ACT Government
Health

Australian Capital Territory
Chief Health Officer's Report 2012

ACKNOWLEDGEMENTS

This publication has been prepared by the Epidemiology Branch, Population Health Division of the ACT Health Directorate for the ACT Minister for Health, the ACT Legislative Assembly and the ACT community.

The Chief Health Officer, Dr Paul Kelly, 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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Katy Gallagher MLA
Minister for Health
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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 2008 to 30 June 2010, 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

Paul Kelly
Chief Health Officer
10 August 2012

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FOREWORD

The ACT Chief Health Officer's Report 2012 profiles 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 reports biennially on the health of the ACT population to the Minister for Health on specific health related topics. This current report covers the two-year period from 1 July 2008 to 30 June 2010 and is aligned with key local and national health priority areas.

Data presented in this report have been analysed from a range of sources including:

- mortality and hospital records;
- notifiable disease data, screening program and immunisation registers;
- survey data; and
- published statistical reports and journal articles.

Where specific information for the reporting period is not available or not considered reliable, the most recent and reliable information available has been presented.

Comparison of population health data should be interpreted with caution in relation to the ACT. This is due to the small population base and sometimes small numbers of cases, 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 for significance and the methods for assessing reliability of data from different sources.

I am pleased to report that the information presented in this latest edition continues to show encouraging trends in the health of ACT residents. The ACT as a whole is a relatively affluent society where socio-economic factors influencing health yield favourable returns compared to Australia in general. The ACT continues to have the highest life expectancy in the country. A high percentage of the population report to be of good to excellent health. There have also been continued decreases in smoking and long-term illicit drug taking overall. In addition, ACT children are showing improvements in their physical activity levels and childhood immunisation coverage rates have remained above the national target.

The report also identifies a number of challenges representing opportunities for health gain. The levels of chronic disease, though generally more favourable than those nationally, continue to be a concern, particularly given the ageing of the ACT population. Alcohol use and injury are also emerging areas of concern, with an increase in injury due to falls in the elderly and increasing hospitalisations due to alcohol misuse. Physical inactivity, particularly in males, and obesity in young children have not changed significantly over time and sun protection behaviours continue to decline.

After consultation with users of previous reports, the format of this report now incorporates an "At a glance" section before each chapter, encapsulating the main findings detailed in that chapter. The report, now in its seventh iteration, continues to act as an authoritative guide for health policy and program development in the Territory. Findings in this report also serve as a valuable resource to anyone with an interest in health.

Paul Kelly

Chief Health Officer

EXECUTIVE SUMMARY

The Australian Capital Territory Chief Health Officer's Report 2012 has been prepared to meet the requirements of the *Public Health Act 1997*, for the reporting period 1 July 2008 to 30 June 2010. This report provides an overview of the health of the ACT population during this two year period.

DEMOGRAPHY

- The population of the ACT will increase by approximately 53% by 2056 and the median age will increase from 33.8 years in 2010 to 39.6 years in 2056. These projected demographic shifts have implications for health and planning in the ACT. The shift towards an older population implies an expected increase in the number of people with age-related chronic conditions and a subsequent increase in demand for health services.

SOCIAL INDICATORS RELEVANT TO HEALTH

- Although social factors impacting on health are generally more favourable in the ACT compared to Australia, there are pockets of social disadvantage that are difficult to identify in the overall statistics of the ACT.

HEALTH STATUS

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.

Life expectancy

- Life expectancy continues to be high in the ACT and is expected to increase over the next ten years.

Mortality

- In 2009, there were 1,648 death registrations (including 10 Aboriginal and Torres Strait Islander registrations) for ACT residents (817 males, 831 females).
- The age-standardised death rate and infant mortality rate have declined over time.
- The median age at death was 79.9 years of age in 2009, a steady increase since 2002.
- In 2009, the leading underlying causes of death were: cardiovascular diseases (34%), cancer (29%), accident and injury (8%), respiratory diseases (5%), mental disorders (5%), diseases of the nervous system including Alzheimer's disease (5%), diseases of the respiratory system (4%) and diabetes (3%).

Morbidity

- Hospitalisations due to certain diseases varied across the life course. Persons 45 years and over were most likely to be hospitalised as a result of chronic obstructive pulmonary disease (COPD); osteoporosis and osteoarthritis; cardiovascular disease; lung and colorectal cancer; chronic kidney disease and diabetes. Those under 45 years were more likely to be hospitalised as a result of asthma (0-14 years), oral disease (15-24 years) and depression (25-44 years).

LIFESTYLE FACTORS

Physical activity

- The percentage of ACT residents 18 years and over who were sufficiently physically active in 2009-10 was 56.9% (males: 59.4%, females: 54.5%) slightly less than in 2007-08.

Nutrition

- In 2009-10, 9.9% of ACT adults 18 years and over were eating sufficient vegetables on a daily basis, compared to 9% in 2007-08. Males were less likely to report this than females.
- The consumption of fruit significantly increased from 52.5% in 2007-08 to 57.1% in 2009-10. Males were less likely to report this than females.
- There was a decrease in sufficient vegetable consumption for Year 6 children.

Healthy weight

- In 2009-10, 52.9% of ACT adults 18 years and over were either overweight or obese. Males were more likely to report this than females.
- Survey data indicate that 53.0% of children aged 5 to 17 years were within a healthy weight range, down from 2007-08.

Tobacco use

- In 2010, 11.7% of ACT residents aged 18 years and over were daily smokers, which is lower than the Australian average (15.9%) and less than reported in 2007. Males were more likely than females to be daily smokers both in the ACT and nationally.

Alcohol consumption

- 23.2% of the ACT population over 18 years did not drink alcohol, 46.8% drank at the acceptable level of up to two drinks on any day, with 30.0% of adults drinking to levels considered to be harmful for increasing the lifetime risk of harm from alcohol-related disease or injury.
- A significantly higher proportion of males (41.3%) consumed more than two drinks on a day when they drink alcohol, compared to 19.4% of females.

Illicit substance use

- In 2010, 13.9% of ACT residents (14.7% of Australian residents) aged 14 years and over used an illicit drug in the previous 12 months, a slight increase from 2007. Males had higher proportions of *recent* illicit drug use than females (males: 17.9%, females: 10.0%).
- Despite this, in the *longer term* (1998-2010), use declined by 42% (1998: 23.9%, 2010: 13.9%).

Sun protection

- There was a downward trend in sun protective behaviour for both adults and children, but the majority of adults (86.4%) aged 18 years and over reported that they usually/always adhered to some form of sun protective behaviour in 2009-10.

HARM MINIMISATION

Sexual health

- In 2009, 34.6% of respondents to the Canberra Gay Community Periodic Survey indicated that they 'sometimes do *not* use a condom with casual partners' compared to 24.6% in 2006.
- Since 2000 there has been a significant increase in the proportion of homosexually active men reporting they are *HIV-negative* from 77.1% in 2000 to 85.3% in 2009.

HEALTH AND THE ENVIRONMENT

- In 2008-10 various ACT lakes had persistent algal blooms over summer and into autumn and Lake Burley Griffin experienced some sewage contamination.
- The concentrations of known pollutants in the air were generally compliant with standards and the ambient air quality was very good.
- There were 1,918 inspections of food premises carried out in 2008-09 (205 non-compliant) and 2,333 in 2009-10 (283 non-compliant).

TRENDS AND INDICATORS IN HEALTH STATUS

Cardiovascular disease (CVD)

- In 2007-08, an estimated 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%).
- In 2009, there were 557 registered deaths in the ACT (34% of all deaths) due to cardiovascular disease. Main causes were coronary heart disease (43%) and cerebrovascular disease (25%). The remainder (32%) were due to a range of hypertensive and pulmonary conditions and other heart disease.

Cancer

- The crude cancer incidence rate for 2004-08 was 439 per 100,000 population for males and 365 per 100,000 population for females.

- The most common cancers were: prostate cancer (18%), female breast cancer (15%), colorectal cancer (13%), melanoma of the skin (10%) and lung cancer (7%).
- From 1985 to 2008 there was a significant increase in cancer incidence for breast (female), prostate, melanoma of skin (male), Non-Hodgkin's lymphoma (male) and lung (female) cancers.
- In 2008, there were 451 ACT residents who died of cancer, the most common causes being lung cancer, colorectal cancer, breast cancer and prostate cancer.

Mental health

- 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%), which was a decrease from 2004-05. Specific disorders included mood disorder (7.8%) and anxiety disorder (3.6%).
- In 2009-10, 9.8% of ACT residents 18 years and over reported symptoms of high to very high psychological distress over the previous four weeks (9.0% in 2007-08). Females were more likely to report these symptoms than males.
- Age-standardised hospital separation rates for mental and behavioural disorders have been rising in the ACT since 1998 for both males and females.
- Age-standardised mortality rates for these disorders have been increasing in both the ACT and Australia largely due to the increasing proportion of deaths due to dementia in older persons.

Injury

- In 2009-10, injuries accounted for 25.9% of all ACT resident emergency department presentations.
- Leading causes of injury-related hospital separations were: falls (32%), complications of care (16%), and land transport accidents (12.1%).
- Between 2001-02 and 2009-10, rates of hospitalisation due to a fall-related injury increased by 62% in residents aged 65-79 years and 64% in residents aged 80 years and over.
- Serious injuries from road crashes have been increasing in the ACT with an average annual increase in age-standardised rates of 13.7% from 2000-01 to 2007-08. Rates of death due to road crashes remained below national rates.
- Overall, rates of alcohol-related injuries have also increased in ACT residents over the period 2000-01 to 2009-10. Three-quarters of all alcohol-related deaths and almost two-thirds of hospitalisations due to alcohol-related injury occurred in males.

Diabetes

- In 2009-10, 6.7% of the ACT population was ever diagnosed with diabetes or high blood glucose.
- Projections indicate that by 2020, there will be a 50% increase of diabetes incidence in the ACT.
- In 2009, there were 52 diabetes-related deaths (17 deaths per 100,000 population).

Asthma

- In 2009-10, 9.6% of ACT residents had current asthma.
- There is an ongoing decline in asthma mortality in the ACT and Australia. Less than five deaths were due to asthma in the ACT in 2009.

Notifiable communicable disease

- During 2009-10 there was a significant increase in reports of notifiable conditions (10,070 reports compared to 5,314 in the 2007-08). This increase can be attributed to the fivefold increase in influenza notifications during 2009 and the fourfold increase in pertussis notifications in 2010 as compared to 2008.
- Chlamydia infections were the most commonly notified infectious condition (31% of all notifications), followed by influenza (16%), campylobacter (14%) and pertussis (12%).
- The H1N1 (human swine flu influenza) pandemic started in early 2009, continuing into 2010.
- The H1N1 immunisation program administered vaccines to more than 24 per cent of the ACT population by June 2010.

Immunisation

- ACT childhood immunisation coverage rates remained above the national target of 90 per cent and above both national and NSW rates during the reporting period.

Maternal and child health

- The number of women giving birth in the ACT increased by six per cent between 2007 and 2009. In 2009, 5,735 women gave birth to 5,850 babies (16% of the women were not ACT residents).

- The ACT had significantly fewer low-birthweight babies than nationally. Those born to ACT Aboriginal and Torres Strait Islander women had significantly higher rates than the overall ACT percentage.
- The ACT perinatal death rate and results for child health indicators such as immunisation and dental health, were similar to national results.

- One in five ACT children (21.7%) were overweight or obese.
- The infant mortality rate was 3.5 per 1,000 live births (Australia: 4.3) and the age specific death rate from injury for children aged 0-14 years was 3.2 per 100,000 population (Australia: 5.8).

ACCESS AND EQUITY INDICATORS RELEVANT TO HEALTH

Access to health services

- In 2009-10, nearly 90% of ACT residents visited a GP and more than a third (35.3%) reporting seeing one in the previous four weeks, which is comparable to 2008-9.
- Females were more likely than males to have reported attending a health service in the previous 12 months and most residents rated the care they received as being good to excellent.
- 19.5% of ACT residents over 18 years of age in 2009-10 reported delaying using a health service because they couldn't afford it, and 7.1% reported inability to get to the health service.

Aboriginal and Torres Strait Islander people

- Almost three quarters of respondents to the National Aboriginal and Torres Strait Islander Social Survey 2008 reported their health to be good to excellent.
- Tobacco use by ACT Aboriginal and Torres Strait Islander residents is consistently significantly higher than that reported by non-Aboriginal and Torres Strait ACT residents, particularly among women who gave birth.
- Just under two per cent of ACT resident women who gave birth in 2009 identified as Aboriginal and Torres Strait Islander (1.7%). They gave birth at younger ages (less than 20 years) with the teenage fertility rate being four times higher than for non-Aboriginal and Torres Strait Islander women. The percentage of low-birthweight babies born to Aboriginal and Torres Strait Islander women, especially for those who smoked, was significantly higher than the percentage of low birthweight babies born to non-Aboriginal and Torres Strait Islander women.

HEALTH SERVICES

- The provision of safe, timely and effective health care is a major priority of the Health Directorate.
- ACT rates of potentially preventable hospitalisations have not changed significantly since 2006-07, remaining lower than national rates. In 2009-10, as for previous years, approximately half of the total was due to chronic diseases in the ACT and more than half nationally.
- In 2010, the ACT continued to have the highest proportion of private health insurance holders in the country (ACT: 55.7%, Aust.: 44.9%).
- The ACT, like other jurisdictions, has ongoing difficulties in attracting trained health staff. In 2009-10, the ACT had a lower full time workload equivalent (FWE) GP rate (66.7 per 100,000 population) than the national average (90.7). ACT public hospitals had a slightly higher rate of FTE nursing staff (1,275 per 100,000 population) than nationally (1,261).
- The ACT's provision of community aged care services exceeded the national average for Community Aged Care Packages, Extended Aged Care at Home Packages and Transition Care.
- The ACT continues to have the highest number of occasions of community mental health services when compared with national figures. In 2008-09 the ACT had a rate of 633 services per 1,000 population compared to 292 nationally.
- In 2008-09 there was significant growth in demand and activity, both in inpatient and outpatient services. From 2007-08, inpatient activity increased by 18% and outpatient activity by 12%, for all services combined.

INTERSECTORAL ACTIVITIES RELEVANT TO HEALTH

- The ACT Health Directorate engages in cross-sectoral approaches to better understand and respond to social factors that influence health in the ACT.
- A key strategy of the Directorate's preventative health initiatives is developing partnerships with government and non-government organisations to deliver health messages to priority groups and the broader community.

1. ACT Profile

1.1. The Australian Capital Territory

Situated on the traditional lands of the Ngunnawal people, the Australian Capital Territory (ACT) is the smallest state or territory in Australia. It is approximately 2,400 square kilometres in area and is surrounded by the state of New South Wales (NSW) (refer Figure 1). The majority of the population resides in Canberra, which covers an area of approximately 806 square kilometres (refer Table 16).

Canberra is the major health referral centre for the Greater Southern Region of NSW. The ACT Health Directorate (formally 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 was estimated to be about 605,100 persons as at June 2010.[1]

As of June 2010 the estimated resident population of the ACT was 358,570 and is projected to reach 547,650 persons by 2056, representing an increase of approximately 53% over this period. Natural increase is expected to contribute approximately 73% of this growth (births minus deaths) while migration is expected to contribute 27% of the increase.[2]

The total fertility rate (babies born per woman) in the ACT was 1.76 in 2008 and 1.74 in 2009, slightly lower than the national rate (1.90).[2]

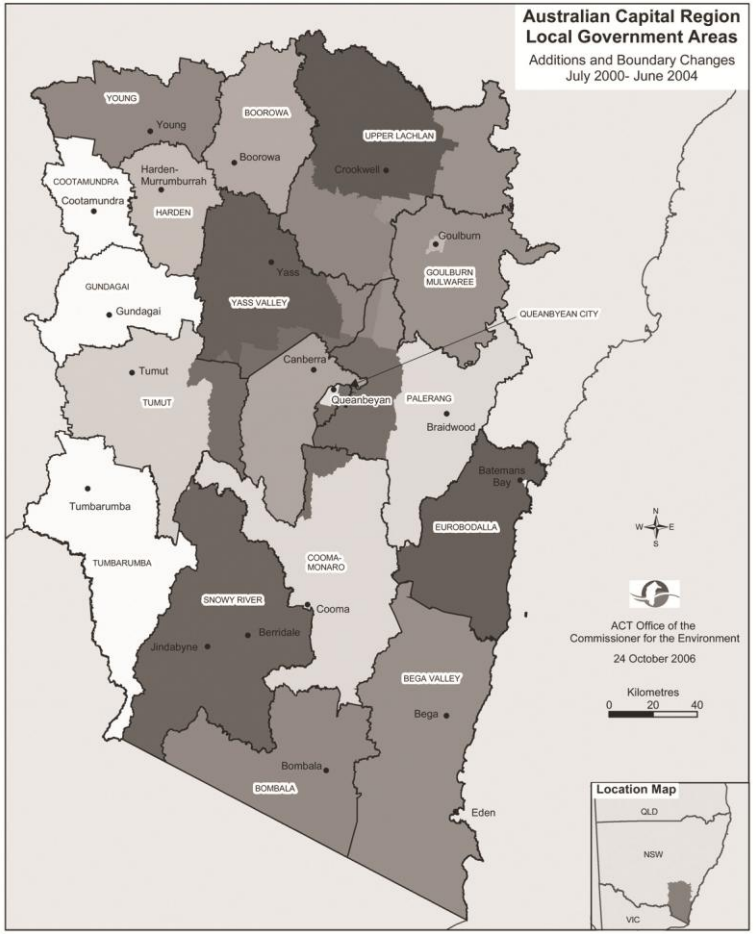
The ACT is expected to experience significant changes in its demographic profile between 2010 and 2056:

- The median age is expected to increase from 33.8 years in 2010 to 39.6 years in 2056.
- The proportion of persons aged 65 years and over is projected to increase from 10.4% of the population to 21.6%.
- The proportion of late school to working age population (15 to 64 years) is projected to decrease from 71.3% of the population to 61.7%.
- The proportion of children aged 14 years and under, is projected to decrease by approximately 43%; from 18.3% of the population to 16.8%.

