contact with family or friends living outside the household in last week	%	n.a.	n.a.	97.1	n.a.	n.a.	96.3

Source: ABS 2009, Australian Social Trends, Data Cube - Family and community, cat. no. 4102.0.

Notes: (a) Excludes families with labour force status not determined.

(b) Based on year of registration.

(c) In the 2008 Childhood Education & Care Survey (CEaCS), information was collected for the first time about usual child care attendance. Previous surveys only collected information about child care attendance in the survey reference week.

(d) Excludes preschool.

(e) Includes children who used a combination of formal & informal care.

n.a. not available

\* estimate has a relative standard error of 25% to 50% & should be used with caution.

**Table 15-3: Social indicators relevant to health (continued), ACT & Australia, 2004-08.**

			2005	2006	2007	2008	2008 Aust.
<b>LABOUR FORCE (June)</b>							
Participation, employed/unemployed	%	15 yrs +	72.2	73.1	73.0	72.6	65.3
Unemployment rate, in labour force	%	15 yrs +	3.1	2.5	3.0	2.3	4.1
Employed; % in FT work	%	15 yrs +	74.1	75.7	74.8	74.8	71.0
<b>INCOME SUPPORT</b>							
Age pension	%		5.5	5.4	5.3	5.5	9.5
Disability support pension	%		2.2	2.1	2	2.1	3.5
Austudy	%		0.2	0.1	0.1	0.1	0.1
Youth allowance	%		1.7	1.6	1.5	1.4	1.5
Single parent	%		1.6	1.4	1.2	1.0	1.7
<b>EDUCATION</b>							
Apparent retention, fulltime students,	%	Yr 7,8-12	87.5	88.7	85.2	85.2	74.5
Did not complete year 12	%	15-64 yrs	19.0				
Bachelor degree or above	%	25-64 yrs	39.5	39.0	41.9	42.4	25.5
<b>FAMILY STRUCTURE</b>							
Average family size	no.		3.0	3.0	3.0	3.0	3.0
<b>COMMUNICATIONS</b>							
			<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>Aust 2008</b>
Household access to computer at home	%		79.0	82.0	84.0	86	75
Household access to the internet at home	%		67.0	72.0	73.0	80	67.0
<b>CRIME AND SAFETY</b>							
Feel unsafe/very unsafe at home alone after dark	%			5.1			<b>Aust 2006</b> 6.7
Victim of physical or threatened violence, last 12 mths	%			9.9			10.8
Victim of actual or attempted break-in, last 12 mths	%			12.8			9.4

Sources: ABS 2009, Social Trends, cat. no. 4102.0.

ABS 2007 & 2008, Year Book, cat. no. 1301.0.

ACT General Health Survey, confidentialised unit record file, 2007-08.



## Morbidity and mortality

**Table 15-4: Selected mortality statistics, ACT, 2001-07.**

	2001	2002	2003	2004	2005	2006	2007
<b>Number of deaths</b>							
Males	729	712	751	739	743	741	815
Females	690	661	663	684	748	743	782
Persons	1,419	1,373	1,414	1423	1491	1484	1597
<b>Standardised mortality rate (deaths per 1,000 standard population)**</b>							
Males	7.6	7	7.3	7	6.6	6.4	6.7
Females	5.3	5.2	4.7	4.6	4.9	4.7	4.7
Persons	6.3	5.9	5.8	5.6	5.6	5.5	5.6
<b>Median age at death (years)</b>							
Males	67.6	69.3	73.9	75.2	75.3	76	76.6
Females	74.9	75.2	81.5	80.8	82	82.6	82.4
Persons	71.7	72.3	78.1	77.6	78.5	79.6	79.5
<b>Infant mortality rate (deaths at age less than 1 year, per 1,000 live births)</b>							
Males	4.5	4.3	7.5	6	5.2	5.2	4.1
Females	1.5	2.5	4	7.9	6.3	5	3.4
Persons	3	3.4	5.8	6.9	5.7	5.1	3.8
<b>*Premature mortality rate (deaths per 1,000 population aged less than 80 years)</b>							
Males	3.2	2.6	3.2	3.1	2.9	2.9	3
Females	2	2	1.8	2	2	1.8	2
Persons	2.6	2.3	2.5	2.5	2.5	2.3	2.5
<b>*Avoidable mortality rate (deaths per 1,000 population aged less than 80 years)</b>							
Males	1.9	1.8	2.3	2.1	2	1.8	2
Females	1	1.3	1.2	1.3	1.3	1.2	1.3
Persons	1.4	1.6	1.7	1.7	1.7	1.5	1.7
<b>Life expectancy (years) select ages</b>							
<b>Males</b>							
0	78.5	79.2	79.2	79.7	79.9	80	80.3
65	17.9	18.2	18.3	18.6	18.8	18.9	19.2
85	5.8	5.8	5.8	6	6.1	6.1	6.1
<b>Females</b>							
0	82.9	83.3	83.8	83.9	84	83.9	84
65	20.8	21	21.4	21.5	21.9	21.7	21.6
85	6.8	6.9	7	7	7.2	7.1	6.9

Sources: ABS 2007, Deaths, Australia, Data cubes table 2 death rates, summary, states & territories, 1995-2007, cat. no. 3302.0.

\*ABS 1995, 2001-07, deaths data, confidentialised unit record files.

AIHW 2005, State & territory general record of incidence of mortality (GRIM) books, AIHW, Canberra

Notes: The data in the table relate to ACT residents only. They include all ACT residents who died interstate. Underlying cause of death in ABS deaths data for the years 2001-2007 is recorded in ICD-10.

\*\*Standardised to 2001 Australian population.

**Table 15-5: Selected long-term conditions, by age group, ACT, 2007-08.**

Condition	Age-group (%)			
	0-24 years	25-44 years	45-64 years	65+ years
Arthritis (incl osteoarthritis)	0.3	7.3	23.8	48.7
Asthma	9.8	11.1	7.6	8.8
Back pain/problems nec, disc disorders	4.7	16.7	18.8	24.5
Deafness (complete and partial)	1.7	6.1	10.8	30.9
Diabetes	na	0.5	4.8	13.8
Hayfever and allergic rhinitis	16.3	28.2	19.5	18.4
Diseases of the circulatory system	1.6	8.8	26.6	53.9
Long sight/hyperopia	6.1	12.4	47.8	54.1
Short sight/myopia	9.6	28.0	40.3	39.6
Neoplasms	0.4	0.4	3.5	8.2
Mental & behavioural (a) (b)	9.6	13.7	13.2	9.9
Bronchitis/Emphysema	0.7	1.5	2.4	5.4
Musculoskeletal	5.6	28.0	46.3	66.1

Source: ABS National Health Survey 2001, 2004-05, 2007-08: Summary of results, state and territory tables cat. no. 4368.0.

Notes: (a) Includes depression.

(b) The methodologies between the surveys were similar, and this is not considered to be a factor contributing to the increase. The increase may in part result from a greater willingness of respondents to report these types of problems in the survey, due to changing community awareness and perceptions of mental health issues.

**Table 15-6: Selected long-term conditions (%), ACT 2001, 2004-05, 2007-08 & Australia, 2007-08.**

	2001	2004-05	2007-08	Aus. 07-08
Short sightedness	23.5	26.7	25.9	22.7
Long sightedness	21.7	25.0	23.1	25.6
Hayfever & allergic rhinitis	25.3	21.6	21.0	15.1
Diseases of the circulatory system	17.4	18.9	15.2	16.4
Backpain/problems nec/disc disorders	22.8	14.2	13.9	14.4
Arthritis (incl osteoarthritis)	11.8	13.0	13	15.2
Mental & behavioural problems (a) (b)	8.7	13.8	11.8	11.2
Asthma	12.3	10.2	9.6	9.9
Deafness (complete/partial)	10.6	8.7	8.2	10.2
Diabetes/high blood sugar	3.1	3.2	3.1	4.0
Osteoporosis	1.7	2.9	2.9	3.4
Cancer	1.8	1.7	1.9	1.6
Bronchitis/emphysema	4.4	2.1	1.8	2.4

Source: ABS National Health Survey 2001, 2004-05, 2007-08: Summary of results, state and territory tables cat. no. 4368.0.

Notes: (a) Includes depression.

(b) The methodologies between the surveys were similar, and this is not considered to be a factor contributing to the increase. The increase may in part result from a greater willingness of respondents to report these types of problems in the survey, due to changing community awareness and perceptions of mental health issues.

## Trends and indicators in health status

**Table 15-7: Women who gave birth by maternal state of residence, ACT, 2003-07.**

	2003	2004	2005	2006	2007
<b>Number of women who gave birth</b>	<b>4,784</b>	<b>4,799</b>	<b>4,995</b>	<b>5,354</b>	<b>5,419</b>
ACT residents	4,054	4,018	4,221	4,480	4,546
Non ACT residents	730	781	774	874	873
<b>Number of babies born</b>	<b>4,876</b>	<b>4,926</b>	<b>5,088</b>	<b>5,485</b>	<b>5,535</b>
to ACT residents	4,111	4,110	4,282	4,576	4,623
to Non ACT residents	765	816	806	909	912

Source: ACT Maternal and Perinatal Data Collection, confidentialised unit record file, 2003-07.

**Table 15-8: Selected maternal and perinatal health summary indicators, ACT & Australia, 2007.**

	ACT	Australia
<b>Maternal age</b>		
Percentage of mothers who were teenagers (less than 20 years)	2.6	4.1*
Percentage of first-time mothers aged 35 years and over	14.6	14.4
<b>Aboriginal status</b>		
Percentage of women who identified as Aboriginal or Torres Strait Islander	1.5	3.8*
<b>Smoking</b>		
Percentage of women smoking during pregnancy	12.5	16.6*
Percentage of Aboriginal or Torres Strait Islander women smoking during pregnancy	52.9	
<b>Mothers country of birth</b>		
Percentage of women born in Australia	79.1	75.2*
<b>Hospital sector</b>		
Percentage of women who gave birth in public hospitals	64.8	70.2*
<b>Multiple pregnancy</b>		
Percentage of women who had a multiple pregnancy	1.6	1.6
<b>Onset of labour</b>		
Percentage of women who had a spontaneous onset of labour	63.0	56.6*
<b>Induction of labour</b>		
Percentage of women who had an induced onset of labour	20.4	25.3*
<b>Instrumental vaginal birth</b>		
Percentage of women who had an instrumental (forceps or vacuum extraction) birth (a)	12.7	11.2*
<b>Caesarean section</b>		
Percentage of women who had a caesarean section (a)	27.5	30.9*
<b>Maternal postnatal stay</b>		
Median length of hospital stay (days) for women who were discharged home	3.0	3.0
<b>Preterm birth</b>		
Percentage of all births that were less than 37 weeks gestation	6.7	8.1*
<b>Low birthweight</b>		
Percentage of liveborn babies weighing less than 2,500 grams at birth	5.7	6.7*
<b>Apgar scores</b>		
Percentage of liveborn babies with an Apgar score of less than 7 at 5 minutes	1.5	1.4
Ever breastfed - total	91%	na

Sources: ACT Maternal Perinatal Data Collection 2007.

AIHW 2008, Australia's Mothers and Babies, 2007, cat. no. PER 48.

2007-08 ACTGHS.

Notes: (a) For multiple births, the method of birth for the first born baby was used.

\*statistically significant difference at  $p < 0.05$ .

## Notifiable conditions

**Table 15-9: Communicable disease notifications & rates, ACT, 2004-08, NSW & Australia, 2008.**

	Number	Notification rate per 100,000 population						
	ACT 2008	2004	2005	ACT 2006	2007	2008	NSW 2008	Aust 2008
<b>Vaccine preventable diseases</b>								
Pertussis	145.0	38.2	96.4	76.7	28.5	41.7	112.2	68.0
Pneumococcal Disease (invasive)	20.0	17.0	9.2	5.6	10.0	5.8	8.0	7.7
Meningococcal Disease	3.0	3.4	2.4	1.5	0.9	0.9	1.2	1.3
influenza (laboratory confirmed)*	244.0	0.3	12.9	23.8	114.4	70.2	26.0	42.8
Measles	0.0	0.0	0.0	0.3	0.0	0.0	0.6	0.3
Mumps	0.0	0.6	0.3	0.3	1.2	0.0	1.1	1.3
Rubella	0.0	0.0	0.0	0.0	0.6	0.0	0.2	0.2
Rubella-Congenital	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haemophilus Influenzae Type B	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Tetanus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diphtheria	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Poliomyelitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Varicella Zoster (Chickenpox)	12.0	NN	NN	0.0	0.0	3.5	NN	8.4
Varicella Zoster (Shingles)	7.0	NN	NN	0.0	0.0	2.0	NN	10.8
Varicella Zoster (Unspecified)	102.0	NN	NN	0.0	0.0	29.3	NN	20.7
<b>Sexually transmitted diseases</b>								
Chlamydial Infection	987.0	192.7	214.6	244.4	265.6	283.8	201.3	273.8
Gonococcal Infection	21.0	10.8	10.1	9.8	13.2	6.0	19.1	35.9
Syphilis	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Syphilis < 2 years	4.0	NN	1.2	0.6	2.6	1.2	6.0	6.1
Syphilis > 2 years	32.0	NN	1.8	3.0	5.6	9.2	14.2	9.1
Syphilis- Congenital	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Donovanosis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Bloodborne diseases</b>								
Hepatitis (NEC)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hepatitis B (incident)	1.0	1.5	0.9	1.8	3.8	0.3	0.7	1.1
Hepatitis B (unspecified)+,++	58.0	15.7	27.5	20.8	16.1	16.7	36.7	30.8
Hepatitis C (incident)	5.0	2.2	4.6	4.5	2.6	1.4	0.3	1.8
Hepatitis C (unspecified)+,++	195.0	64.4	48.7	52.6	56.0	56.1	51.0	51.2
Hepatitis D	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
<b>Gastrointestinal diseases</b>								
Campylobacteriosis	381.0	116.9	123.4	119.8	122.7	109.5	NN	107.8
Salmonellosis	132.0	30.8	28.8	39.5	32.3	38.0	32.5	38.9
Cryptosporidiosis	11.0	1.9	8.3	23.5	2.6	3.2	6.9	9.4
Shigellosis	3.0	0.6	2.1	0.6	0.0	0.9	1.6	3.9
Hepatitis A	5.0	0.3	0.9	0.3	0.6	1.4	1.0	1.3
Listeriosis	1.0	0.3	0.9	0.3	0.0	0.3	0.5	0.3
Typhoid	0.0	0.3	0.0	0.0	0.0	0.0	0.6	0.5
SLTEC, VTEC	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.5
Haemolytic Uraemic Syndrome (HUS)	0.0	0.0	0.0	0.0	0.3	0.0	0.2	0.1
Hepatitis E	0.0	0.0	0.6	0.6	0.3	0.0	0.2	0.2
Botulism	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tuberculosis	13.0	4.3	5.8	4.2	2.9	3.7	7.2	5.7
Legionellosis	4.0	0.3	0.0	0.3	1.2	1.2	1.3	1.3
Leprosy	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
<b>Vectorborne diseases</b>								
Malaria	15.0	5.2	3.7	3.3	3.5	4.3	1.7	2.5
Dengue	6.0	1.9	0.6	1.8	0.9	1.7	2.2	2.6
Ross River Virus Infection	21.0	1.9	1.2	3.0	3.8	6.0	16.5	26.4
Barmah Forest Virus Infection	7.0	0.6	0.0	2.4	1.8	2.0	7.6	9.8
Arbovirus Infection (NEC)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Kunjin Virus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Murray Valley Encephalitis Virus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Japanese Encephalitis Virus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Zoonotic diseases</b>								
Q Fever	2.0	0.6	0.0	0.0	0.0	0.6	2.4	1.7
Ornithosis	0.0	0.6	0.0	0.6	0.0	0.0	0.6	0.5
Leptospirosis	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5
Brucellosis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Australian Bat Lyssavirus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Anthrax	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Quarantinable diseases</b>								
Cholera	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plague	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rabies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Viral Haemorrhagic Fever	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow Fever	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Severe Acute Respiratory Syndrome	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: ACT Notifiable Diseases System 2004-08, National Notifiable Diseases Surveillance System, NNDSS.