The estimated number of Aboriginal and Torres Strait Islander people living in the ACT has increased from 3,900 in 2001 to 4,710 in 2010.[3] This represents 1.3% of the total ACT population. In addition, there were at least 3,000 Aboriginal and Torres Strait Islander people living in the surrounding region who may access ACT health services.

The demographic profile and projected demographic shifts of the ACT population have 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

1.2. Social indicators relevant to health

At a glance

During the reporting period:

- ACT income and education levels were high in comparison to Australian levels.
- The unemployment rate for the ACT was lower than the national rate.
- There has been a slight, but steady decrease in the percentage of ACT people employed in the lowest skilled occupations with a corresponding increase in those employed in the highest skilled occupations.
- More ACT couple families with children under 15 years of age had both parents working than nationally.
- In 2010, ACT residents were less likely to be victims of assault in the previous 12 months, but were more likely to be victims of an actual or attempted break-in.

Many of the social factors influencing health are related to the economic and social conditions under which people live and work. Social disadvantage is associated with potentially avoidable poor health outcomes, and in the ACT as for other jurisdictions, indicators of material disadvantage have been linked to higher levels of risky health behaviours, poorer health status, lower levels of service utilisation and service access.[4] Social factors impacting on health are generally more favourable in the ACT compared to Australia, but the ACT has pockets of social disadvantage that may be masked by the homogenous make-up of the Territory (refer Table 17).

In 2010:

- The unemployment rate for the ACT (3.5%) was lower than the national rate (5.5%).
- The ACT had the lowest proportion of 15-19 year olds not fully engaged in education or work (9.4%) compared to other states and territory (Australia; 14.8%).
- ACT income levels were high in comparison to national levels. The average weekly full-time earnings were $1,459, well above the national average ($1,305).
- The proportion of people working in the lowest skill occupations was 12.0% compared to 18.2% nationally. There has been a slight, but steady decrease in the percentage of ACT people employed in the lowest skilled occupations with a corresponding increase in those employed in the highest skilled occupations.[5]
- ACT residents received less income support (aged pension, disability pension, single parent support) than other Australians, but they received similar support in the area of Youth Allowance.
- Education levels in the ACT were high in comparison to Australian levels. In 2010, 44.6% of ACT adults had tertiary qualifications (Australia: 26.9%) and ACT school students continued to have higher year 12 retention rates (90.8%) than overall national rates (78.0%).
- Single parent families with children under 15 years of age comprised 16.9% of ACT families with children (Australia: 20.4%).
- More ACT couple families with children under 15 years of age had both parents working (75.4%) than nationally (60.6%).
- More ACT single adult families with children under 15 years of age had the adult working (64.3%) than nationally (55.0%).
- Of ACT persons aged 65 years and over, 23.6% lived alone (Australia: 24.9%).

- ACT residents were more likely in 2009 to have home computers (ACT: 87.5% of households, Australia: 78.1%) and have internet access at home (ACT: 81.5% of households, Australia: 71.8%).
- Safety from crime and physical or threatened violence is important to wellbeing. In 2010, ACT residents were less likely to be victims of assault (ACT: 4.8%, Australia: 5.7%) in the previous 12 months, but were more likely to be victims of an actual or attempted break-in (ACT: 3.8%, Australia: 3.0%).
- The ACT continues to have a higher rate of passenger vehicles per 1,000 population (ACT: 596, Australia: 551).
- ACT residents (47.9%) attend more sporting events (42.4% nationally) and participate in organised sport (ACT:34.7%, Australia: 24.4%) more than their national counterparts. A similar trend is evident for children.
- The ACT (55.7%) continues to have the highest proportion of private health insurance holders in the country (44.9% nationally), reflecting the Territory's relatively high socio-economic status (refer Table 32).

Socio-Economic Indices for Areas

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.[6] 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.[7]

Homelessness, a measure of extreme disadvantage, is difficult to identify. Information collected from the 2006 Census (ABS) estimated that the rate of homeless people was 4.2 per 1,000 ACT population on Census night (Australia 5.3 per 1,000 population).[8]

2. Health status

Self-rated health is a strong and independent predictor of subsequent illness and premature death.[9] Results from the 2009 and 2010 ACT General Health Surveys (ACTGHS), indicate that 82.2% of adults over 16 years reported their health as excellent, very good or good.[10]

At a glance

The demographic profile of the population and projected demographic shifts have 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.

Burden of disease and injury

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

Life expectancy

- Life expectancy continues to be high in the ACT and is expected to increase over the next ten years.

Mortality

- In 2009, there were 1,648 death registrations (including 10 Aboriginal and Torres Strait Islander registrations) for ACT residents.
- The age-standardised death rate has declined over time.
- The median age at death was 79.9 years of age in 2009, a steady increase since 2002.
- In 2009, the leading underlying causes of mortality for ACT residents were: cardiovascular diseases, cancer, accident and injury, respiratory diseases, mental disorders, diseases of the nervous system including Alzheimer's disease, diseases of the respiratory system and diabetes.
- The infant mortality rate in the ACT continues to decline.

Morbidity

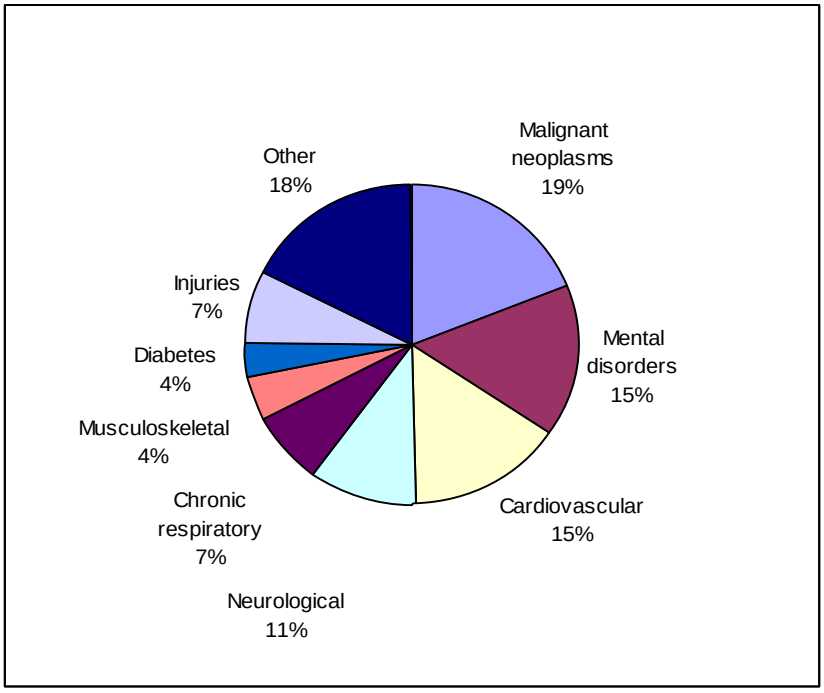
- Hospitalisations provide an insight into severe or acute levels of ill-health.
- Persons 45 years and over were most likely to be hospitalised as a result of chronic obstructive pulmonary disease (COPD); osteoporosis and osteoarthritis; cardiovascular disease; lung and colorectal cancer; chronic kidney disease and diabetes. Those under 45 years were more likely to be hospitalised as a result of asthma (0-14 years), oral disease (15-24 years) and depression (25-44 years).

2.1. 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.[11]

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 (refer 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 & 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), *coronary 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. A*nxiety and depression* together with *coronary 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 (refer 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 attributable to known chronic disease risk factors, DALYs 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 exposure*	37	38	75	0%
Particulates	19	18	37	0%
Ozone	18	19	37	0%
Air pollution - long-term exposure*	92	90	182	1%
TOTAL DALYs from all causes	14,847	14,608	29,455	37%

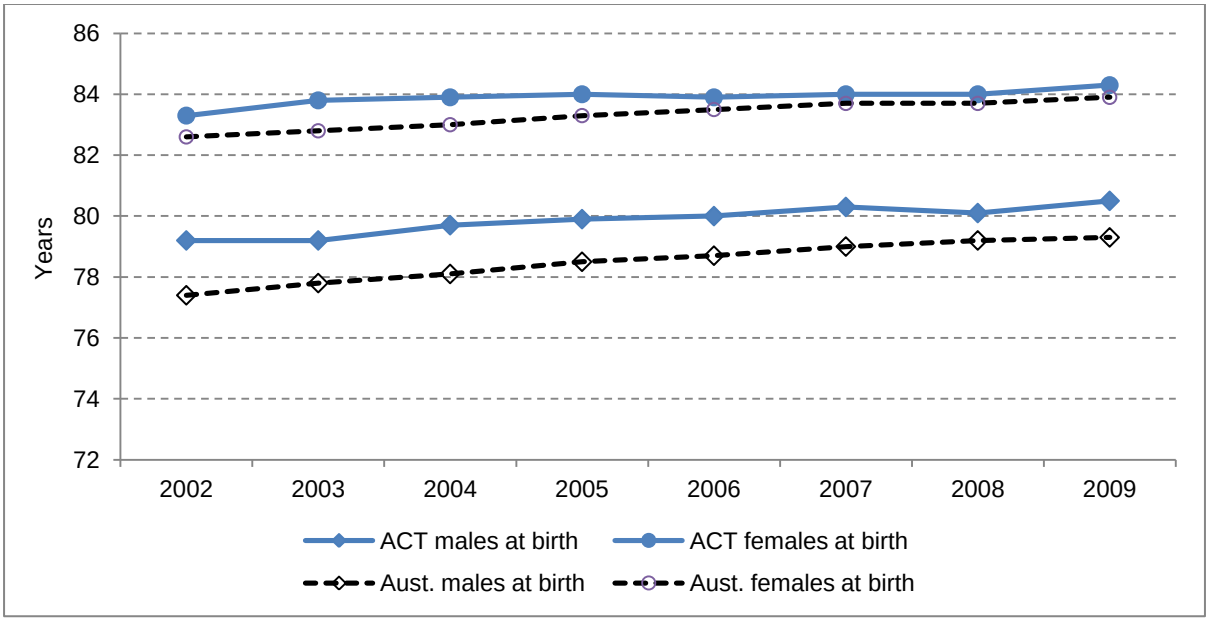
Source: AIHW 2007, *The burden of disease and injury in Australia 2003*. PHE 82, 2007, Canberra
Note: * An example of short-term exposure to air pollution would be bushfire pollution. For long-term exposure, constant air pollution from transport exhaust fumes in a person's environment.

Projections of Australian expenditure by disease (2003-33) indicate that diabetes has the highest projected increase (436%) followed by dementia (364%). Projections for injuries (116%), neonatal (88%) and maternal services (84%) were low by comparison, mainly due to changes in age structure.[12]

2.2. Life expectancy

Life expectancy (refer glossary) has increased steadily in Australia since the early 1900s and is now one of the highest in the world. Life expectancy continues to be high in the ACT and is expected to increase over the next ten years. In 2009, the ACT recorded the highest life expectancy at birth for males (80.5 years) and equal highest (with NSW) for females (84.3 years) of all jurisdictions. Although life expectancy in females has remained fairly constant since 2004, life expectancy in males continues to rise (refer Figure 3).

Figure 3: Life expectancy by sex, ACT & Australia, 1997-2009



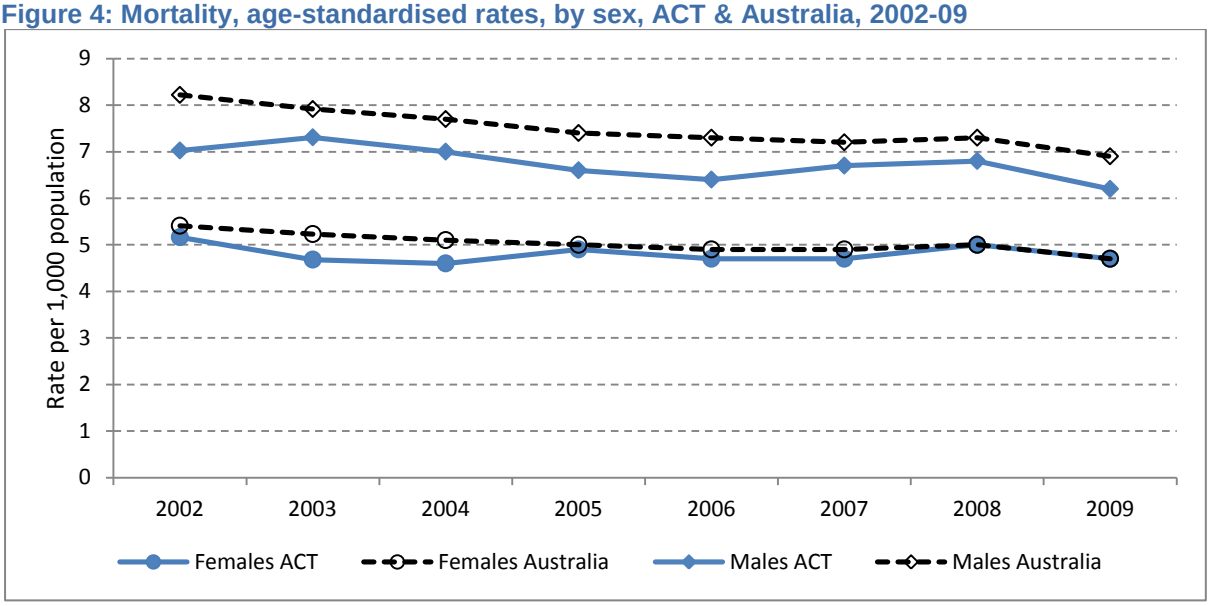
Source: ABS 2008, *Deaths, Australia, 2007,* cat. no. 3302.0, ABS, Canberra

2.3. Mortality

In 2009, there were 1,648 death registrations (including 10 Aboriginal and Torres Strait Islander registrations) for persons whose usual state of residence was the ACT (817 males, 831 females). There has been an increase in the number of registered deaths over the past ten years due to an increasing and older population.

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).