Notes: NN – not notifiable

NEC – not elsewhere classified.

**Table 15-10: Cancer incidence, ACT, 2004-06.**

	<b>Unit</b>	<b>Age</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
All cancers	no.	0-85+	1287	1331	1283
All cancers - persons	rate	0-85+	461.5	455.8	435.1
All cancers - males	rate	0-85+	557.2	526.6	506.9
All cancers - females	rate	0-85+	387.0	403.6	376.8
Female breast cancer	rate	0-85+	136.6	124.6	130.5
Cervical cancer-female	rate	0-85+	11.2	5.5	4.6
Prostate cancer - male	rate	0-85+	195.5	152.9	156.4
Lung cancer - persons	rate	0-85+	29.4	36.5	33.9
Lung cancer - male	rate	0-85+	44.8	41.2	42.2
Lung cancer - female	rate	0-85+	17.2	34	27
Colorectal cancer - persons	rate	0-85+	58.1	60.5	62.1
Colorectal cancer - male	rate	0-85+	72.8	71.3	71.6
Colorectal cancer - female	rate	0-85+	45.2	50.9	54.2
Melanoma - persons	rate	0-85+	47.1	58.4	42.4
Melanoma - male	rate	0-85+	54.6	71.3	47.5
Melanoma - female	rate	0-85+	39.9	50	38.3

Source: ACT Cancer Registry.

Note: Rate per 100,000 population was age-standardised to the Australian Standard Population 2001.

## Potential public health risks

**Table 15-11: Chronic disease risk factors, selected indicators (%), adults 18 years & over, by sex, ACT & Australia, 2007-08.**

	ACT			Australia		
	Males	Females	Persons	Males	Females	Persons
<b>Tobacco(1)</b>						
Daily smokers	18.0	13.9	15.9	21.1	17.3	19.2
<b>Alcohol</b>						
Long-term harm from drinking (a)	14.1	10.3	12.2	15.0	11.3	13.2
<b>Physical activity(2)</b>						
Sufficient physical activity (b)	61.7	52.5	57.0	na	na	na
<b>Fruit and vegetable consumption(1)</b>						
Sufficient vegetable consumption (c)	5.3	9.0	7.2	7.3	10.1	7.8
Sufficient fruit consumption (d)	48.9	59.0	54.0	45.2	56.3	51.3
<b>Overweight and obesity(1)</b>						
Adults who are overweight or obese	64.8	50.5	57.8	67.7	54.9	61.4
Children who are overweight or obese	na	na	21.7	na	na	24.9
<b>Sun protection(2)</b>						
Adults who use sun protection (e)	10.8	13.3	12.1	na	na	na

Sources: (1) ABS 2008, National Health Survey 2007-08, Summary of results, ACT tables, cat. no. 43620.

(2) ACT Health, ACT General Health Survey 2007-08, unpublished data.

Notes: (a) For males, consumption of 29 or more standard drinks per week; for females, consumption of 15 or more standard drinks per week. A standard drink is 10 grams of pure alcohol.<sup>37</sup>  
 (b) Those who met the Australian Government guidelines<sup>38</sup> of 30 minutes each day or 150 minutes per week of moderate to vigorous physical activity. Data from 2007-08 ACT General Health Survey.  
 (c) Those who met the Australian Government guidelines<sup>40</sup> of eating 5 or more serves of vegetables per day. Data from 2007-08 National Health Survey.  
 (d) Those who met the Australian Government Guidelines<sup>40</sup> of eating 2 or more serves of fruit per day. Data from 2007-08 National Health Survey.  
 (e) Those who usually or always wear sunglasses, apply sunscreen, wear a hat and wear protective clothing. Data from the 2007-08 ACT General Health Survey.

**Table 15-12: Chronic disease risk factors, selected indicators (%), adults 18 years & over, by sex, ACT, 2004-05 & 2007-08.**

	2004-05			2007-08		
	Males	Females	Persons	Males	Females	Persons
<b>Tobacco(1)</b>						
Daily smokers	17.3	12.6	14.9	18	13.9	15.9
<b>Alcohol</b>						
Long-term harm from drinking (a)	15.6	12.7	14.2	14.1	10.3	12.2
<b>Physical activity(2)(3)</b>						
Sufficient physical activity (b)	58.5	52	55.2	61.7	52.5	57
<b>Fruit and vegetable consumption(2)</b>						
Sufficient vegetable consumption (c)	9.3	11.5	10.4	5.3	9	7.2
Sufficient fruit consumption (d)	45.1	57.3	51.3	48.9	59	54
<b>Overweight and obesity(1)</b>						
Per cent of adults who are overweight or obese	na	na	na	64.8	50.5	57.8
Per cent of children who are overweight or obese	na	na	na	na	na	21.7
<b>Sun protection(2)</b>						
Per cent of adults who use sun protection (e)	na	na	na	10.8	13.3	12.1

Sources: (1) 2007-08 National Health Survey, Summary of results, ACT tables, Australian Bureau of Statistics, cat. no. 43620.

(2) 2007-08 ACT General Health Survey, unpublished data.

(3) 2004 ACT Smoking Nutrition and Physical Activity Survey (SNAPS), ACT Health.

Notes: (a) For males, consumption of 29 or more standard drinks per week; for females, consumption of 15 or more standard drinks per week. A standard drink is 10 grams of pure alcohol.  
 (b) Those who met the Australian Government guidelines of 30 minutes each day or 150 minutes per week of moderate to vigorous physical activity. Note data from 2007-08 ACT General Health Survey  
 (c) Those who met the Australian Government guidelines of eating 5 or more serves of vegetables per day. Data from 2007-08 National Health Survey.  
 (d) Those who met the Australian Government Guidelines of eating 2 or more serves of fruit per day. Data from 2007-08 National Health Survey.  
 (e) Those who usually or always wear sunglasses, apply sunscreen, wear a hat and wear protective clothing. Data is from the 2007-08 ACT General Health Survey.

**Table 15-13: Summary results, Australian Secondary Student Alcohol & Drug Survey (ASSAD), ACT, 1996, 1999, 2002, 2005 & 2008.**