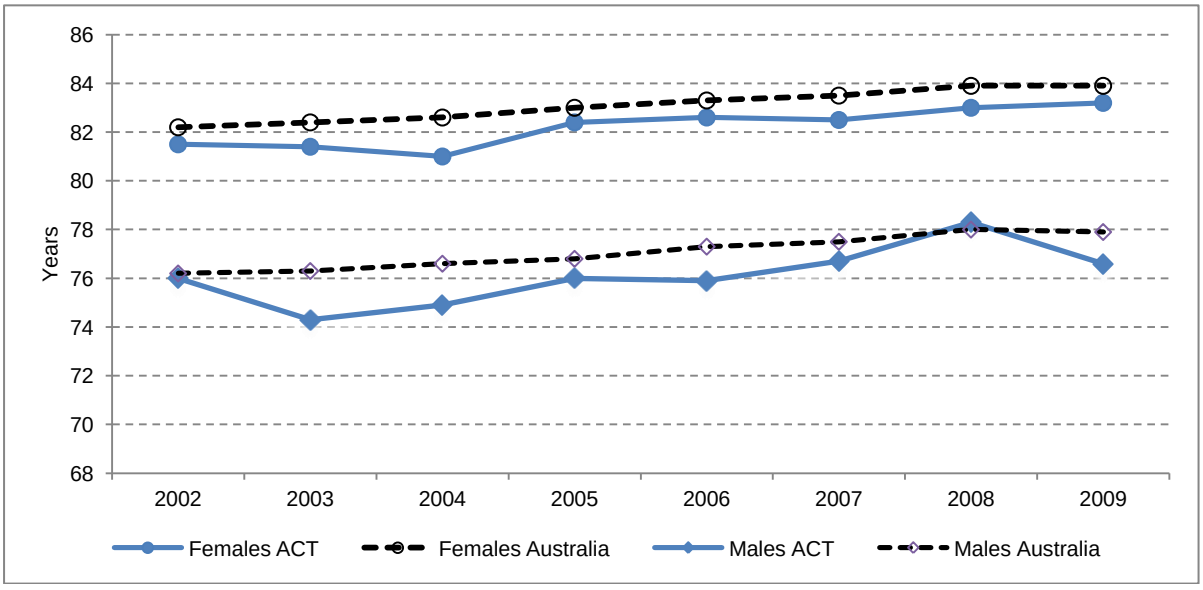
Figure 4: Mortality, age-standardised rates, by sex, ACT & Australia, 2002-09



Source: ABS 2010, data cubes table 2 death rates, summary, states & territories, 1985-2007, cat. no. 3302.0, ABS, Canberra
Note: 2008-09 ABS deaths data are preliminary and should be treated with caution.

The median age at death was 79.9 years in 2009 (males: 76.6 yrs, females: 83.2 yrs). This compares to 81.0 years nationally (males: 77.9 yrs: females: 83.9 yrs). Since 2002 the ACT median age of death has steadily increased for males (2002: 76.0 years) and females (2002: 81.5 years).

Figure 5: Median age at death, by sex, ACT & Australia, 2002-09



Sources: ABS 2010, data cubes table 2 death rates, summary, states & territories, 1995-2010, cat. no. 3302.0, ABS, Canberra
Note: 2008-09 ABS deaths data are preliminary and should be treated with caution.

In 2009, the leading underlying causes of mortality for ACT residents were: cardiovascular diseases (34%), cancer (29%), accident and injury (8%), respiratory diseases (5%), mental disorders (5%), diseases of the nervous system including Alzheimer's disease (5%), diseases of the respiratory system (4%) and diabetes (3%).

The level of avoidable mortality in a population indicates the theoretical scope for future health gain through disease prevention and management. An avoidable or premature 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. The years of potential life lost reflect theoretical premature deaths (refer Table 2 and Table 18).

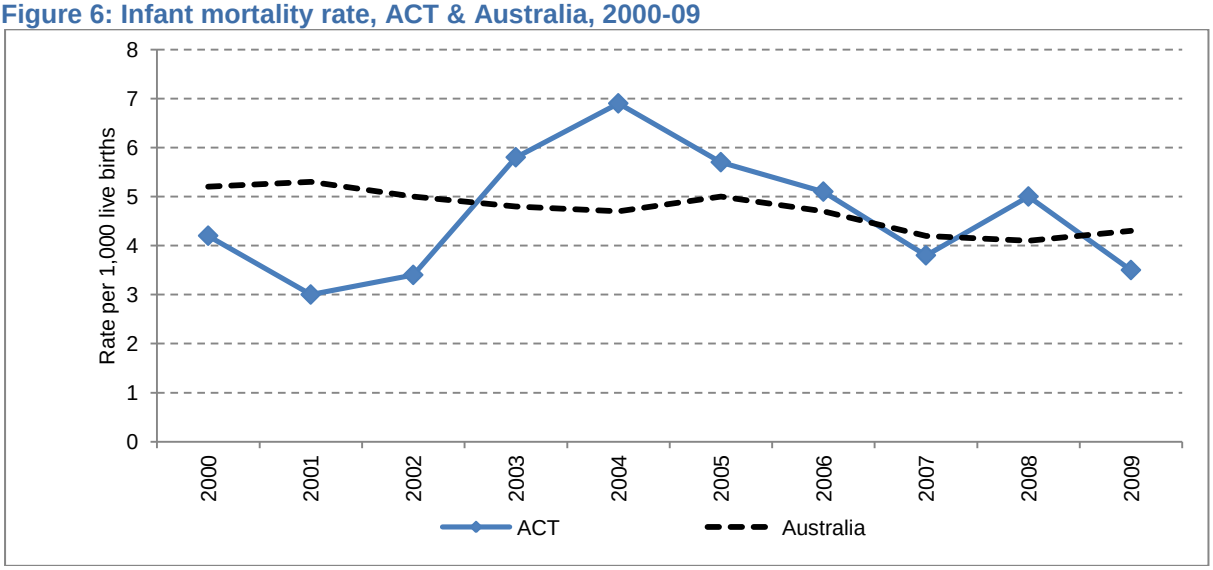
Table 2: Selected causes of death, age-standardised rates & years of potential life lost, ACT, 2009

	No.	Standardised death rate			Years of potential life lost		
Cause of death	Persons	Males	Females	Persons	Males	Females	Persons
External causes	126	46.7	27.2	36.9	2,223	851	3,074
Transport accidents	17	7.2	2.7	4.9	367	208	575
Intentional self-harm	32	13.7	4.4	8.9	760	184	944
Falls	23	5.0	9.0	7.5	164	30	194
Accidental poisoning	13	5.6	1.0	3.3	478	56	534
Diseases of circulatory system	557	223.3	163.3	189.1	1,575	805	2,380
Ischaemic heart disease	242	111.2	61.3	82.3	792	194	986
Cerebrovascular disease	140	45.8	50.1	48.0	162	224	386
Cancers	478	179.7	138.9	156.0	2,318	2,277	4,595
Diseases of digestive system	62	22.6	17.4	20.3	323	256	579
Diseases of respiratory system	86	44.0	21.4	30.6	358	73	431
Diseases of nervous system	76	28.8	22.9	25.9	228	170	398
Diabetes mellitus	52	21.0	14.5	17.4	231	80	311
Mental & behavioural disorders	89	27.3	30.1	30.1	211	55	266
Infectious & parasitic diseases	20	7.2	5.4	6.7	164	57	221

Source: ABS, *Causes of death, Australia* 2009, cat. no. 3303.0
Note: 2009 ABS deaths data are preliminary and should be treated with caution.

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.[13]

Figure 6: Infant mortality rate, ACT & Australia, 2000-09



Sources: ABS 2010, data cubes table 2 death rates, summary, states & territories, 1995-2010, cat. no. 3302.0, ABS, Canberra
Note: 2009 ABS deaths data are preliminary and should be treated with caution.

2.4. Morbidity

Estimates derived from the 2007-08 Australian Bureau of Statistics National Health Survey (ABS NHS) provide the most recent information on long-term health conditions within the ACT population. ACT respondents reported similar levels of long-term conditions to respondents nationally and in comparison to 2004-05 (refer Table 3). The exception was a significant decrease in the proportion of respondents reporting diseases of the circulatory system since 2004-05. The next NHS results for 2010-11 will be released in 2012.

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 (refer Table 3). ACT residents were significantly more likely to suffer hayfever and allergic rhinitis and short sightedness compared to their national counterparts.

Table 3: Selected long-term conditions, % of ACT residents, 2004-05 & 2007-08, Aust. 2007-08

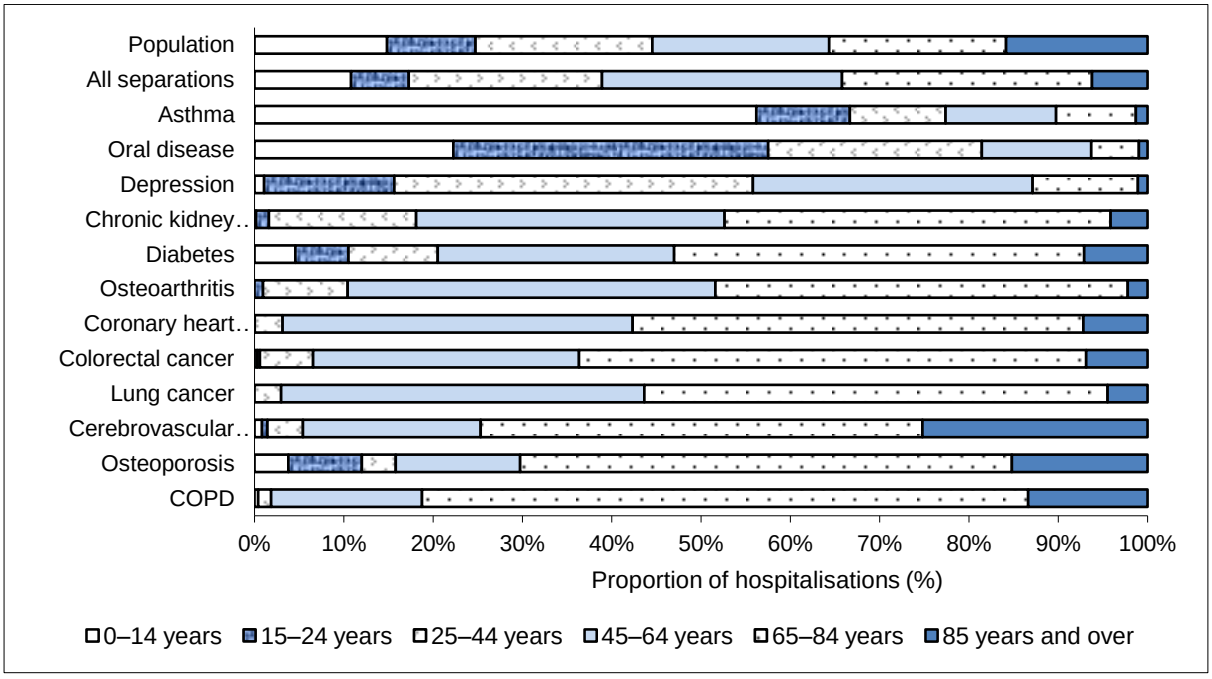
	2004-05	2007-08	Aust. 2007-08
Short sightedness	26.7	25.9	22.7
Long sightedness	25.0	23.1	25.6
Hayfever & allergic rhinitis	21.6	21.0	15.1
Diseases of the circulatory system	18.9	15.2	16.4
Backpain/problems neck/disc disorders	14.2	13.9	14.4
Arthritis (including osteoarthritis)	13.0	13.0	15.2
Mental & behavioural problems [(a)]	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 severe or acute levels of ill-health. Hospitalisation data in 2009-10 show that hospitalisations due to certain diseases varied across the life course (refer Figure 7).

Persons 45 years and over were most likely to be hospitalised as a result of chronic obstructive pulmonary disease (COPD); osteoporosis and osteoarthritis; cardiovascular disease; lung and colorectal cancer; chronic kidney disease and diabetes. Those under 45 years were more likely to be hospitalised as a result of asthma (0-14 years), oral disease (15-24 years) and depression (25-44 years).

Figure 7: Major chronic diseases, hospital separations, % by age group, ACT residents, 2009-10



Source: ACT Health Admitted Patient Care Collection, confidentialised unit record file, 2009-10

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, these rates have not changed significantly since 2002-03. In 2009-10, half of the total potentially preventable hospitalisations were due to chronic diseases in both the ACT and Australia (refer Table 4) (refer also Chapter 8).

Table 4: Potentially preventable hospitalisations for chronic conditions, age-standardised rates, ACT & Australia, 2006-10

	2006-07		2007-08		2008-09		2009-10	
Select chronic conditions (a)	ACT	Aust.	ACT	Aust.	ACT	Aust.	ACT	Aust.
Diabetes complications	5.3	10.4	5.5	10.6	4.8	7.7	4.0	7.1
Congestive cardiac failure	1.9	1.9	1.8	2.0	2.1	1.9	1.9	1.9
Chronic obstructive pulmonary disease	1.7	2.6	1.5	2.7	2.2	2.6	2.0	2.6
Asthma	1.2	1.8	1.0	1.4	0.9	1.7	1.1	1.8
Angina	1.1	1.8	1.1	1.7	1.0	1.5	0.9	1.4
Hypertension	0.2	0.3	0.1	0.3	0.3	0.3	0.2	0.3
Total chronic conditions[(c)]	11.4	19.1	11.1	19.2	11.7	16.5	10.4	16.0
Total potentially preventable hospitalisations[(c)]	22.2	32.5	22.3	33.1	23.6	30.6	20.7	30.4

Source: AIHW, Australian Hospital Statistics 2006-10
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.

3. Lifestyle risk factors

At a glance

Physical activity

- In 2009-10, more than half (56.9%) of ACT residents 18 years and over were sufficiently physically active.

Nutrition

- In 2009-10, there was a slight increase from 2007-08 in ACT adults eating sufficient vegetables on a daily basis and a significant increase in the consumption of fruit. However, there was a decrease in sufficient vegetable consumption for Year 6 children.

Healthy weight

- In 2009-10, over half of ACT adults 18 years and over were either overweight or obese.
- Data suggest an upward trend in obesity in young children.
- However the percentage of children in year 6 in ACT primary schools who were either overweight or obese in 2009 (25%), is similar to 2006 (25.8%).

Tobacco use

- In 2010, 11.7% of ACT residents aged 18 years and over were daily smokers, which is lower than the Australian average (15.9%) and which is an improvement from 2007.
- Smoking during pregnancy for teenage women who gave birth approached 50% (and 68% of young Aboriginal and Torres Strait Islander women).

Alcohol consumption

- 46.8% of the ACT population over the age of 18 drank at the acceptable level of up to 2 drinks on any day, with 30.0% of adults drinking to levels considered to be harmful for increasing the lifetime risk of harm from alcohol-related disease or injury.
- In 2008, 24.2% of secondary school students were current drinkers (1996: 29.1%) and 7.1% of students reported drinking at harmful levels.

Illicit substance use

- In 2010, 13.9% of ACT residents aged 14 years and over used an illicit drug in the previous 12 months, similar to 2007.
- Similar to the national pattern, the age groups most commonly reporting having used illicit drugs in the previous 12 months were those aged 18-29 years.
- Among ACT adolescents, there is evidence that levels of illicit substance use have declined over time, primarily driven by a decline in cannabis use.

Sun protection

- There was a downward trend in sun protective behaviour, with 86.4% of adults aged 18 years and over reporting that they usually/always adhere to some form of sun protective behaviour, compared to 89% in 2007-08.
- The most common forms of sun protection reported were wearing sun glasses (64.3%), wearing a hat (58.1%), seeking shade in the sun (55.4%) and using SPF 30 sun protection (51.9%).
- There has been a similar decline in ACT secondary school students' sun protective behaviour, with 29% reporting to wear a hat in 2008, compared to 53% reporting this in 1996.

There are many risk factors that influence the health of populations, including biological, environmental, social and lifestyle factors, each with varying degrees of preventability. Lifestyle factors are implicated as major preventable causes of chronic disease and include activities such as physical activity, smoking, alcohol and food consumption. Lifestyle factors are the product of both the choices people make and the factors that influence these choices such as socio-economic status and accessibility to healthy environments.

In 2008, in recognition of the increasing need to prevent chronic disease through initiatives that target health risk behaviours, the Coalition of Australian Governments agreed to a package of reforms referred to as the National Partnership Agreement on Preventive Health (NPAPH). Information on the funding arrangements and performance benchmarks associated with the NPAPH are included in Table 34 in Chapter 10.

3.1. Physical activity

Results from the ACT General Health Survey (ACTGHS), which are self reported, show the percentage of ACT residents 18 years and over who were sufficiently physically active (in accordance with national guidelines)[14] in 2009-10 was 56.9% (males: 59.4%, females: 54.5%). This was a slight reduction from 2007-08, where 58.7% (males: 63.3%, females: 54.3%) were sufficiently physically active. Although not a statistically significant decrease, the downward trend is currently being addressed by several government initiatives including those under the NPAPH and health promotion activities (refer Chapter 8.9).

3.2. Nutrition

In 2009-10, based on ACTGHS survey results, 9.9% of ACT adults 18 years and over reported they were eating sufficient vegetables on a daily basis (in accordance with national guidelines)[15], which is a slight increase from 9.1% in 2007-08. Males (6.3%) were less likely to report this than females (13.4%). The mean number of daily serves of vegetables for adults from ACTGHS results was 2.5 serves in 2009 and 2.58 serves in 2010. Therefore, to meet NPAPH targets adults need to consume 3.0 serves of vegetables daily by 2013. Several interventions have been implemented to assist in meeting these targets (refer Chapter: 8.9).

Results from the same survey indicate that 33% of ACT adults were aware that they needed to eat five serves of vegetables each day to be healthy. Of the respondents who answered the question ‘How many serves of vegetables do you think you should eat each day to be healthy?’ answers ranged from zero to sixteen serves with 14.6% of respondents answering ‘Don’t know’.

The consumption of sufficient fruit according to national guidelines[15] has significantly increased, from 52.5% in 2007-08 to 57.1% in 2009-10. Males (53.3%) were less likely to report this than females (60.6%). In 2009-10, 41.1% of ACT adults were aware that they needed to eat two serves of fruit each day to be healthy. The mean number of daily serves of fruit for adults from ACTGHS results was 1.83 serves in 2009 and 1.77 serves in 2010. Therefore to meet NPAPH targets adults need to consume 2.03 serves of fruit by 2013 (refer Table 35 and Chapter 8.9 for program initiatives).

Results from the 2009 ACT Year 6 Physical Activity and Nutrition Survey indicate a change in trends in fruit and vegetable consumption in year 6 ACT primary school students since 2006.[16] In 2009, a significantly higher proportion of students reported eating 2-3 serves of fruit a day (59.5%) compared to 53.0% in 2006. However, significantly fewer students reported eating 4 or more serves of vegetables a day in 2009 (31.1%) compared to 2006 (41.1%).

3.3. Healthy weight

In 2009-10, 52.9% of ACT adults 18 years and over were either overweight or obese based on results from the ACTGHS. Males (59.9%) were more likely to report overweight than females (46.1%). It is important to note that these results are ‘self reported’, unlike other surveys, such as the National Health Survey (NHS), where height and weight are measured. This proportion is similar to that reported in 2007-08, when 52.8% of ACT adults were reportedly overweight or obese, with 59% of males and 46.7% of females falling into this category.

The rate of overweight and obesity in children varies between different age-groups and is difficult to compare. This variation can be due to developmental changes, such as height still increasing and body composition and adiposity changing over time. Therefore any calculation of Body Mass Index (BMI) must be adjusted for age and sex.[17] Variations can also be 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 Australian Secondary School Alcohol and Drug (ASSAD) survey and ACTGHS are based on self-reported height and weight, which is less reliable and subject to response biases that can lead to an under-estimation of overweight and obesity.

Survey results suggest a plateauing of overweight and obesity in older children and adolescents but an upward trend in younger children.

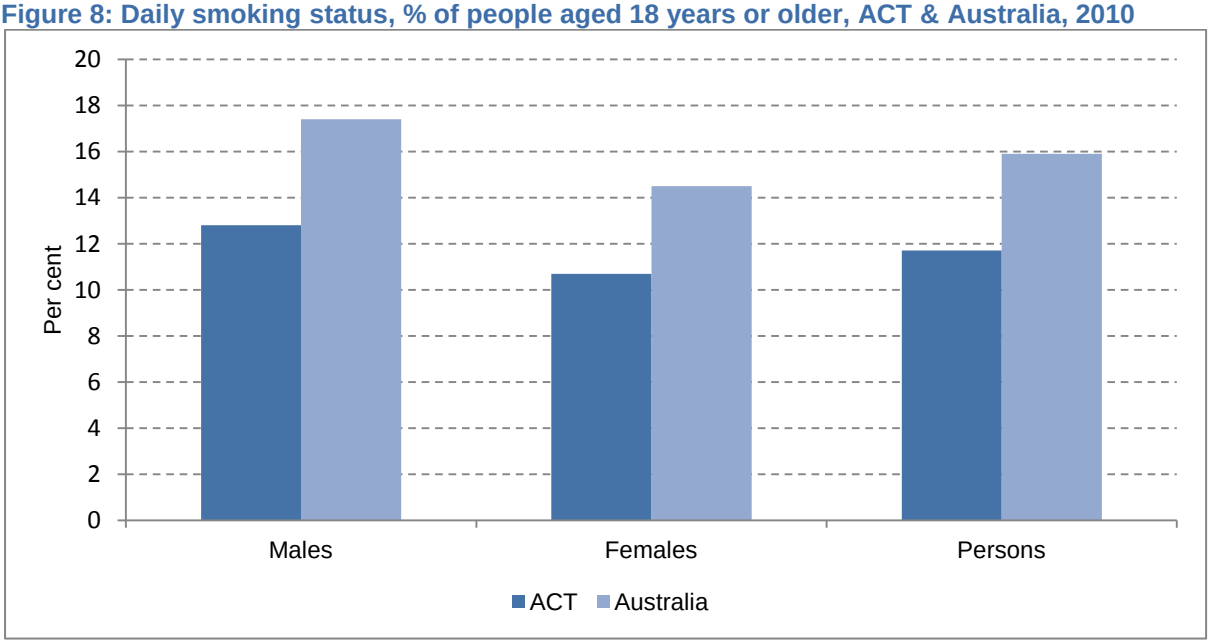
For example:

- 15.7% of kindergarten children in the ACT in 2010 were measured as overweight or obese (*ACT Kindergarten Screening Program*) compared to 14.6% in 2009 and 12.8% in 2008.
- 25.0% of children in year 6 in ACT primary schools were measured as either overweight or obese in 2009. This proportion has not changed from 2006 (25.8%) (2009 and 2006 ACT Year 6 Physical Activity and Nutrition Surveys).
- 19.5% of ACT secondary school students aged 12-17 years were overweight or obese (ASSAD) in 2008 compared to 22.5% in 2005 (self-reported). The decrease was not statistically significant.

3.4. Tobacco use

Results from the 2010 National Drug Strategy Household Survey indicate that 11.7% of ACT residents aged 18 years and over were daily smokers, which is lower than the Australian average (15.9%). This is an improvement from 2007 where 15.2% of ACT residents aged over 18 were daily smokers compared to the Australian average of 17.4%. Males were more likely than females to be daily smokers both in the ACT and nationally (refer Figure 8).[18]

Figure 8: Daily smoking status, % of people aged 18 years or older, ACT & Australia, 2010



Source: AIHW 2011, 2010 National Drug Strategy Household Unit Record Files

Smoking during pregnancy

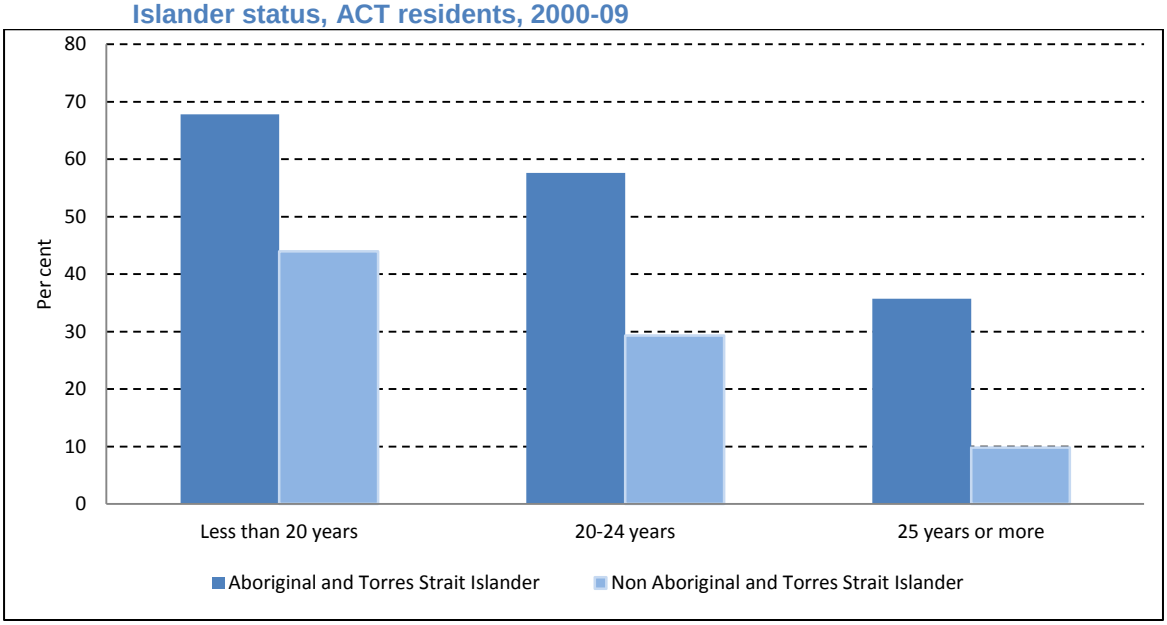
Smoking during pregnancy is an important risk factor for adverse perinatal outcomes. Self reported data on cigarette smoking were collected from women who gave birth in the ACT from 2000 to 2009. ACT resident women were significantly less likely to smoke during pregnancy (10.4%) in 2009 than nationally (14.5%).

Smoking during pregnancy decreased significantly with maternal age (refer Figure 9). Women in younger age groups were significantly more likely to use tobacco during pregnancy, with smoking rates for teenage women who gave birth approaching 50% in the ACT.

Smoking during pregnancy was significantly higher for Aboriginal and Torres Strait Islander women. Figure 9 shows that 68% of Aboriginal and Torres Strait Islander women aged under 20 years and over half (58%) of those aged 20 to 24 years reported that they smoked during pregnancy. Comparatively, just under half (44%) of young non-Aboriginal and Torres Strait Islander women under the age of 20 years and just under one-third (29%) of those aged 20 to 24 years reported smoking during pregnancy.

The average birthweight for babies of ACT resident women who smoked during pregnancy in 2009 was significantly lower (3,183 grams) than babies of women who did not smoke (3,443 grams).

Figure 9: Smoking during pregnancy, % by maternal age group & Aboriginal & Torres Strait Islander status, ACT residents, 2000-09

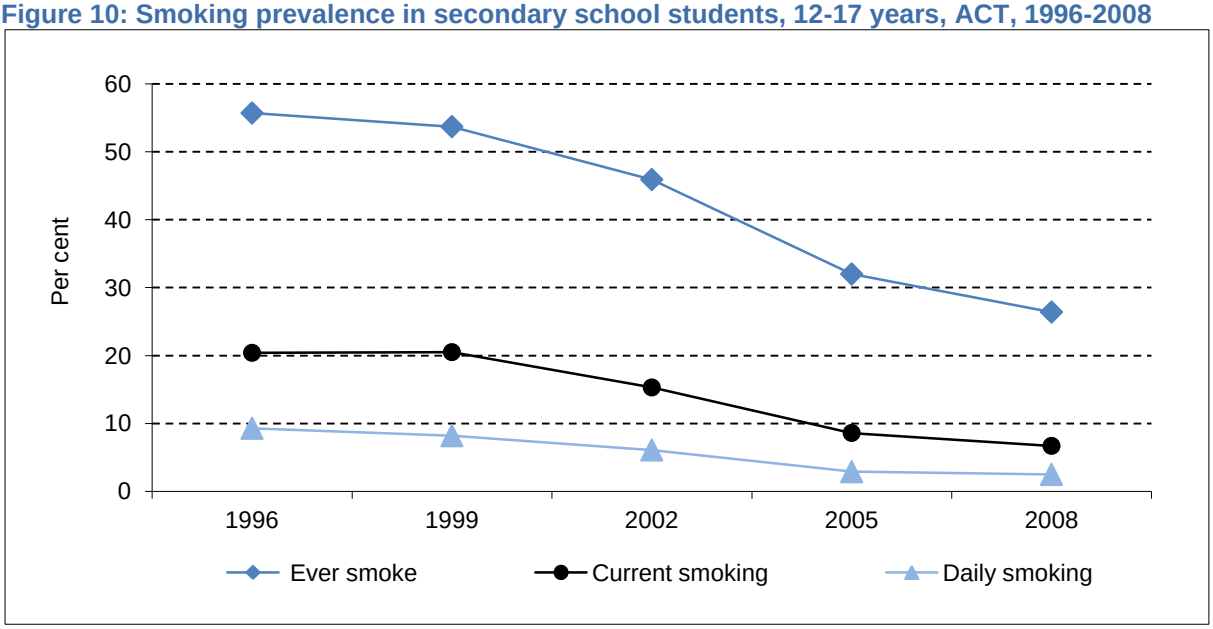


Source: ACT Maternal Perinatal Data Collection, 2000-2009

Student smoking

There has been a decline in self-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) (refer Figure 10).

Figure 10: Smoking prevalence in secondary school students, 12-17 years, ACT, 1996-2008

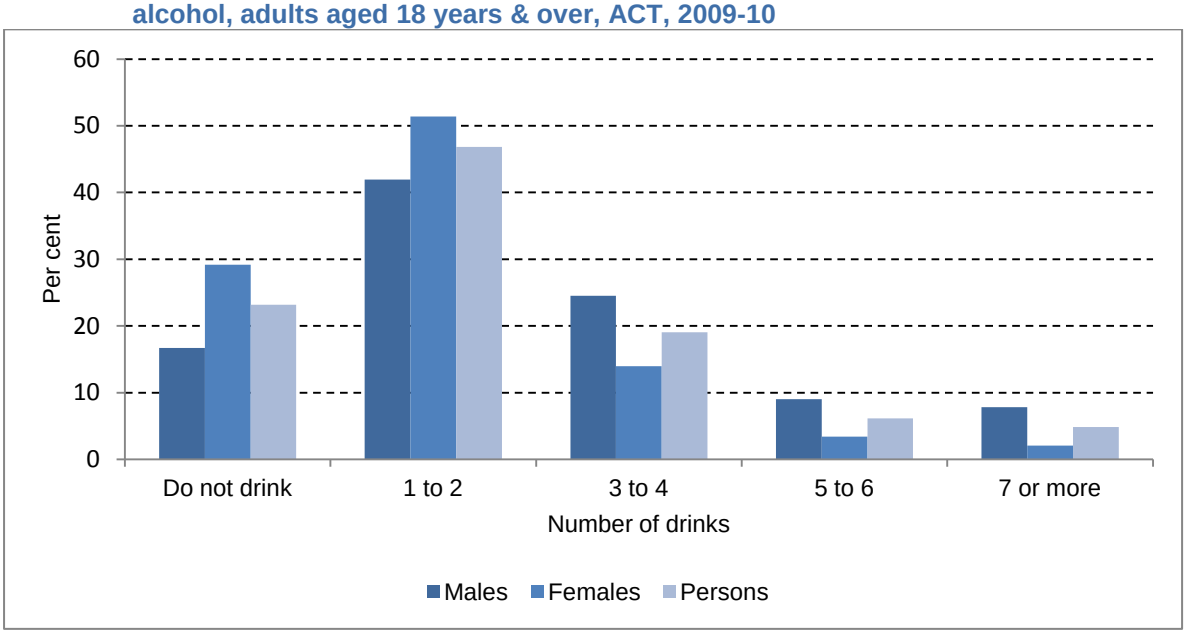


Source: ACT Health, ASSAD, confidential unit record files, 1996-2008

3.5. Alcohol consumption

In February 2009, the *2001 Australian Alcohol Guidelines*[19] were replaced with the *Australian Guidelines to Reduce Health Risks from Drinking Alcohol*[20] which were based on modelling the lifetime risk of harm from drinking. For healthy men and women, drinking no more than two standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury. Results from the 2009-10 ACTGHS show that 23.2% of the ACT population over the age of 18 do not drink alcohol, 46.8% drink at the acceptable level (up to two drinks on any day), with 30.0% of adults drinking to levels considered to be harmful. A significantly higher proportion of males (41.3%) consumed more than two drinks on a day when they drank alcohol, compared to 19.4% of females (refer Figure 11).