	1996	1999	2002	2005	2008	P value <sup>(e)</sup>
<b>Tobacco</b>	%	%	%	%	%	
Smoked at least part of a cigarette in lifetime	55.7	53.7	45.9	32.0	26.4	p<0.05
Current smokers (smoked at least once in last 7 days)	20.4	20.5	15.3	8.6	6.7	ns
Daily smokers (smoked each day in last 7 days)	9.3	8.2	6.1	2.9	2.5	ns
	<b>No.</b>	<b>No.</b>	<b>No.</b>	<b>No.</b>	<b>No.</b>	
Mean no. of cigarettes smoked in last 7 days by current smokers	31	29	29	25	23.8	ns
<b>Alcohol</b>	%	%	%	%	%	
Drank at least a few sips of alcohol in lifetime	89.7	90.2	89.8	89.6	85.9	ns
Current drinkers (drank at least once in last 7 days)	29.1	32.9	31.2	26.3	24.2	ns
Harmful drinkers (a)	6.9	8.6	8.5	5.8	7.1	ns
	<b>No.</b>	<b>No.</b>	<b>No.</b>	<b>No.</b>	<b>No.</b>	
Mean no. of drinks consumed in last 7 days by current drinkers	7	7	8	6	6	ns
<b>Illicit substances &amp; other drugs</b>	%	%	%	%	%	
<i>Illicit substances</i>						
Used at least one illicit substance in lifetime	37.5	35.0	29.6	20.3	14.8	p<0.05
Used at least one illicit substance in last week	11.6	9.7	7.8	4.8	3.7	ns
Used cannabis at least once in lifetime	36.4	33.5	28.1	16.9	13.2	p<0.05
Used cannabis at least once in last week	10.7	8.8	7.6	3.7	2.7	ns
Used hallucinogens at least once in lifetime	8.0	7.1	4.0	4.1	2.4	p<0.05
Used amphetamines at least once in lifetime	6.1	7.7	6.1	5.8	3.3	p<0.05
Used opiates at least once in lifetime	4.6	4.0	2.5	2.3	1.8	ns
Used cocaine at least once in lifetime	4.2	4.7	3.4	3.4	1.6	p<0.05
Used ecstasy at least once in lifetime	4.5	4.5	5.3	5.0	3.8	ns
<i>Other drugs</i>						
Used inhalants at least once in lifetime	26.7	25.1	19.6	17.6	17.7	ns
Used inhalants at least once in last week	6.5	6.4	6.2	5.2	3.6	ns
Used tranquilisers at least once in lifetime	20.6	19.1	15.1	14.7	19.4	p<0.05
Used steroids at least once in lifetime	2.5	3.7	4.1	2.8	2.4	ns
Injected drugs with needles in lifetime	4.8	4.2	4.1	3.8	3.9	ns
<b>Used multiple substances in the last week (b)</b>	6.7	5.2	4.4	2.3	1.4	ns
<b>Non-users</b> (never tried tobacco, alcohol or any illicit in lifetime)	9.0	8.8	8.1	9.5	13.6	p<0.05
<b>Healthy weight (c)</b>						
Met dietary guidelines for fruit consumption (3 serves)	-	-	-	41.7	41.7	ns
Met dietary guidelines for vegetable consumption (4 serves)	-	-	-	22.0	22.3	ns
Met dietary guidelines for cereal consumption (5 serves)	-	-	-	18.5	17.7	ns
Met physical activity guidelines for daily activity (60mins.+)	-	-	-	13.9	15.6	ns
Met physical activity guidelines for daily TV/computer use (<=2hrs)	-	-	-	29.9	25	p<0.05
Overweight or obese	-	-	-	22.5	19.5	ns
<b>Sun protection (d)</b>						
Usually or always wear a hat	53.1	45.8	43.6	40.2	29.2	p<0.05
Usually or always wear clothes covering most of your body	27.3	22.4	19.8	22.4	20.2	ns
Usually or always deliberately wear less or briefer clothing	14.0	18.7	23.2	20.0	19.0	ns
Usually or always wear maximum protection sunscreen	67.1	61.6	48.1	40.3	43.7	ns
Usually or always stay mainly in the shade	28.8	29.0	26.1	22.2	27.0	p<0.05
Usually or always most of time inside	17.8	20.6	22.4	20.2	26.7	p<0.05

Source: ACT Health, ASSAD, confidentialised unit record files, 1996, 1999, 2002, 2005 & 2008.

- Notes:
- (a) Five or more drinks on any one day of the last week for females and seven or more for males.
  - (b) Used alcohol, tobacco and at least one illicit in the week prior to survey – not necessarily on the same occasion.
  - (c) Healthy weight questions changed between 2002 & 2005, so results are not comparable. No questions asked about healthy weight prior to 2002.
  - (d) Self care practices usually or always adopted when out in the sun on a sunny day between 11am & 3 pm.
  - (e) p<0.05 = significant change between 2005 & 2008.
- ns= not significant (p>0.05).

## Health protection

**Table 15-14: Immunisation screening rates, ACT, 2004-08.**

<b>Immunisation</b>	<b>Units</b>	<b>Age group</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
Childhood vaccination rates	%	12-<15 mths	92.5	94.0	91.3	93.4	93.6
Childhood vaccination rates	%	24-<27 mths	90.8	93.6	93.4	93.2	94.5
Childhood vaccination rates	%	72-<75 mths	85.0	89.1	86.8	89.0	na
Childhood vaccination rates	%	60-63 mths*	na	na	na	na	86.2
HPV vaccination rates (complete 3 doses)**	%		na	na	na	63.1	64.9

Sources: Australian Childhood Immunisation Register, 2004-08.

ACT Health school immunisation program database, 2007-08

Notes: \* Assessment age for cohort three was reduced from 72-75 months to 60-63 months in March 2008.

\*\* School-based program.

**Table 15-15: Cancer screening rates, ACT, 2004-2008.**

<b>Screening</b>	<b>Units</b>	<b>Age group</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
BreastScreen ACT participation	%	50-69	55.2	58.4	58.2	55.4	na
Pap smear screening participation	%	20-69	65.5	na	63.8	na	na
Bowel screening participation	%	55	na	na	na	40.5	na
Bowel screening participation (Sep 2006-June2008)	%	65	na	na	na	48.1	na

Sources: BreastScreen Australia Monitoring Report series, AIHW, cat. no. CAN 37.

ACT Health's Cervical Cytology Register.

Personal communication with the Bowel Cancer Nurse in the Canberra Hospital.



## Access and equity indicators

**Table 15-16: Aboriginal & Torres Strait Islander people, selected indicators, ACT & Australia, 2002 & 2008.**

	ACT 2002		ACT 2008		Australia 2008
	%	'000	%	'000	%
<b>Language and culture</b>					
Speaks an Indigenous language	10.7	0.3	11.6	62.6	19.1
Identifies with clan, tribal or language group	69.9	2.0	70.6	203.1	62.1
Lives on homelands	9.2	0.2	8.2	82.6	25.3
Involved in events, ceremonies or organisations	73.3	2.0	72.4	205.7	62.9
<b>Social networks and support</b>					
Participated in sporting, social or community activities in last 12 months	95.3	2.7	96.8	302.4	92.5
Able to get support in time of crisis from outside household	95.5	2.6	94.3	290.5	88.8
<b>Health</b>					
Self assessed health status					
Excellent/Very good	46.7	1.3	46.2	143.0	43.7
Good	35.4	1.0	33.9	111.4	34.0
Fair/Poor	17.9	0.6	20.0	72.7	22.2
Level of psychological distress					
Low/Moderate	na	2.0	70.8	221.7	67.8
High/Very high	na	0.8	28.3	100.4	30.7
Disability status					
Has no disability or long-term health condition	na	1.2	43.8	164.2	50.2
Smoker status					
Current smoker	43.1	1.0	36.2	153.0	46.8
<b>Education</b>					
Highest year of school completed					
Year 12 or equivalent	na	1.1	38.9	66.7	20.4
Has a non-school qualification	44.8	1.5	52.4	105.5	32.3
No non-school qualification	55.2	1.3	47.6	221.6	67.7
<b>Employment</b>					
Labour force status					
Employed	62.8	2.0	70.1	169.1	51.7
Unemployed	5.6	0.2	7.5	33.4	10.2
Not in the labour force	31.5	0.6	22.4	124.6	38.1
<b>Housing</b>					
Tenure type					
Owner with a mortgage	32.4	1.1	40.0	65.7	20.1
Owner without a mortgage	9.1	0.3	11.3	27.7	8.5
Has major structural problems with housing	30.5	0.4	13.6	92.4	28.2
<b>Financial stress</b>					
Whether household members could raise \$2000 in an emergency					
Could not raise \$2,000 within a week	25.8	0.6	21.7	155.0	47.4
<b>Income</b>					
Mean equivalised gross household income	619	na	na	na	na
<b>Total Indigenous persons aged 15 years and over</b>		<b>2.8</b>	<b>100.0</b>	<b>327.1</b>	<b>100.0</b>

Source: ABS, 2008 National Aboriginal & Torres Strait Islander Social Survey 2002 & 2008, cat. no. 4714.0.

**Table 15-17: Aboriginal & Torres Strait Islander people, summary health indicators, ACT, NSW & Australia, 2004-05.**

	NSW	ACT	Australia
	%	%	%
<b>Self assessed health status(a)</b>			
Fair/poor	23	17	22
Good	34	34	35
Excellent/very good	43	49	43
<b>Risk behaviours</b>			
Overweight/obese(a)(h)( i)	59	58	57
Risky/high risk alcohol consumption(g)(h)	17	11	16.5
Current daily smoker(g)	51	41	50
<b>Health related actions(c)</b>			
Admitted to hospital	15	13	16
Consulted GP/specialist	20	13	20
Consulted dentist(d)	3	5	4
Consulted other health professional	14	16	17
Days away from work/study(e)	12	18	14
Other days of reduced activity(f)	12	14	13
<b>Long-term conditions (b)</b>			
Arthritis	12	9	9
Asthma	17	18	15
Back pain/problems nec, disc disorders	13	14	13
Diabetes/high sugar levels	5	*4	6
Ear/hearing problems	12	14.5	12
Eye/sight problems	34	38	30
Heart and circulatory problems/diseases	12	10	12
No long-term condition	31	27	35

Source: ABS, 2006. National Aboriginal & Torres Strait Islander Health Survey, 2004-05, ACT results, cat. no. 4715.0.

Notes: \* estimate has a relative standard error of 25% to 50% & should be used with caution.

- (a) Persons aged 15 years & over.
- (b) ICD-10 based output classification.
- (c) Hospital admissions relate to the 12 months prior to interview.
- (d) Persons aged 2 years & over.
- (e) Persons aged 5–64 years.
- (f) Persons aged 5 years & over.
- (g) Persons aged 18 years & over.
- (h) See Glossary for definitions.
- (i) Proportions are calculated excluding 'Body Mass Index'.

## Health service performance against minimum standards of care.

**Table 15-18: Public hospital summary indicators, ACT & Australia, 2007-08.**

	ACT	Aust
<b>Separations (a)</b>		
Overnight separations	81,127	4,744,061
Same-day separations	37,341	2,380,460
Same-day separations as a % of total	54.0%	49.8%
Separations per 1,000 population(b)	256.1	217.6
<b>Average public cost weight of separations (b)</b>	1.03	1.01
<b>Cost per casemix-adjusted separation (excluding depreciation)</b>	\$4,510	\$4,215
<b>Patient days</b>	277,429	17,835,945
Patient days per 1,000 population (c)	891.6	805.8
<b>Average length of stay (days)</b>		
Average length of stay, excluding same-day separations (days)	3.4	3.8
	6.3	6.5
<b>Number of available beds</b>	851	56,467
Number of available beds per 1,000 resident population	2.5	2.7
% of beds accredited	100%	93%
% of hospitals accredited	100%	86%

Source: AIHW 2009, Australian Hospital Statistics 2008-09.

Notes: (a) Separations for which the care type was reported as newborn with no qualified days, & records for hospital boarders & posthumous organ procurement have been excluded.

(b) Separations for which the care type was reported as acute, or as newborn with qualified patient days, or was not reported. AR-DRG version 5.1 national public sector estimated cost weights 2006-07 were applied to AR-DRG version 5.1 DRGs for all rows in average public cost weight of separations.

(c) Figures are directly age-standardised as detailed in Appendix 1 of Australian Hospital Statistics 2007-08 (AIHW).

**Table 15-19: Aged care places & packages, persons 70 years & over, ACT & Australia, 2007-08.**

	30 Jun-07		30 Jun-08	
	Number	Rate	Number	Rate
<b>ACT</b>				
Residential places	1,636	72.6	1,793	76.8
Community Aged Care packages	499	22.2	529	22.6
Extended Aged Care at Home packages	117	5.2	155	6.6
Transition Care Program packages	35	1.6	35	1.5
Total (places & packages)	2,287	101.5	2,512	107.5
<b>Australia</b>				
Residential places	170,071	87	175,472	87.7
Community Aged Care packages	37,997	19.4	40,280	20.1
Extended Aged Care at Home packages	4,573	2.3	6,240	3.1
Transition Care Program packages	1,609	0.8	1,963	1
Total (places & packages)	214,250	109.7	223,955	111.9

Source: AIHW, Residential Aged Care in Australia, 2006-07 & 2007-08, tables 1.2 & 1.3, cat. no. AGE 58.

Note: The national figures include places & packages provided by Multi-purpose Services & funded under the National Aboriginal & Torres Strait Islander Flexible Aged Care Program. Neither of these operate in the ACT.

**Table 15-20: General practitioner full-time workload equivalents, per 100,000 population, ACT & Australia, 2004-08.**

	ACT	Australia
2003-04	61	83.9
2004-05	61.5	84.9
2005-06	63.3	85.8
2006-07	66.8	86.1
2007-08	67	88.1

Source: Report on Government Services, 2010.

Notes: (a) FWEs are calculated for each practitioner by dividing the practitioner's Medicare billing by the mean billing of full time practitioners for that reference period. For example, a FWE value of 2 indicates that the practitioner's total billing is twice that of the mean billing of a full time practitioner.

(b) FWE data include vocationally recognised GPs & other medical practitioners (OMPs).

(c) FWE numbers are based on doctors' practice location postcodes at which services were rendered within the reference period.

**Table 15-21: Private health insurance, selected statistics, ACT & Australia, 2004-08.**

		2004	2005	2006	2007	2008
<b>Percentage of population with private health insurance (a)</b>						
	ACT	52.10%	52.20%	54.00%	55.80%	55.30%
	Australia	43.10%	43.00%	43.40%	44.30%	44.80%
<b>Percentage of public hospital admissions using private health insurance (ACT residents) (b)</b>						
	Public hospitals	5.50%	6.90%	5.40%	5.10%	5.80%
	All hospitals (public and private)	31.42%	31.78%	29.52%	28.59%	28.30%

Sources: <http://www.phiac.gov.au/for-industry/industry-statistics/annualsurvey/> and

ACT Health Admitted Patient Care data (unpublished), 2004-08.

Note: (a) Survey as at 31 December.

## List of abbreviations

ABS	Australian Bureau of Statistics
ABS NHS	Australian Bureau of Statistics National Health Survey
ACIR	Australian Childhood Immunisation Register
ACT	Australian Capital Territory
ACTGHS	ACT General Health Survey
ACTCOSS	Australian Capital Territory Council of Social Services
AIDS	Acquired Immune Deficiency Syndrome
AIHW	Australian Institute of Health and Welfare
AMC	Alexander Maconochie Centre
ANSPS	Australian Needle Syringe Program Survey
ANU	Australian National University
APC	Admitted Patient Care collection
ASVS	Australian Standard Vaccination Schedule
ASSAD	Australian Secondary Students Alcohol and Drug Survey
BMI	Body Mass Index
BOD	Burden of Disease
CATI	Computer-Assisted Telephone Interview
CDNA	Communicable Disease Network Australia
CHD	Coronary (Ischaemic) Heart Disease
CMD	Chief Minister's Department
COPD	Chronic Obstructive Pulmonary Disease
CVD	Cardiovascular Disease
DALY	Disability-adjusted life year
DoHA	Department of Health and Ageing
DRG	Diagnostic Related Group
EDIS	Emergency Department Information System
ERP	Estimated Resident Population
ETS	Environmental Tobacco Smoke
FTE	Fulltime Equivalents
FWE	Fulltime Workforce Equivalents
GP	General Practitioner
GSAHS	Greater Southern Area Health Service
HSC	Higher School Certificate
HIV	Human Immunodeficiency Virus
HPS	Health Protection Service
HPV	Human papillomavirus
ICD-9-CM	International Statistical Classification of Diseases and Related Health Problems, 9th Revision, Clinical Modification
ICD-10	International Statistical Classification of Diseases and Related Health Problems, 10th Revision
ICD-10-AM	International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification