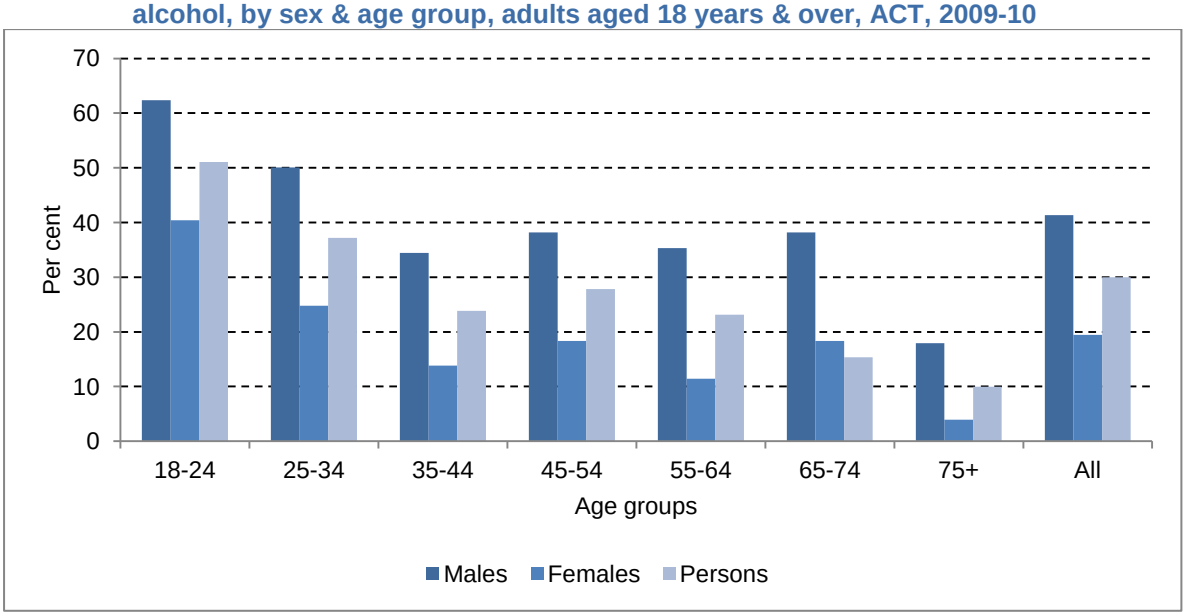
Figure 11: Alcohol consumption, number of standard drinks on a day when consuming alcohol, adults aged 18 years & over, ACT, 2009-10



Source: ACT General Health Survey, 2009 & 2010

Rates of drinking levels that risk long term harm have not significantly changed over time in either males (2007-08: 41.8%, 2009-10: 41.3%) or females (2007-08: 19.5%, 2009-10: 19.4%). The amount of alcohol consumed by 18-34 year old males remains a concern (refer Figure 12).

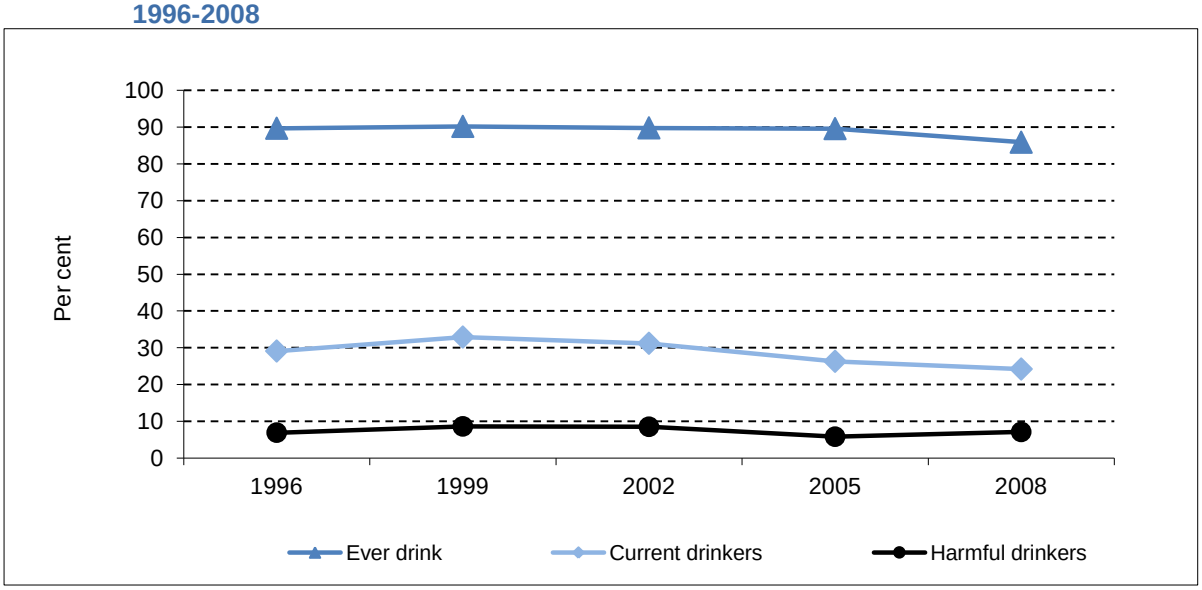
Figure 12: Alcohol consumption, more than 2 standard drinks on a day when consuming alcohol, by sex & age group, adults aged 18 years & over, ACT, 2009-10



Source: ACT General Health Survey, 2009 & 2010

Drinking trends for ACT secondary school students aged 12 to 17 years have not changed (refer Figure 13). In 2008, 24.2% of students were current drinkers (1996: 29.1%) and 7.1% of students reported drinking at harmful levels.

Figure 13: Alcohol consumption, prevalence, secondary school children, 12-17 years, ACT, 1996-2008



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

In 2009, there was a total of 21 deaths where the underlying cause of death was due to alcohol consumption in the ACT.[21] Sixty-seven per cent of these deaths were due to alcoholic liver disease, 19% to mental and behavioural disorders due to alcohol use and 14% due to accidental poisoning by, and exposure to, alcohol (refer Chapter 6.4.3).

3.6. Illicit drug use

In 2010, 13.9% of ACT residents and 14.7% of Australian residents aged 14 years and over used an illicit drug in the previous 12 months. Although ACT rates have not changed significantly (2007: 13.8%), national rates show a significant increase (2007: 13.4%).[22]

Table 5: Illicit drug use in the previous 12 months, % persons, ACT & Australia, 2007 & 2010

Drug	ACT 2010	Aust. 2010	ACT 2007	Aust. 2007
Cannabis	9.5	10.3*	9.1	9.1
Ecstasy	2.3**	3.0	4.7	3.5
Methamphetamine	1.2**	2.1	2.3	2.3

Source: AIHW 2011, *2010 National Drug Strategy Household Survey report*, Drug statistics series no. 25. Cat. No. PHE 145. Canberra: AIHW.

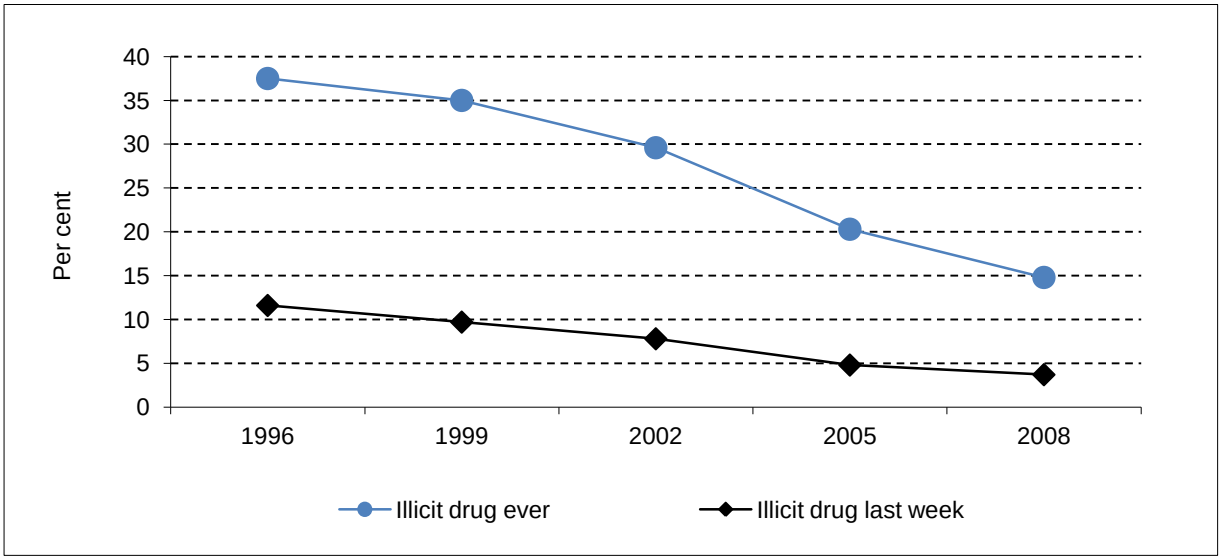
Notes: * Statistically significant *(p<0.05).*
***(estimate has a RSE of 25% to 50% and should be used with caution).*

Although there has been a slight increase between 2007 and 2010 in the ACT of individuals reporting drug use in the previous 12 months, in the longer term (1998-2010), there has been a decline in the number of people reporting drug use in the previous 12 months (from 23.9% in 1998 to 13.9% in 2010.[22]

In the ACT, as in all other jurisdictions, males had higher proportions of recent illicit drug use than females (males: 17.9%, females: 10.0%). The age groups most commonly reporting having used illicit drugs in the previous 12 months in most jurisdictions were those aged 18-19 years (20.4%) and 20-29 years (25.7%).[22]

Among ACT secondary students 12-17 years, there is evidence that levels of illicit substance use have declined over time (refer Figure 14). 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 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 (refer Table 21).

Figure 14: 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%). In the ACT, approximately 3.3% of students reported recent use of methamphetamine.

3.7. Sun protection

In the two year period 2009-10, results from the ACTGHS indicate that the majority of adults (86.4%) aged 18 years and over reported that they usually/always adhere to some form of sun protective behaviour. This is a significant decline from 89% for the two year period 2007-08. The most common form of sun protection reported in the two year periods 2007-08 and 2009-10 was wearing sun glasses (65.4% and 64.3% respectively), followed by wearing a hat (60.9% and 58.1%), seeking shade in the sun (55.7% and 55.4%) and using SPF 30 sun protection (50% and 51.9%). Over one-fifth (20.6%) of adults reported to adhere to all four of these sun-protection behaviours.

2008 ASSAD survey results for students 12-17 years shows a number of trends including:

- 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 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).

Results from both surveys highlight the decline in ‘sun smart’ behaviour.

4. Harm minimisation

Harm minimisation refers to policies and programs designed to reduce the harmful effects of some behaviours, in particular those related to drug use and sexual health. 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 *HIV/AIDS, Hepatitis C Sexually Transmissible Infections: A Strategic Framework for the ACT 2007-2012* identifies local priorities, actions and strategies to improve outcomes against notifiable blood borne viruses and sexually transmissible infections.

4.1. Alcohol and drugs

Harm minimisation is a key guiding principle of the *ACT Alcohol, Tobacco and other Drug Strategy 2010-2014*. This principle continues to be the basis for alcohol, tobacco and other drug policies and service provision within the ACT. Harm minimisation represents a three-pillared approach that aims to improve health, social and economic outcomes for the community and individuals by encompassing a wide range of approaches including supply reduction, demand reduction and harm-reduction.

The Health Directorate provides funding to the Education and Training Directorate towards the costs of 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 (PEDP) 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 them, police can divert them to the health sector. They are referred to the Alcohol & Drug Services Diversion Service for comprehensive assessment and then referred to an approved ACT agency for treatment, which may include education, counselling, withdrawal, pharmacotherapy and/or residential rehabilitation. Over the two year reporting period the Police Early Diversion Program referred 118 people, of whom 116 were recommended for and completed treatment.

The ACT Government has in place both pre and post-sentencing treatment options for those charged with alcohol and other drug (AOD) related offences under the Court Alcohol and Drug Assessment Service (CADAS). The goals include reducing recidivism and engaging clients in treatment. During 2008-10 CADAS completed 469 assessments, and of these, 396 individuals were recommended for treatment, 219 were engaged in a treatment plan, and 144 completed treatment.

Needle and Syringe Programs

Needle and syringe programs (NSPs) aim to protect the health, social and economic welfare of the community by focusing on preventing the transmission of blood-borne viruses such as HIV, hepatitis B and C, by preventing injecting-related injury and disease; and by facilitating access to other health and related services.

The ACT program provides injecting equipment and education through a range of outlets including pharmacies and 24-hour vending machines. In December 2008, ACT Health (now ACT Health Directorate) further expanded out-of-hours access to sterile injecting equipment including the installation of a syringe vending machine at Winnunga Nimmityjah Aboriginal Health Service.

In this reporting period there were 11 NSP outlets across the ACT and 29 participating pharmacies. There were five syringe vending machines in the ACT which were co-located with secure disposal facilities and which operate 24 hours per day.

There was no change in the number of outlets over the reporting period although the amount of NSP equipment supplied increased in the ACT.

There was evidence of increased demand for NSP equipment in the North of Canberra (which includes the Inner North, Belconnen and Gungahlin) compared to the South of Canberra (which includes the Inner South, Weston, Woden and Tuggeranong) during the reporting period.

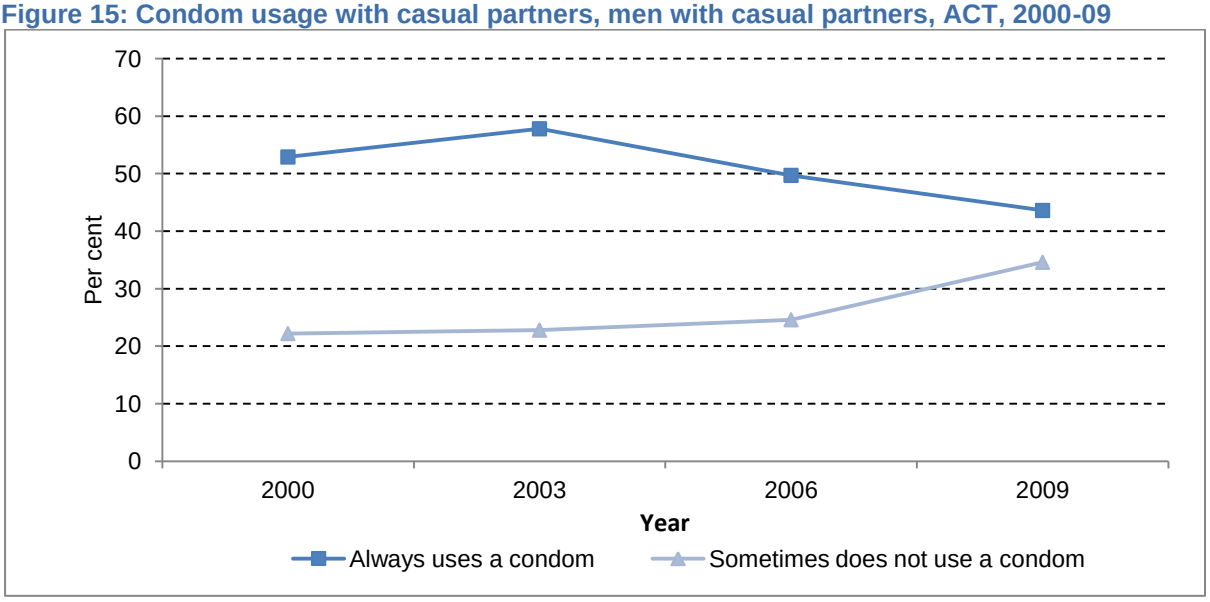
For example, twice as many individual needle and syringe units were distributed from the primary NSP in Civic compared to the primary NSP in Phillip, and more than three times as many safety packs (4-packs and 8-packs of needle and syringe units plus saline, alcohol swabs etc. inside a personal sharps container) were distributed from the Belconnen Community Health Centre and the Civic primary NSP, compared to the Phillip primary NSP.

4.2. Sexual health

Sexual activity can be associated with health risks. Unprotected sexual intercourse can transmit infections such as chlamydia, gonorrhoea, HIV, syphilis and other diseases, as well as being associated with an increased risk for specific cancers such as cervical and anal cancer. Notifications of STIs have risen over the past decade (refer Chapter 6.8.1).

The triennial Canberra Gay Community Periodic Survey, funded by ACT Health, provides information on a range of sexual practices among gay and homosexually active men in Canberra. The 2009 survey showed a significant difference in the 'condom use with casual partners, among men with casual partners' with 34.6% of respondents indicating that they 'sometimes do not use a condom' compared to 22.2% in 2000.[23]

Figure 15: Condom usage with casual partners, men with casual partners, ACT, 2000-09



Source: Gay Community Periodic Survey: Canberra 2009

Results from the triennial Canberra Gay Community Periodic Survey show that since 2000 there has been a significant increase in the proportion of homosexually active men reporting they are HIV-negative from 77.1% in 2000 to 85.3% in 2009.

Survey results indicate that between 2000 and 2009, the proportion of non-HIV positive men reporting HIV testing in the 12 months prior to the survey, significantly increased (from 56.6% to 68.8%).