JACS	Department of Justice and Community Safety
K10	Kessler Psychological Distress Scale -10
MBS	Medicare Benefit Schedule
MMR	Measles, Mumps and Rubella
na	not available
NAC	National Asthma Council Australia Ltd
NATSISS	National Aboriginal and Torres Strait Islander Social Survey
NATSIHS	National Aboriginal and Torres Strait Islander Health Survey
NCHECR	National Centre in HIV Epidemiology and Clinical Research
NCSP	National Cervical Screening Program
NDARC	National Drug and Alcohol Research Centre
NDSHS	National Drug Strategy Household Survey
NDSS	National Diabetes Services Scheme
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NGO	Non-government Organization
NHMRC	National Health and Medical Research Council
NHS	National Health Survey
NMDS	National Minimum Data Set
NPSU	National Perinatal Statistics Unit
NSP	Needle Syringe Program
NSW	New South Wales
PPH	Potentially Preventable Hospitalisation
PSA	Prostate Specific Antigen
RSE	Relative Standard Error
RSI	Relative Stay Index
SAAP	Supported Accommodation Assistance Program
SNAPS	ACT Smoking, Nutrition, Alcohol and Physical Activity Survey
Spf30	Sun Protection factor 30 (skin will not burn until it has been exposed to 30 times the amount of solar energy that would normally cause it to burn).
STI	Sexually Transmitted Infection
TAMS	Territory and Municipal Services
TCCA	The Cancer Council Australia
TCH	The Canberra Hospital
TFR	Total Fertility Rate
VPD	Vaccine Preventable Disease
WHO	World Health Organisation
Winnunga	Winnunga Nimmityjah Aboriginal Health Service
WTP	Water Treatment Plant
YLL	Years of Life Lost
95%CI	95% Confidence Interval

# Glossary and statistical methodology

## AGE GROUPS

Infants: babies aged 0<1 years.

Children: persons aged 2-14 years unless otherwise stated.

Young persons: persons aged 12-24 years unless otherwise stated.

Adults: persons aged 18 years or over unless otherwise stated.

Early adulthood: persons aged 25-44 years.

Middle age: persons aged 45-64 years.

Older Australians: persons aged 65 years and over.

## AGE-SPECIFIC RATES

Age specific rates are calculated by dividing the number of cases occurring in each specified five-year age group (and sex) by the corresponding population in the same age group (and sex) and are expressed as an annual rate per 100,000 population.

## AGE-STANDARDISED RATES

The standardised rates presented in this report are based on the direct method of standardisation. This method adjusts for effects of differences in the age composition of different populations. The direct age-standardised rates are based on the weighted sum of age-specific (five-year age group) rates in the population. The weights used in the calculation of these rates (the 'standard' population) are population ratios for five-year age groups derived from the mid-year 2001 Australian population.

## CO-MORBIDITIES

A person with co-morbidities has more than one disease or condition at the same time. (e.g. diabetes and coronary heart disease) that may or may not be causally connected to each other.

## CONFIDENCE INTERVALS (CI)

A confidence interval is a computed interval with a given probability (calculated at 95% probability in this report) that a true value of a variable, such as a rate, mean or proportion, is contained within the interval. The confidence interval is the likely range of the true value.

## CRUDE RATES

A crude rate is an estimate of a proportion of a population that experiences a specific event over a specified period. It is calculated by dividing the number of events recorded for a given period by the number at risk of the event in the population.

## CUMULATIVE RATES

A cumulative rate is a directly-standardised rate with equal weights in each age group of interest and zero weight otherwise and is calculated from the age-specific rates. In this report, ages 0-74 years are used as an approximation to an average lifetime. Cumulative rates are often expressed as percentages (rates per 100).

## DISABILITY ADJUSTED LIFE YEARS (DALYs)

A measure of the burden of disease on a defined population. A DALY is equivalent to the loss of one year of "healthy" life. As such, it is an indication of the "unfinished" health agenda and identifies areas where health gains can be made.

The DALY extends the concept of potential years of life lost due to premature death (PYLL) by including equivalent years of 'healthy' life lost by virtue of being in states of poor health or disability. A DALY for a disease or health condition is calculated as the sum of the years of life lost due to premature mortality (YLL) in the population and the equivalent 'healthy' years lost due to disability (YLD) for incident cases of the health condition:

$DALY = YLL + YLD$  where;

YLL = number of deaths at a particular age x standard life expectancy at that age and

YLD = incidence x duration x severity weight. (Severity weights for each disease were calculated as part of the Global Burden of Disease Study and adapted to account for Australian conditions).

## HARM MINIMISATION

Harm minimisation is a philosophy which underlies many health promotion programs, particularly those focussing on alcohol and other drug use. These programs aim to reduce the harmful effects of some behaviours.

## **INCIDENCE**

Incidence is defined as the number of new cases in a population during a specific period.

## **INFANT MORTALITY RATE**

The infant mortality rates that appear in this report are based on the number of infant deaths registered in a calendar year, divided by the number of registered births to ACT residents in a given calendar year, multiplied by 1,000.

## **LIFE EXPECTANCY AT BIRTH**

Life expectancy at birth is an estimate of the average length of time a person can expect to live, assuming that current rates of death for each age group in the population will remain the same for the lifetime of that person.

Life expectancy data provided have been obtained from ABS reports and referenced accordingly.

## **MEDIAN AGE**

Median age at diagnosis is the middle value, i.e. 50 per cent of cancer cases are diagnosed at an older age and 50 per cent at a younger age compared to the median age.

The interquartile range represents the age at which 25 per cent of the cases are above and 25 per cent below the median age. This range spans 50% of the data set, and in effect, eliminates the highest and lowest of outliers because the highest and lowest quartiles are removed.

## **MORTALITY**

Mortality refers to deaths in a given population occurring in a specified period.

## **PREVALENCE**

Prevalence is a useful measure that provides health care planners and support personnel with the number of people who remain alive following the diagnosis of a chronic disease or who currently have the disease or condition in the case of other diagnoses.

Point prevalence is the proportion of existing cases (old and new) in a population at a single point in time. This is different from incidence which is the number of new cases in a given period of time, usually a calendar year.

## **RELATIVE STANDARD ERRORS (RSE)**

Relative standard errors (RSE) provide an indication of the reliability of an estimate. Estimates with RSEs less than 25% are generally regarded as 'reliable'. All estimates presented in tables in this report have RSEs less than 25%, unless otherwise stated. Estimates presented in tables with an RSE between 25-50% have been marked with an '\*' (asterisk) and should be interpreted with caution. For the purposes of this report, estimates for the ACT with RSEs over 50% were not considered reliable and have not been presented.

## **STATISTICAL SIGNIFICANCE**

In statistics, a result is significant if it is considered unlikely to have occurred by chance. For the purpose of this report 'significant' implies that a test of significance has been applied. A result was deemed statistically significant (i.e. there is an effect that is considered unlikely to be due to chance alone) if the p-value obtained was less than 0.05, or if comparing confidence intervals, there was no overlap between intervals.

Statistical significance has been assessed in this report by comparing confidence intervals (95% CI) or calculating p-values, depending on the type of data available for hypothesis testing.

Note that statistical significance is different to clinical significance.

## **THREE YEAR MOVING AVERAGE**

Three year moving averages minimise natural variations observed in annual rates produced from relatively small populations. The 3-year moving average was calculated by summing the age-standardised incidence or mortality rates for the 3-year period centred on the year of interest and dividing the total by three. For the first and last years in each series the rates were averaged over two years.

## **YEARS OF LIFE LOST**

The person years of life lost (YLL) provide an indication of the impact of ageing on mortality in a population. In this report, the following formula has been used:

$YLL_{80} = (80 - \text{age at death}) \times \text{the number of deaths at each age. (All deaths before 80 years are deemed premature).}$



## Data sources

### ACT population health information

Quality information is vital for monitoring the health status of the population to inform planning and policy activities. Over the 2006-08 period, ACT Health invested resources into developing surveillance for health conditions and associated risk factors. With the emerging health issues associated with the alarming increase in chronic diseases largely attributable to poor health choices and an ageing population, the need for information that can monitor and inform public health planning and policy is critical.

ACT Health has established a survey program to collect information on the health of the ACT population and associated risk factors. These include:

- ACT General Health Survey which has been ongoing since 2007;
- ACT Year 6 Physical Activity and Nutrition Survey;
- Kindergarten Screening Survey; and
- ACT Secondary School Alcohol and Drug Survey.

Information from these surveys is published and available on the ACT Health website. They are critical for performance reporting and informing planning and policy activities.

In the ACT comprehensive and reliable information on the health status of Aboriginal and Torres Strait Islander people has been difficult to obtain, due to the small population size, a high degree of population mobility and issues concerning the recording of Aboriginal and Torres Strait Islander status in existing health data collections. ACT has low numbers of compared to other jurisdictions and these represent only about one per cent of the total Australian and Torres Strait Islander population.

ACT government has invested resources into improving information on the ACT Aboriginal and Torres Strait Islander population across all ACT data sets to ensure quality and reliable information is available for health policy and planning.

The Epidemiology Branch utilises data from ACT and national surveys and administrative datasets to monitor and report on the health of the ACT community. Data sources are summarised below.

### ABS Disability, Ageing and Carers Survey (SDAC)

The SDAC collects information about people of all ages with a disability, older people (aged 60 years and over) and people who provide assistance to older people with disabilities. The 2003 SDAC survey was conducted throughout Australia, from June to November 2003. The survey included people in both private and non-private dwellings, including people in cared-accommodation establishments, but excluded those in gaols and correctional institutions. The ACT sample of respondents numbered 3,777 in 1993, which was a large enough sample on which to base valid analyses. In the latest survey (2003), there were 1680 ACT respondents (including 139 from cared accommodation component).

### ABS General Social Survey (GSS)

The General Social Survey (GSS) collects data on a range of social dimensions. Information is collected nationally on health, housing, education, work, income, financial stress, assets and liabilities, transport, family and community, and crime. Personal interviews are conducted with survey respondents. The first such survey was undertaken in 2002 and it is planned to repeat it every four years. The 2006 survey contained an ACT sample of 1613 respondents, aged 18 years or more.

### ABS National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS collects information about the health circumstances of Aboriginal and Torres Strait Islander Australians from both remote and non-remote areas across Australia. The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians (including 368 ACT residents). The NATSIHS sample covered usual residents at private dwellings only. Results from that survey are able to be compared with results for non-Indigenous Australians from the 2004–05 National Health Survey.

### ABS National Crime and Safety Survey

The National Crime and Safety Survey collects information from residents of private dwellings about selected household and personal crime and safety issues, including the perception of crime problems in the neighbourhood, fear of crime, the incidence of selected categories of crime, and reporting behaviour. The 2005 survey included an ACT sample of 1,485 households. The last survey was conducted in 2008 as part of the Monthly Population Survey (ACT sample of 1,179 households). There will be a break in series for that year (timeframe unknown).

### ABS National Health Surveys (NHS)

The NHS survey collects data to produce national benchmark information on a range of health issues, and enable trends to be monitored over time. This includes information about the health status of the population, health related behaviours, and use of health services. Information is collected from individuals who were

residents of private dwellings. The final survey sample from the ACT included 2,219 respondents in 2001 and 1,777 in 2004-05. The 2007-08 survey included 1,831 fully responding households.

#### **ABS National Survey of Mental Health and Wellbeing (SMHWB)**

The SMHWB was conducted in 1997 and collected information from approximately 10,600 people aged 18 years and over. Data that were collected included information on a range of mental disorders such as anxiety disorders, affective disorders, and alcohol and drug use disorders. The survey also collected information about disability associated with mental disorders, health service use for a mental health problem, and perceived need for health services for a mental health problem. The second survey was administered in late 2007. With a national sample size of approximately 11,000, little analysis for the ACT is possible.

#### **ACT Admitted Patient Care Collection (ACT APC)**

The data sets in this collection contain details of all ACT hospital inpatient records. They detail patient records from each of the public and private hospitals in the ACT, for ACT and non-ACT residents. The information reported includes patient demographics, diagnoses, procedures, source of referral etc. The data do not include details of ACT residents admitted to hospitals outside of the ACT.

#### **ACT Cancer Registry data**

The ACT Cancer Registry was established in 1994, when cancer reporting became mandatory in the ACT. Its purpose is to monitor the incidence and trends of cancer in the ACT. Data are collected from hospital records, pathology laboratories, day surgeries, hospices and nursing homes. About 1,000-2,000 new cases are reported each year. Currently, there are approximately 20,000 records in the registry. The registry does not cover non-melanocytic skin cancer.

#### **ACT Emergency Department Information System (EDIS)**

The ACT Emergency Department Information System contains records of patient presentations to The Canberra Hospital and Calvary Hospital Emergency Departments. The EDIS data contain details of patient demographics and diagnoses, triage categories and sources of referral.

#### **ACT General Health Survey (ACTGHS)**

The ACT commissioned NSW Health to undertake a CATI continuous general health survey in the ACT. There were thirteen hundred respondents in 2007 with a similar sample in 2008. Topics were/will be similar to those of the 2005 ACT General Health Survey and will mainly be comparable with 2005 results. Sample pooling over the years (where appropriate) will allow more specific analysis than has been previously possible.

#### **ACT Maternal Perinatal Collection (ACT MPDC)**

The ACT Maternal Perinatal Data Collection is a population based collection covering all births in ACT hospitals (public and private) and home births in the ACT. It does not include interstate births where the mother is usually resident in the ACT. Each data set includes all live births and still births of at least 20 weeks gestation or at least 400 grams birthweight and covers such topics as mother's demographics, type of induction, method of birth, malformations, and apgar scores at birth. The data are managed and maintained by the Epidemiology Branch, within ACT Health. The ACT MPDC is linked to the ACT APC data to provide maternal condition and complications, and birth defects information.

#### **ACT Smoking, Nutrition, Alcohol and Physical Activity Survey (SNAPS)**

The National CATI Technical Reference Group (CATI TRG) undertook a pilot test to aggregate state and territory health surveillance/survey data on the following risk factors: Smoking, Nutrition, Alcohol, Physical Activity and Mental Health (SNAPS). Federal funding provided for a collection of SNAPS data for smaller jurisdictions including the ACT. The 2004 SNAPS was conducted by computer assisted telephone interview (CATI). The survey included questions on respondent demographics, smoking status, alcohol consumption levels, physical activity levels, dietary behaviours and heights and weights. The target population for the survey was adults aged 18 years or more. A total sample of 1,215 was achieved for the ACT.

#### **ACT Year 6 Physical Activity and Nutrition Survey (ACTPANS)**

As a first stage in the development of a Child Healthy Weight Surveillance System for the ACT, an ACT year 6 school children's physical activity and nutrition survey (PANS) was administered in 2006. It was a schools based study involving the collection of height and weight information on approximately 1,200 ACT children in year 6. In addition, a questionnaire on physical activity, nutrition, attitudes and psycho-social outcomes was administered to these children.

#### **AIHW Australian Cancer Incidence and Mortality (ACIM) Books**

The AIHW ACIM Books are a series of newly developed interactive Excel workbooks of tables and graphs by age and sex for 'all cancers' and the major cancers, for incidence from 1982 to 2005 and mortality from 1968 to 2006. See also NCSCH.

### **AIHW National Hospital Morbidity Database**

This database contains demographic, diagnostic, procedural and duration-of-stay information on episodes of care for patients admitted to hospital. The data collection is maintained by the AIHW using data supplied by state and territory health authorities. The database is episode-based, and it is not possible to count patients individually.