ACT Health's actions to address the rising incidence of chlamydia in the ACT included funding the 'Stamp Out Chlamydia' project, that provides readily accessible outreach screening 'events' to identified high-risk populations. This project is being delivered through a partnership comprising the Canberra Sexual Health Centre, Sexual Health and Family Planning ACT and the Academic Unit of Internal Medicine of the Australian National University Medical School.

5. Health and the environment

The Health Protection Service (HPS), as a part of the Health Directorate, is responsible for monitoring environmental factors that have the potential to influence public health within the ACT. The monitoring includes development and implementation of a range of environmental programs including regulatory control of some activities within the community. Activities undertaken include monitoring and regulation of public health, food safety, water surveillance, radiation safety and communicable disease control. The HPS also has policy responsibility for tobacco control.

At a glance

- Over the reporting period various ACT lakes had persistent algal blooms over summer and into autumn and Lake Burley Griffin experienced some sewage contamination.
- In 2008-10 the concentrations of known pollutants in the air were generally compliant with standards.
- Overall the ambient air quality in the ACT was good.
- There were 1,918 inspections of food premises carried out in 2008-09 and 2,333 in 2009-10.
- Notifications for potential food-borne pathogens have increased steadily from 622 notifications in 2008 to 813 in 2009 and 906 in 2010.

5.1. 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 (PM_{10}), 2.5 ($PM_{2.5}$) and 1 (PM_1) microns in diameter. In the July 2008 to June 2010 period, the concentrations of these pollutants were generally compliant with the standard set out in the Ambient Air Quality National Environment Protection Measure (NEPM).

There were no breaches of the NEPM standards for carbon monoxide, nitrogen dioxide or ozone concentrations in the reporting period. There were 13 occasions that the PM_{10} standard of 50µg/m^3 averaged over a 24 hour period, was exceeded (refer Figure 33). Three of these occurrences were during the winter months. There were six exceedences for $PM_{2.5}$ levels, four of which were in winter months (refer Figure 34).

Drought conditions dominated the ACT region throughout 2008 and 2009. There were major bushfires and dust storms in 2009 across south east Australia that contributed to the particulate matter pollution in the ACT in the non-winter months. Smoke from wood-fired heaters used for home heating in the winter was the main source of particulate matter pollution in the winter months. The highest PM_{10} concentration for a 24 hour average was 210µg/m^3 recorded during the dust storms in September 2009). In comparison, the highest wintertime exceedence attributable to wood-fired heaters was 56 µg/ m^3 recorded in July 2009.

Due to community concerns regarding the winter air quality in the Tuggeranong Valley, ACT Health commissioned a study[24] that identified solid fuel burning (mainly wood) as the Valley's dominant emission source and wood smoke as an air quality issue during winter. It found the emission sources

in the Tuggeranong Valley were relatively small compared to other inland urban areas such as Launceston and Ballarat.

The study also found programs encouraging the reduction of wood smoke emissions such as “Don’t Burn Tonight” campaign and the “Solid fuel heater buy back scheme” appeared to be successful and should be continued. (The programs are the responsibility of the Environment and Sustainable Development Directorate).

While there are some concerns regarding wintertime particulate pollution in the Tuggeranong Valley, overall the ambient air quality in the ACT is good.

5.2. Water quality

The breaking of the drought (2009-10) offered additional challenges to the management of the drinking water supply. The HPS worked with the water supply authority to ensure the quality of drinking water continued to be of a high standard. No organisms of concern were detected in the drinking water, evidence of effective treatment of the drinking water supply.

The ACT Government monitors the environmental status of Canberra's Lakes and Ponds and advises users of changes in water quality conditions in relation to bacteria and blue green algae and how the changes affect public use. Over the reporting period various ACT lakes had persistent algal blooms over summer and into autumn and Lake Burley Griffin experienced some sewage contamination. To address the concerns, the HPS developed the ACT Guidelines for Recreational Water Quality. This document combines the blue-green algae management strategy with the new microbial guidelines.

The major urban lakes (with the exception of Lake Burley Griffin which is a Commonwealth responsibility) are sampled eight months of the year during August, October to March, and May by the Environment Protection Authority. Monitoring of blue-green algae in Canberra’s lakes is undertaken mostly, but not exclusively during the summer months and encompasses the recreation zones of the lakes and the Molonglo River. The HPS conducts monitoring for bacterial pathogens at a number of sites in Lake Tuggeranong, Lake Ginninderra and the Molonglo River on behalf of Territory and Municipal Services (TAMS).

During 2008-10 Lake Ginninderra had one closure due to blue green algae levels, Lake Tuggeranong had three closures and Molonglo reach Water-ski Area had two closures.

During 2007-10 the overall bacterial quality of Lake Burley Griffin was generally good and did not affect organised lake events. The swimming beaches were, however, occasionally subjected to elevated bacterial levels marginally exceeding guideline values. In 2007-08 algal bloom conditions affected several areas in the lake for a period of more than four weeks. The areas affected included East Basin, Central Basin and West Lake. The alert was managed with shore-based signage and media announcements. From February 2009 the proliferation of algal blooms saw both partial to full closures of the lake. The blue-green algae counts fell within safe levels towards the end of June 2009 allowing all areas of the lake to be opened. From 4 February to 1 April 2010 the proliferation of algal blooms again resulted in full closure to primary activities across the lake. The public was informed through lake signage and media alerts.

Since the ACT Health Directorate released its new water quality guidelines in December 2009, the number of lake closures has declined. This was mainly due to a change in the level of algae required for a lake closure for secondary use such as rowing, sailing and canoeing. The level increased from 50,000 cells per millilitre to 125,000. Closure for primary contact such as swimming remained at 50,000 cells per millilitre.

5.3. Food safety

Illness from food prepared for sale is a preventable public health threat. Regulating food safety ensures that food for sale is suitable and safe to eat and is prepared in accordance with the *Australia New Zealand Food Standards Code* (the Code). The *Food Act 2001* incorporates this Code.

Public health officers routinely conduct inspections of registered food businesses. The inspection program aims to ensure that food is protected from contamination at all steps of the production and supply to consumers. The inspection program focuses on the food premises' hygiene, temperature control and personal hygiene factors that have a direct influence on potential contamination that may make the food unsafe for consumption.

Public health officers are authorised to take actions when non-compliance with the Food Act or the Code is identified. These actions include: providing advice or guidance to educate a proprietor of food premises about how to comply; issuing an improvement notice for less critical non-compliances; issuing a prohibition order for serious breaches that may pose a threat to public health; and proposing a prosecution.

During the 2008-09 period, 1,918 inspections of food premises were carried out, 205 of which were non-compliant. In 2009-10 there were 2,333 inspections, of which 283 were non-compliant. (The total number of inspections represents individual occasions and may include multiple inspections of individual businesses). Other food surveillance activities include planning, follow-up of complaints, initial registration of new food businesses and the inspection of refurbished premises.

During the 2008-09 and 2009-10 periods there was one court case for each period. A food business is referred to the Director of Public Prosecutions when there is a serious non-compliance with the Act and the Code.

An additional part of the food safety regulation is a food testing program that tests "ready to eat" foods that are offered for sale in any food businesses within the ACT, for bacterial contamination. A total of 549 samples were tested during 2008-10 for Salmonella, E.coli, Listeria monocytogenes, Bacillus cereus and Staphylococcus aureus. There were: thirty two (5.8%) containing *E.coli*; one (0.2%) containing *Listeria monocytogenes*; five (0.9%) containing *Bacillus cereus*; and seven (1.3%) containing *Staphylococcus aureus*.

These results show a very high level of compliance in the ACT with the Food Standards Australia New Zealand Guidelines for the Microbiological Examination of Ready-to-Eat Foods December 2001.

The ACT also participates in a number of national food sampling programs to ensure continual improvement of food safety within the country. During 2008-10 the ACT participated in the Pre-packaged Ready-to-Eat Chilled Foods survey and Nut and Nut Products survey. The results of these surveys have indicated that the quality and safety of the food surveyed in the ACT was very good.

Other national surveys in which the ACT participates include: Folate in Bread, Australian Total Dietary Study, Iodine in Seaweed, Packaging Migration Chemicals and Meat Content of Sausages. Participation in coordinated cross-jurisdictional surveys provide the opportunity for ACT to influence national policy and regulation.

Notifications for potential food-borne pathogens have increased steadily from 622 notifications in 2008 to 813 in 2009 and 906 in 2010. This increase can be partly attributed to improvement in reporting of diseases as well as a national increase in salmonella notifications in 2009 and 2010. There were five food-borne or suspected food-borne outbreaks in 2008-09 and three in 2009-10.

5.4. Radiation safety

The *Radiation Protection ACT 2006* (the RPA) and *Radiation Protection Regulation 2007* (the Regulation) commenced operation in 2007. The RPA establishes the ACT Radiation Council which issues radiation licences, registers radiation sources and provides advice to the minister. Enforcement of the RPA remains a function of the Health Directorate.

Development of the *Radiation Protection (Tanning Units) Amendment Regulation* commenced in early 2010 to introduce solaria (cosmetic tanning units) as the first non-ionising radiation source to be regulated in the ACT under the RPA. The Amendment requires all tanning units to be registered, each operator to be licensed and trained, and lists a number of safety requirements that must be adhered to. In addition, persons under the age of 18 and persons with pale white skin (Fitzpatrick skin type 1) are excluded from using solaria. The Amendment commenced in November 2010.

A new radiation safety database was introduced on 12 March 2010 enabling more accurate data collection in relation to regulated radiation sources and licences. As of 30 June 2010 there were 494 registered radiation sources and 622 licences registered in the ACT.

The Health Protection Service (HPS) manages the inspection of all radiation sources prior to initial registration to ensure that a device complies with the relevant radiation safety requirements. This compliance test confirms that the source has been properly installed, shielded, calibrated, is well maintained, and that it meets relevant standards. The test also verifies important details of the radiation source such as the model, type and identification details. Any device which fails to meet the inspection requirements is not registered, and cannot be used, until the outstanding issue has been resolved. This service is currently provided to the HPS by qualified contractors.

There were 55 compliance inspections in 2008-09 and 51 in 2009-10. Where elements of non-compliance were detected, the issues were rectified before registration was approved. There were no radiation safety incidents caused by non-compliant radiation sources and no legal proceedings or prosecutions during the reporting period.

5.5. Tobacco control

The ACT Government 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 Preventive Health Strategy 2009* (the Strategy) outlines the resolve of the Federal, State and Territory Governments of Australia to work together in collaboration with non-government agencies to address the health and social costs associated with obesity, tobacco and excessive alcohol use in Australia. The Strategy engages both government and private sectors to a long-term, comprehensive, evidence-based and coordinated national plan to make Australia 'the healthiest country by 2020'.

The Population Health Division has undertaken a number of initiatives in tobacco control. In the legislative field, it developed and implemented the following tobacco control initiatives:

- Prohibiting smoking in ACT outdoor eating and drinking places from 9 December 2010, through amendments to the *Smoking (Prohibition in Enclosed Public Places) Act 2003*, the now *Smoke-Free Public Places Act 2003* and a comprehensive community education campaign.
- The *Tobacco Amendment Act 2008* included prohibiting the display of smoking products at point of sale areas in retail businesses from 1 January 2010 and in specialist tobacconists from 1 January 2011.
- In January 2009 a consultation paper on a proposal to regulate smoking in cars when children under the age of 16 are present was distributed.
- The Directorate's Smoke-Free Workplace Policy review resulted in a new policy in May 2009.
- The Health Protection Service provided advice on the Work Safety (*ACT Code of Practice for Smoke Free Workplaces*) Code of Practice 2010 that applies to all workplaces in the ACT.
- To support these measures, various organisations were funded to assist people reduce or quit their smoking (refer Chapter 9).

6. Trends and indicators in health status

At a glance

Cardiovascular disease

- In 2007-08, an estimated 15.2% of the ACT population reported having a long-term disease of the circulatory system (for 6 months or more) (Australia: 16.4%).
- In 2009, 34% of all registered deaths in the ACT were due to cardiovascular disease.

Cancer

- In 2008, there were 1,433 new cases of cancer diagnosed in ACT residents (56% males and 44% females). Most common cancers were prostate, breast and, colorectal.
- In 2008, the most common causes of cancer mortality were lung cancer, colorectal cancer, breast cancer and prostate cancer.

Mental health

- In 2007-08, 11.8% of ACT adults reported having a mental disorder diagnosed by a doctor (Australia: 11.2%), a decrease from 2004-05 (13.8%).
- Mortality rates have been increasing in the ACT and Australia, largely due to the increasing proportion of deaths due to dementia in older persons.

Injury

- In 2009-10, injuries accounted for a quarter of all ACT resident emergency department presentations. The leading causes of injury-related hospital separations were falls (32%), complications of care (16%), and transport accidents (12%).
- Between 2001-02 and 2009-10, hospitalisation rates due to a fall increased for residents aged 65-79 years and doubled for those aged 80 years and over.
- Rates of alcohol-related injuries and serious injuries from road crashes have been increasing in the ACT since 2000-01.

Diabetes

- 6.7% of the ACT population were ever diagnosed with diabetes or high blood glucose in 2009-10, most of whom were overweight or obese.
- There have been no major changes in the age-standardised death rate since 1980.

Asthma

- 9.6% of ACT residents had current asthma in 2007-08.
- 10.8% of ACT kindergarten children had asthma during 2005-10.

Immunisation

- In the 2008 schools program 65.4% of girls in year 7 completed the human papillomavirus (HPV) vaccination course, increasing to 67.1% in 2009 and 68% in 2010.
- ACT childhood immunisation coverage rates remained above the national target.

Notifiable communicable disease

- During 2009 and 2010 there was a significant increase in reports of chlamydia, influenza, campylobacter, and pertussis.

Maternal and child health

- The number of women giving birth in the ACT increased by six per cent (2007-09).
- The ACT had significantly fewer low-birthweight babies than nationally.
- The 2009 ACT perinatal and infant mortality rates was similar to the national rates.
- One in five ACT children (21.7%) were overweight or obese.

6.1. Cardiovascular disease

Cardiovascular disease (CVD) refers to diseases of the heart and blood vessels. Within this broad group, coronary heart disease (CHD or ischaemic heart disease) is the leading cause of disease burden, followed by cerebrovascular disease (including 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.[25]

6.1.1. Morbidity

Based on self-reports from the 2007-08 National Health Survey, an estimated 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%).[26]

The main risk factor for CVD is age. The major preventable risk factors are tobacco smoking, high blood pressure, high blood cholesterol, insufficient physical activity, overweight and obesity, poor nutrition and diabetes.[27] Unalterable risk factors include sex, ethnicity and a family history of heart disease.[28]

Results from the 2009-10 ACTGHS showed that:

- Persons who had ever been told they had cardiovascular disease were significantly more likely (than those not told) to be overweight (61.0%) or obese (50.5%).
- There was no difference in adequate levels of physical activity by CVD status (told they had CVD: 53.1%, not told: 53.8%).
- 27.8% of all respondents reported to have ever been told that they had high blood pressure and of these 57.8% reported still having high blood pressure, of whom 90.1% were currently on medication for the condition.
- 22.1% of all respondents reported ever having been told that they had high cholesterol. Of these, 56.1% reported still having high cholesterol and 97.2% were either on medical treatment or making some lifestyle change to lower their cholesterol.

Findings from the Heart Foundation HeartWatch Survey of 30-65 year old residents in the ACT (July 2010-June 2011) revealed that 37.4% had spoken to their GP or other health care professional in the last two years about their risk of developing heart disease, with significantly more men (43.5%) than women (30.1%) reporting this. Furthermore, of all adults surveyed 91.9% had a blood pressure check, 72.1% had a test for cholesterol, and 32.7% had a heart health check-up conducted by a doctor or other health professional in the last two years.