### **AIHW National Mortality Database**

This database contains information on the cause of death supplied by the medical practitioner certifying the death or by a coroner. Registration of deaths is the responsibility of the state and territory registrars of births, deaths and marriages. Registrars provide the information to the ABS for coding of cause of death and the data is then provided to the AIHW. See also GRIM Books.

### **AIHW National Perinatal Statistics Unit (NPSU) Perinatal statistics**

The NPSU is a collaborating unit of the AIHW that is involved in perinatal data development activities and epidemiological research. The NPSU maintains national data collections on perinatal health, maternal deaths, congenital anomalies and assisted reproduction technology.

### **Australian Diabetes, Obesity and Lifestyle Study (AusDiab)**

The AusDiab study was conducted in 1999–2000 by the International Diabetes Institute. Results from this study are based on data collected from 11,200 Australians aged 25 years and over and residing in six states of Australia and the Northern Territory. The study was designed to provide estimates of the prevalence of diagnosed and undiagnosed diabetes and self-reported chronic conditions such as heart disease and high blood pressure.

### **Australian Secondary School Alcohol and Drug (ASSAD) survey**

The ASSAD survey explores behaviours and attitudes surrounding smoking, alcohol consumption, drug use and sun protection; recreational activities and nutrition in ACT (and other states and the NT) secondary school students. The target population is students in Years 7 to 12, between 12 and 17 years of age, enrolled in government, Catholic and independent schools in the ACT.

The ACT survey is conducted by ACT Health every 3 years, commencing in 1996, in partnership with the Victorian Cancer Council. The last survey was conducted in 2008. ACT students completed a total of 1,650 questionnaires.

### **National Cancer Statistics Clearing House (NCSCCH)**

The AIHW maintains the NCSCCH. Information on the incidence of cancer from 1982 in the Australian population is provided to the NCSCCH by the state and territory cancer registries. Data items provided enable record linkage to be performed and the analysis of cancer by site and histology. The NCSCCH produces reports of national incidence and mortality data. Periodically, analyses of specific cancer sites, cancer histology, differentials in cancer rates by country of birth, geographical variation, trends over time and survival are undertaken. Refer also ACIM Books.

### **National Drug Strategy Household Survey (NDSHS)**

The (now) three yearly NDSHS collects information from Australians aged 14 years and over (the 2004 survey collected from 12 years and over). Respondents are asked about their knowledge of drugs, their attitudes towards drugs, their drug consumption histories and related behaviours. The collection includes information about alcohol, tobacco, illicit and non-illicit drugs. The national sample included an ACT sample of 1053 questionnaires completed by people aged 12 years or more in 2007.

# ICD-10-AM Diagnostic & Procedural Codes

<b>Diagnostic description</b>	<b>ICD-10-AM code</b>
<b>Certain infectious and parasitic diseases</b>	<b>A00-B99</b>
Enteritis and other diarrhoeal diseases	A00-A09
<b>Neoplasms</b>	<b>C00-D48</b>
Cancer of the trachea, bronchus and lung	C33-C34
Melanoma	C43
Breast cancer	C50
Colorectal cancer	C18-C21
Prostate cancer	C61
Cervical cancer	C53
Non-hodgkins lymphoma	C82-C85, C96
Non-melanocytic skin cancer	C44
<b>Diseases of blood/blood-forming organs etc</b>	<b>D50-D89</b>
<b>Endocrine, nutritional and metabolic diseases</b>	<b>E00-E90</b>
Diabetes Mellitus	E10-E14
<b>Mental, behavioural disorders</b>	<b>F00-F99</b>
Dementia	F00-F03
Other organic mental disorders	F04-F09
Mental, behavioural disorders due to alcohol	F10
Mental, behavioural disorders due to other psychoactive substances use	F11-F19
Schizophrenia	F20
Other schizophrenic, schizotypal, delusional disorders	F21-F29
Manic episode	F30
Bipolar affective disorders	F31
Depressive disorders	F32-F33
Other mood (affective) disorders	F34-F39
Neurotic, stress-related and somatoform disorders	F40-F48
Eating disorders	F50
Other behav. syndromes assoc. with physiological disturbances, physical	F51-F59
Disorders of adult personality and behaviour	F60-F69
mental retardation	F70-F79
disorders of psychological development	F80-F89
disorders onset usually occurring in childhood, adolescence	F90-F98
mental disorder not otherwise specified	F99
<b>Diseases of the nervous system</b>	<b>G00-G99</b>
<b>Diseases of the eye and adnexa</b>	<b>H00-H59</b>
<b>Diseases of the ear and mastoid process</b>	<b>H60-H95</b>
Otitis media infections	H65-H67
<b>Diseases of the circulatory system</b>	<b>I00-I99</b>
All heart disease	I05-I09, I11, I13, I20-I25, I26, I27, I30-I152
Ischaemic heart disease (excl myocardial infarction)	I20, I22-I25
Myocardial infarction	I21
Cerebrovascular disease	I60-I69
<b>Diseases of the respiratory system</b>	<b>J00-J99</b>
Influenza and pneumonia	J10-J18
Chronic lower respiratory diseases (incl. Asthma, COPD, emphysema etc)	J40-J47
Asthma	J45-J46
<b>Diseases of the digestive system</b>	<b>K00-K93</b>
Diseases of the liver	K70-K77
<b>Diseases of the skin and subcutaneous tissue</b>	<b>L00-L99</b>
Cellulitis	L03
<b>Diseases of the musculoskeletal system and connective tissue</b>	<b>M00-M99</b>
Arthritis and musculoskeletal disorders	M00-M99
<b>Diseases of the genitourinary system</b>	<b>N00-N99</b>
<b>Pregnancy, childbirth and the puerperium</b>	<b>O00-O99</b>
<b>Certain conditions originating in the perinatal period</b>	<b>P00-P96</b>
<b>Congenital malformations/deformations etc</b>	<b>Q00-Q99</b>
<b>Symptoms/signs/abnormal clinical and laboratory findings</b>	<b>R00-R99</b>

<b>External causes of mortality and morbidity</b>	<b>V01-Y98</b>
Transport accidents	V01-V99
Falls	W00-W19
Drowning	W65-W74
Poisoning by pharmaceuticals	
Poisoning other	X45-X49
Fires/burns/scalds	X00-X19
Suicide/intentional self-harm	X60-X84
Homicide/intentional harm by another	X85-Y09
Undetermined intent	Y10-Y34
Complications of medical and surgical care	Y40-Y84
Other unintentional	W20-W64, W75-W99, X20-X39, Y86, X50-X59, Y85, Y89.9
<b>ICD-10-AM procedural code description</b>	<b>ICD-10-AM procedural codes</b>
Coronary artery bypass graft (CABG)	38497, 38500, 38503 & 90201
Percutaneous transluminal coronary angioplasty (PTCA)	35304, 35305
Percutaneous transluminal coronary angioplasty with stenting	35304, 35305 with any mention of 35310
<b>ICD-10-AM codes used to define diagnosis groups for Chronic Kidney</b>	
Regular dialysis (Haemodialysis, Peritoneal dialysis)	Z49.1Z49.2
<b>Other</b>	
Diabetic nephropathy	E10.2, E11.2, E12.2, E13.2, E14.2
Hypertensive kidney disease	I12, I13, I15.0, I15.1
Glomerular disease	N00-N07, N08
Kidney tubulo-interstitial diseases	N11, N12, N14, N15, N16
Chronic kidney failure	N18
Unspecified kidney failure	N19
Other disorders of the kidney and ureter	N25-N28, N39
Congenital malformations	Q60-Q63
Complications related to dialysis and kidney transplant	T82.4, T86.1
Preparatory care for dialysis	Z49.0
Kidney transplant and dialysis status	Z94.0, Z99.2
Transplant procedures	36503-00

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