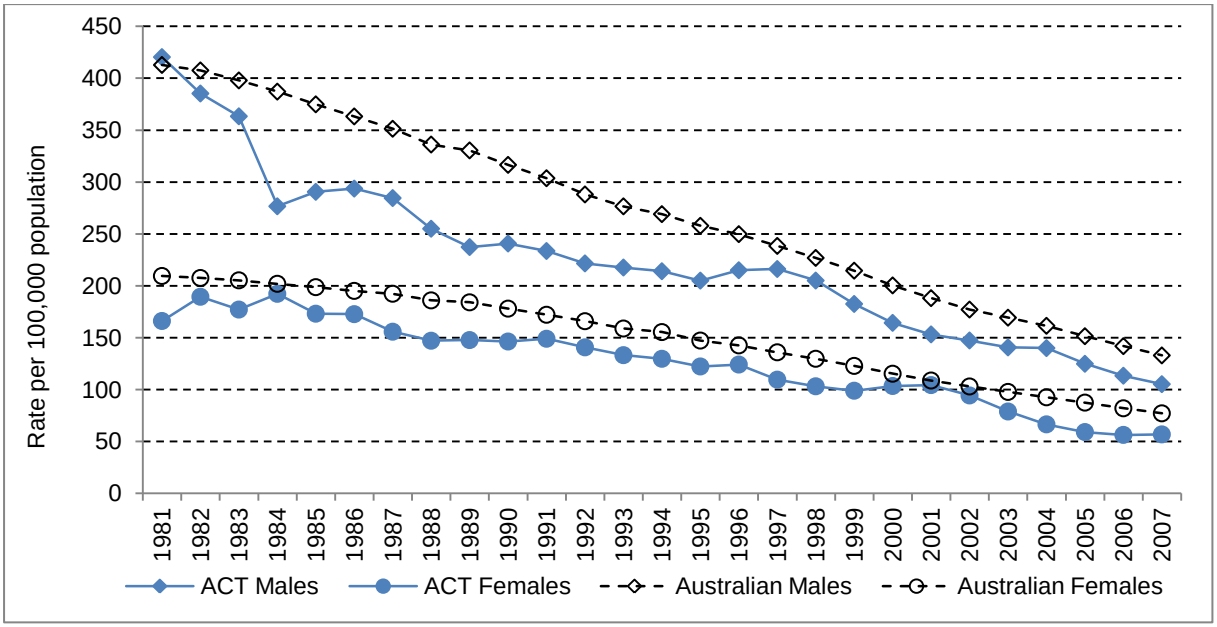
In 2009-10, age-standardised rates for hospital separations for CVD were close to three times higher for males (870.6 per 100,000) than for females (326.4 per 100,000). Rates were also higher than the previous decade (males: 816.2 per 100,000, females: 319.3 per 100,000 in 1998-99). The most common procedures performed for CHD in ACT hospitals included coronary angiography, coronary angioplasty and coronary artery bypass grafting. The condition was also commonly treated by generalised allied health interventions.

6.1.2. Mortality

During 2009, 557 deaths (34% of all deaths) in the ACT were due to cardiovascular disease.[21] Of these, the main causes were CHD (43%) and cerebrovascular disease (25%), with the remainder due to a range of hypertensive and pulmonary conditions and other forms of heart disease. Mortality increased with age (with age-specific mortality rates increasing from 12.5 per 100,000 in persons aged 45-54 years to 2,353.5 in those aged 85-94 years for CHD, and from 2.1 per 100,000 in persons aged 45-54 years to 1,352.0 in those aged 85-94 years for cerebrovascular disease). In 2009, age-standardised mortality rates for cardiovascular disease were higher in males (223.3 per 100,000 population) than females (163.3). While males were more likely to die from CHD than females (male:female ratio 1.20:1), they were less likely to die from cerebrovascular disease than females (male:female ratio 0.6:1).

Age-standardised mortality rates for CHD in males and females in the ACT and nationally have continued to decline since the early 1980's (refer Figure 16). This decline was more marked in males than females and rates of CHD in the ACT for both sexes have remained lower than national rates. Despite these trends, CHD remains a leading cause of mortality both in the ACT and nationally.

Figure 16: Coronary heart disease mortality, age-standardised rates, by sex, ACT & Australia, 1981-2007



Sources: AIHW, 2010, State & Territories GRIM Books. AIHW: Canberra

ABS, *Causes of Death Australia*, cat.no. 3303.0, 2007-09

Notes: (a) Rates adjusted to the Australian Standard Population 2001.
(b) Three year leading moving averages were used to smooth age-standardised mortality rates for CHD deaths in the ACT, to better discern trends by removing year to year fluctuations due to the relatively small numbers. For instance, the 3-year moving average for 2007 was calculated from the average age-standardised mortality rates for 2007, 2006 and 2005.
(c) Underlying cause of death is coded to ICD-9 codes from 1979 to 1996 and to ICD-10 codes from 1997 to 2007. The GRIM data are reported by year of death, except for the most recent year of data, 2007-09, which are reported by year of registration of death. 2009 deaths data are preliminary and should be treated with caution.

6.2. 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%).[11] Cancer will continue to be a leading contributor to the burden of disease as the population ages. The impact of screening programs that identify more new cases and improvement of survival rates due to advances in treatment and early detection of cancers, improve the ability to determine cancer impact on the population.

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, in addition to providing information to the Australian Institute of Health and Welfare to develop national statistics of cancer in Australia.

6.2.1. Incidence

In 2008, there were 1,433 new cases of cancer diagnosed in ACT residents (56% males and 44% females). For the period of 2004-08, there was an average of 1,346 new cases of cancer diagnosed per year (5-year total: 6,730). The overall crude rate for 2004-08 was 439 per 100,000 population for males and 365 per 100,000 population for females.

Table 6: All cancers, incidence, rates & lifetime risk, ACT, 2004-08

All cancers	Crude rate	ASR	Lifetime risk	Lifetime risk
	(per 100,000)	(per 100,000)	To age 75	To age 85
Male	439	540	1 in 3	1 in 2
Female	365	384	1 in 4	1 in 3
Persons	402	304	1 in 3	1 in 2

Source: ACT Cancer Registry
Notes: (a) All cancers excluding non-melanocytic skin cancers.
(b) ASR: age-standardised rate using Australian population 2001 as the standard.

The most common cancers were: prostate cancer (18%), female breast cancer (15%), colorectal cancer (13%), melanoma of the skin (10%) and lung cancer (7%).

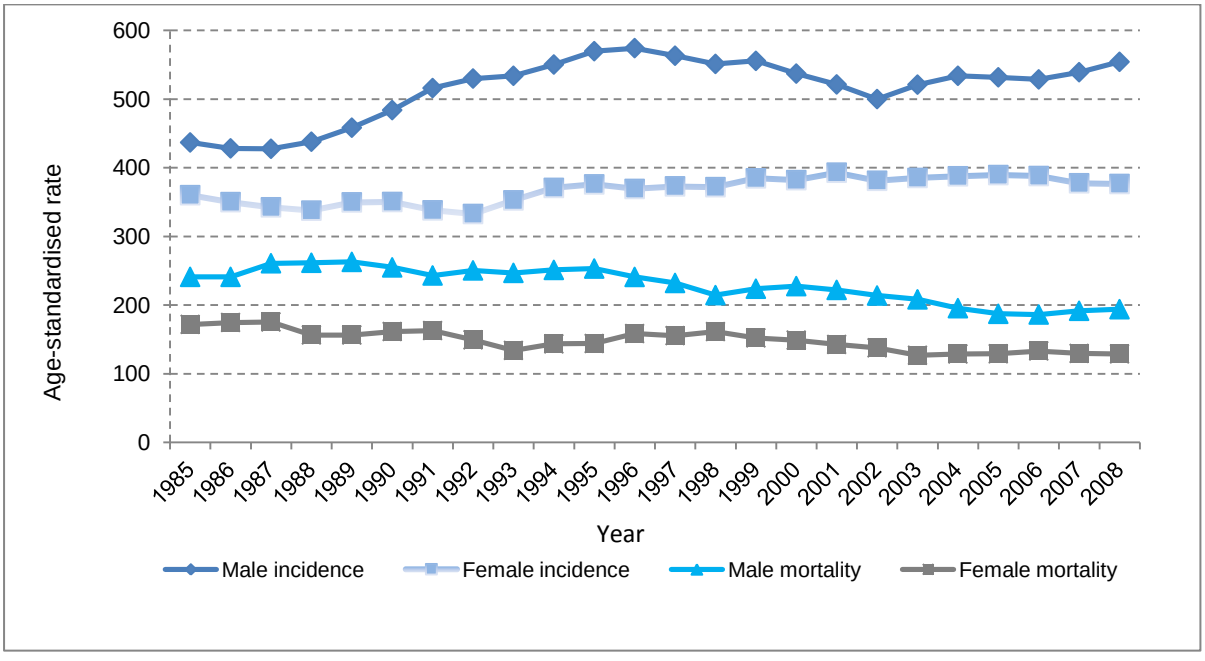
The most common cancers in males were prostate cancer, colorectal cancer, melanoma of the skin and lung cancer. The risk of developing cancer before the age of 85 years was 1 in 2 and the median age at diagnosis was 65 years.

The most common cancer in females was breast cancer, followed by colorectal cancer, melanoma of the skin, and lung cancer. The risk of developing cancer before the age of 85 years was 1 in 3 and the median age at diagnosis was 61 years.

Over the period 1985 to 2008 there was a significant increasing cancer incidence trend for female breast, prostate, melanoma of the skin (males), Non-Hodgkin's lymphoma (males) and lung (females).

At the end of 2007, there were 2,561 males and 2,333 females who were living in the ACT following a diagnosis of cancer within the previous five years.

Figure 17: All cancers, incidence & mortality rates (3-year moving average), by sex, ACT, 1985-2008



Source: ACT Cancer Registry, 1985-2008
Note: Age-standardised rate per 100,000 population using the Australian Standard Population (2001) as the standard. 2008 deaths data are preliminary and should be treated with caution.

6.2.2. Mortality

In 2008, there were 451 ACT residents who died from cancer. For the period of 2004-08, there was an average of 426 cancer-related deaths per year (5-year total: 2,128). The overall crude mortality rate for 2004-08 was 137 per 100,000 population for males and 117 per 100,000 population for females.

The most common causes of cancer-related deaths were: lung cancer, colorectal cancer, breast cancer and prostate cancer. The primary site of 6.6% of all cancer-related deaths was unknown.

The most common causes of cancer-related death in males were lung cancer, followed by colorectal cancer and prostate cancer. The risk of a male dying from cancer before 85 years was 1 in 4.

The most common causes of cancer-related death in females were breast cancer, followed by lung cancer and colorectal cancer. The risk of a female dying from cancer before 85 years was 1 in 7.

The mortality rate for all cancers combined decreased steadily and significantly over time. An average decrease in mortality rate of 1.4% for males and 1.2% for females per year was estimated for the period of 1985 to 2008. Cancers that showed a significant downward trend in mortality over time included colorectal cancer in both sexes, lung cancer in males and cervical cancer in females.

6.2.3. Selected cancers

Breast cancer

Breast cancer was the most common cancer occurring in females, and the highest cause of cancer related death in females in the ACT. Risk factors include family history, reproductive factors, body size/obesity, alcohol consumption, physical activity and exogenous hormones (oral contraceptives, hormonal replacement therapy).

In 2008, there were 207 new cases of female breast cancer diagnosed in ACT residents. In 2004-08, with 1,035 cases, the crude incidence rate was 122 cases per 100,000 population. One in eight females in the ACT developed breast cancer before the age of 85 years. The crude mortality rate was 23 deaths per 100,000 population. The risk of a woman dying from breast cancer before the age of 85 years was 1 in 42.

The median age at diagnosis was 57 years and the median age at death was 62 years.

As for most cancers, incidence and mortality of female breast cancer increased with age. Seven per cent of cases were diagnosed in females under 40 years of age; 20 per cent from 40-49 years of age, 53 per cent from 50-69 years (target group for the BreastScreen program); 20 per cent from 70 years and above.

The age-standardised incidence rate increased significantly at an average of 3.2 per cent per year from 1985 to 2002. This upward trend could be due to the introduction of mandatory cancer notification in 1994 in the ACT, resulting in increased notifications. Further, increased screening and early detection as a result of the introduction of the BreastScreen program in 1993 for women 50-69 years, may also have contributed to this increase.

From 2002 to 2008, the incidence rate decreased at an average of two per cent per year, but the downward trend was not statistically significant. The decrease in incidence coincided with a fall in the use of hormonal replacement therapy in women over 50 years of age in the ACT (2001: 22.4%, 2004-05: 15.6%).[29] This downward trend was also reflected at the national level.[30]

The age-standardised mortality rate decreased over time at an average of 0.5 per cent per year from 1985 to 1996 and by 2.8 per cent per year from 1996 to 2008. However, none of these trends were statistically significant.

Prostate cancer

Prostate cancer was the most common cancer occurring in males, and the third highest cause of cancer-related death in males in the ACT. Risk factors include family history, older age, highly saturated fat diet, smoking, exposure to heavy metal (eg. cadmium), exposure to pesticides and sedentary life style.

In 2008, there were 313 new cases of prostate cancer diagnosed in ACT male residents. There was an average of 245 new cases per year for the period of 2004-08 (5-year total: 1,227). In 2004-08, the crude incidence rate was 148 cases per 100,000 population. One in four males in the ACT developed prostate cancer before the age of 85 years. The median age at diagnosis was 66 years and median age at death was 80 years.

Age-specific incidence increased sharply from 50 years of age. This rise was partly due to age and more importantly due to increasing awareness of prostate cancer that leads to screening.

The age-standardised incidence rate increased significantly at an average of 16 per cent per year from 1985 to 1995. The upward trend was attributed to improvement in diagnostic testing using Prostate Specific Antigen Test that results in earlier diagnosis of clinically silent prostate cancers. The peak incidence occurred in the mid 1990s. An increase in incidence since 2002 was also seen nationally.[30, 31]

Age-specific mortality increased gradually with age and rose steadily from 60 years and over. The crude mortality rate in 2004-08 was 18 deaths per 100,000 population. The risk of dying from prostate cancer before the age of 85 years was 1 in 28 males. The age-standardised mortality rate has been stable over time.

Mesothelioma

Malignant mesothelioma is an uncommon cancerous tumour of the lining of the lung and chest cavity (pleural) or lining of the abdomen (peritoneum) that is typically due to long-term asbestos exposure. 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 28 new cases reported in the five year period between 2004 and 2008. The age-standardised rate was two new cases per 100,000 population in 2004-08 (Australia: 3 new cases per 100,000 population in 2007).

The risk of being diagnosed with mesothelioma in the ACT before the age of 85 years was 1 in 193 in males and 1 in 2,199 in females.

Due to the low incidence of mesothelioma, deaths due to this cancer are also rare. Over the five year period 2004-08, there were 22 deaths in the ACT. The age-standardised mortality rate was 1.5 deaths per 100,000 population (Australia: 2.4 deaths per 100,000 population in 2007).

6.2.4. Cancer 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) 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. (refer Table 23 and Table 25).

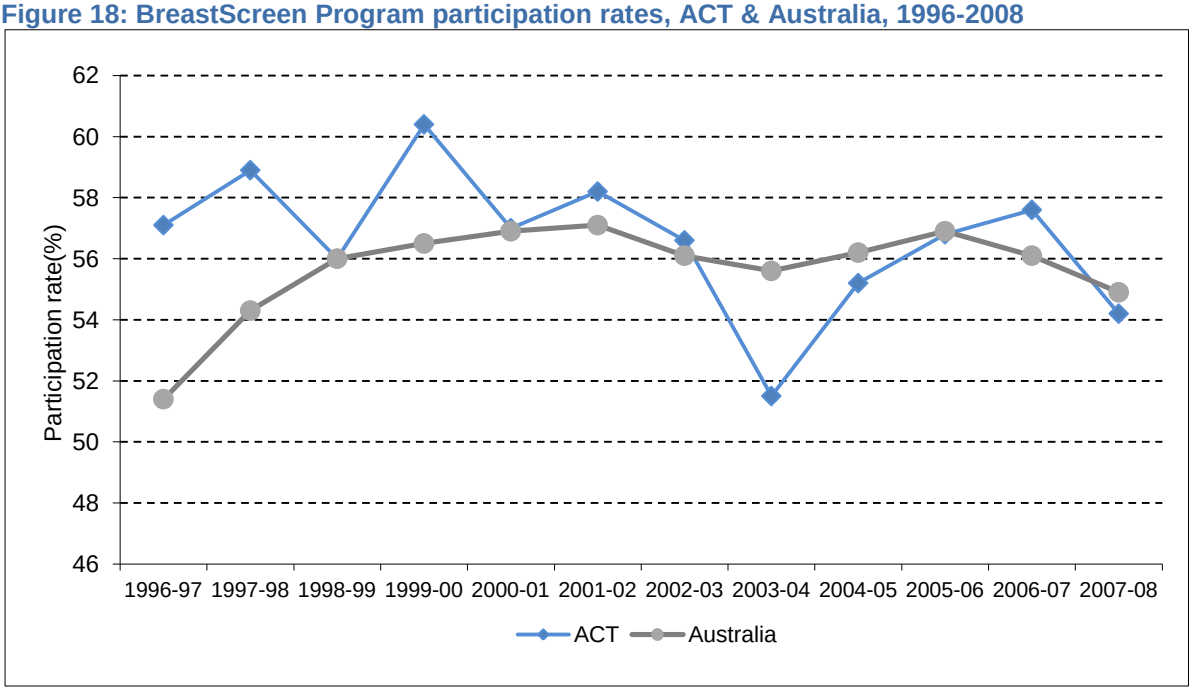
Breast cancer screening

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, established in 1991, commenced 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 targets asymptomatic women aged 50-69 years of age, with a target participation rate of 70%. Any women aged 40 years and older is also able to attend screening.

The ACT participation rate remained between 50-55% for most years during 1996-2008, lower than the target participation rate. These results are consistent with national results (refer Figure 18).

Figure 18: BreastScreen Program participation rates, ACT & Australia, 1996-2008



Source : AIHW, BreastScreen Ausralia Monitoring Reports, 1996-2008

Cervical screening

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 35,368 women were screened in 2010 (2009: 35,499). In 2010, 5.6% of women screened had either a low grade (4.5%) or high grade (1.1%) abnormality detected in their Pap smear.

The two-year participation rate of the eligible women (20-69 years) was 59.9% in the ACT (Australia: 58.6%).

In addition to this program, the incorporation of human papillomavirus (HPV) vaccination into the National Immunisation Program should reduce the prevalence of cervical abnormalities over time (refer Chapter 6.7.3).

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* (NBCSP). 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.

During the period of 1 July 2008 and 30 June 2011, the Phase 2 of the NBCSP, ACT residents had a significantly higher participation rate in the program compared to national rates (ACT: 40.8%, Australia: 38.4%).

6.3. 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.[32]

Mental health disorders were responsible for 15% of the total burden of disease and injury in the ACT in 2003, slightly higher than the national figure of 13.3%.[25] The main contributors to this disease burden were: anxiety and depression (60%), substance use disorders (14%), and personality disorders (11%).

6.3.1. 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%).[33] Specific disorders included: mood disorder (7.8%), anxiety disorder (3.6%) and other mental and behavioural disorders (5.0%).

Results of the 2009-10 ACTGHS show that persons who reported having been diagnosed with a mental health problem in the previous 12 months were more likely than the rest of the ACT adult population to report current smoking (22.7%: 13.0%), and inadequate physical activity levels (55.0%: 40.8%). Of those who were diagnosed in the previous 12 months with a mental health disorder, 53.8% were currently receiving treatment.

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 2009-10, 9.8% of ACT residents 18 years and over reported symptoms of high to very high psychological distress over the previous four weeks using the Kessler Psychological Distress Scale (K10) compared to 9.0% in 2007-08.[34] Information collected through the ACTGHS also shows that:

- Females were more likely to report symptoms of high to very high psychological distress than males. (In 2009-10: 11.3% of females compared to 8.3% of males).
- In 2009-10, 29.0% of women and 17.7% 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 compared to 35.6% of females and 15.7% of males in 2007-08.
- In 2007-08, 70.4% 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, increasing to 76.0% in 2009-10.
- In 2007-08, 39.9% of the ACT population reported reduced activities for more than a week as a result of the condition decreasing to 33.7% in 2009-10.

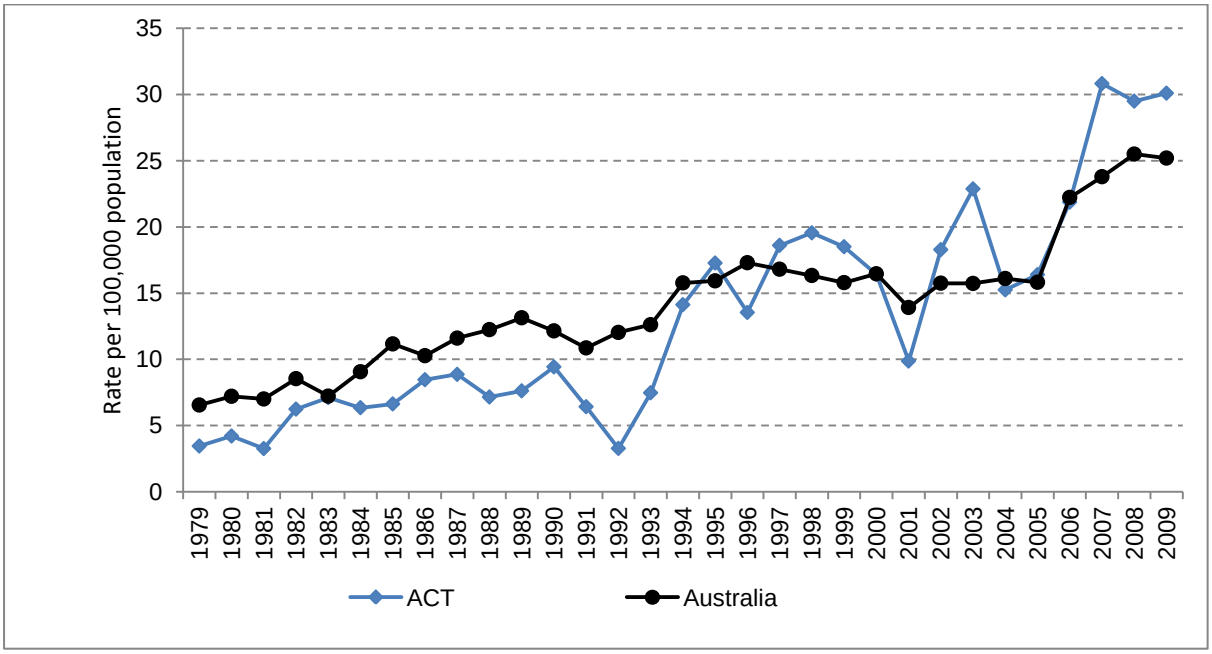
In 2009-10, there were 2,935 hospital separations for ACT residents with a primary diagnosis of mental or behavioural disorder. Of these, 37.4% involved a diagnosis of mood (affective) disorder, 20% had psychotic disorders such as schizophrenia, 16% had a diagnosis of neurotic, stress related or somatoform disorders and 16% had a mental disorder due to substance use.

6.3.2. Mortality

During 2009, 89 (5%) ACT death registrations were attributed to mental or behavioural disorders (32 males and 57 females). Dementia was the cause of death for over 88.8% of these deaths.[21]

The age-standardised ACT mortality rates for mental and behavioural disorders fluctuate 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 (refer Figure 19).

Figure 19: Mental & behavioural disorder mortality, age-standardised rates, ACT & Australia, 1979-2009



Sources: ABS, *Causes of Death Australia*, cat. no. 3303.0, 2008-09
AIHW 2010. State & Territories GRIM Books, 2010

Notes: (a) Rates adjusted to the Australian Standard Population 2001.
(b) Underlying cause of death is coded to ICD-9 codes from 1979 to 1996 and to ICD-10 codes from 1997 onwards.
(c) The GRIM Books data are reported by year of death, except for the most recent years of data; 2007-09, which are reported by year of registration of death. 2008 and 2009 ABS deaths data are preliminary and should be treated with caution.

6.4. Injury

Injury is a leading cause of premature mortality and accounts for an estimated 7% of the total burden of disease in the ACT and Australia.[25] 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.

6.4.1. Morbidity

In 2009-10, 6,673 injuries resulted in hospitalisation in the ACT. The age-standardised rates of hospital separations with injury as a primary diagnosis was 1,932.6 per 100,000 in 2009-10 and was similar to rates in 2007-08 (1,753.3 per 100,000) and in 2005-06 (1,809.7 per 100,000). The leading causes of injury-related hospital separations were: falls (32%), complications of care (16%), land transport accidents (12.1%), exposure to inanimate mechanical forces (e.g. power tool and machinery injuries, accidental firearm discharges, being struck by objects such as sporting equipment) (11.4%) and intentional self-harm (5.1%).

Females were more likely to be hospitalised for falls injuries (females: 40.7%, males: 25.1%) and intentional self-harm (females: 7.9%, males: 2.9%) than males.

Males were more likely to be hospitalised for land transport accidents (males: 14.7%, females: 8.8%); and exposure to inanimate mechanical forces (males: 14.6%, females: 7.4%) than females.

In 2009-10, the highest age-specific rates for hospital separations were in ACT residents aged 65 years and over (4,506.5 per 100,000 persons). Falls comprised 63% of hospitalisation separations due to injury in this age group, followed by complications of care (22%).

The second highest rates occurred in those aged 20-24 years of age (2,205.1 per 100,000), and the leading causes of hospital separations due to injury were land transport accidents (19.8%), exposure to inanimate mechanical forces (16.3%), falls (12%) accidental exposure to other and unspecified factors (9.8%), assaults (9.7%) and self harm (9.1%).

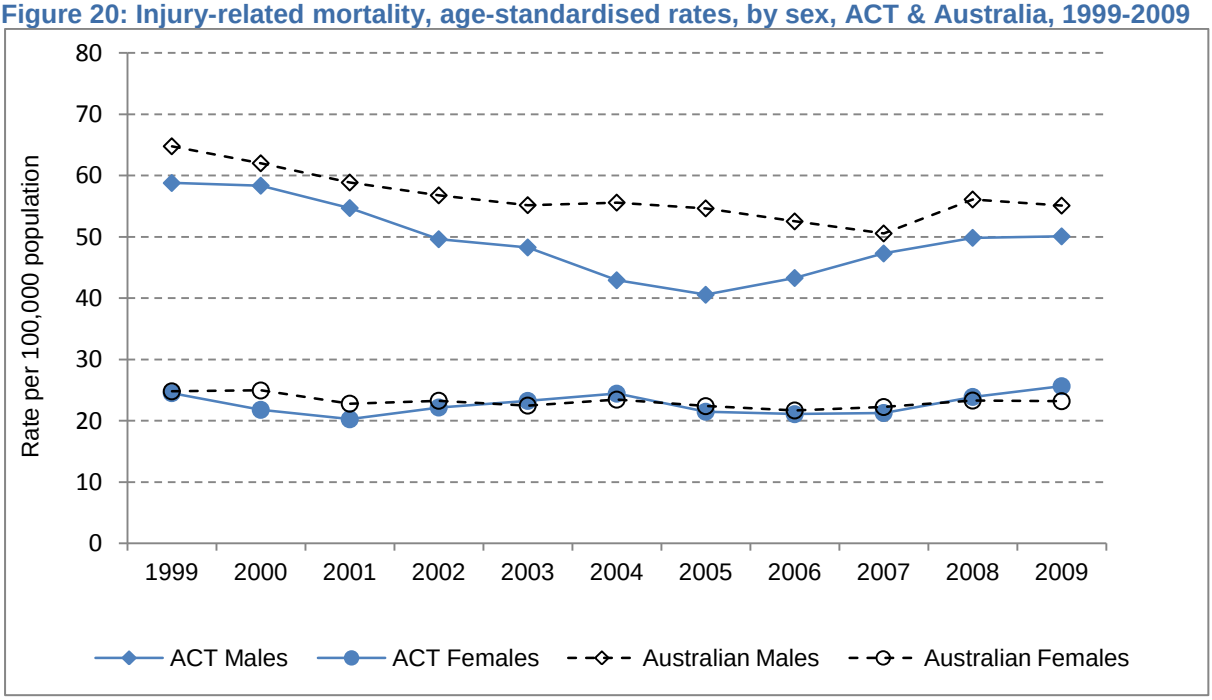
Most injuries requiring treatment present to emergency departments, but are not admitted into hospital. In 2009-10, there were 23,820 ACT residents (males: 59.4%; females: 40.6%) who presented with an injury to ACT hospital emergency departments. Injuries accounted for more than a quarter (25.9%) of all ACT resident emergency department presentations in the Territory.

6.4.2. Mortality

In 2009, there were 126 deaths with an underlying cause of injury in the ACT, with 60% of deaths occurring in males.[21] Age-standardised mortality rates for injury-related causes decreased for males in the ACT from 1999 to 2005, but have been increasing ever since. Current rates are still lower than 1991 rates. In comparison, rates for females have remained largely unchanged. Injury-related mortality rates for males in the ACT were consistently lower than those for Australian males, while mortality rates for females in the ACT were similar to rates for Australian females over the reported period (refer Figure 20).

In 2009, the leading underlying causes of injury-related mortality in the ACT were: intentional self-harm (25.4%), falls (18.3%), road transport injury (13.5%), and accidental poisoning (10.3%).

Figure 20: Injury-related mortality, age-standardised rates, by sex, ACT & Australia, 1999-2009



Source: AIHW 2010, State & Territories GRIM Books, AIHW, Canberra

Notes: (a) Rates adjusted to the Australian Standard Population 2001.
(b) Underlying cause of death is coded to ICD-9 codes from 1979 to 1996 & to ICD-10 codes from 1997 to 2007.
(c) The GRIM Books data are reported by year of death, except for the most recent years of data; 2007-09, which are reported by year of registration of death. 2008 and 2009 ABS deaths data are preliminary and should be treated with caution.
(d) To better discern trends, the age standardised mortality rates presented for the ACT have been smoothed using three-year leading moving averages. This technique was used to smooth the random yearly fluctuations that can occur due to the small number of deaths from injury-related causes in the ACT. Hence, (e.g.) the rate for the year 2007 is based on the years 2005-2007.

6.4.3. Selected causes of injury

Falls injury

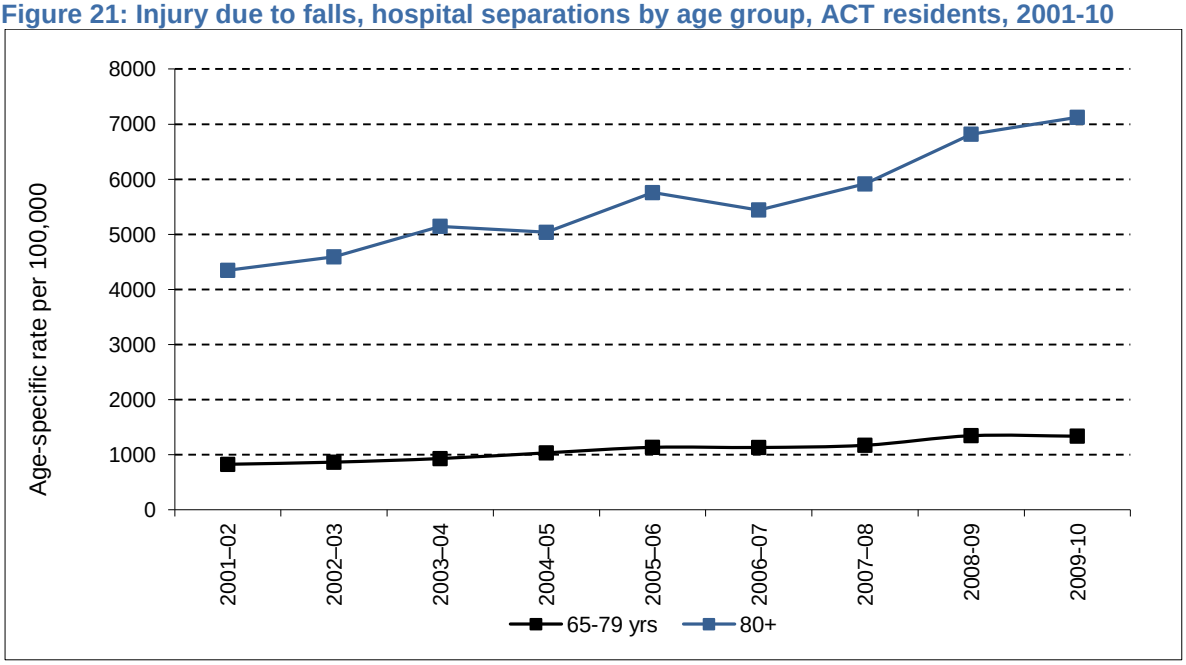
Falls are a leading cause of musculoskeletal trauma in the elderly and can lead to adverse long-term outcomes. Data from the 2009-10 ACTGHS show that 23.7% of ACT residents aged 65 years and over had a fall in the previous 12 months, with 30.3% of these people requiring medical attention. Twenty-one percent (21.2%) of residents aged 65 years and over reported having a fear of falling and 29% reported taking measures to minimise the risk of falling such as installing handrails (58%), replacing steps with ramps (12%) and removing mats and rugs (13%).

In 2009-10, there were 1,013 ACT residents aged 65 years and over who were hospitalised as a result of a fall-related injury. The age-specific hospitalisation separation rate for an injury due to a fall was markedly higher for those aged 80 years and over, compared to those aged 65-79 years (refer Figure 21). Moreover, the age-specific rate for persons aged 65-79 years increased from 825.4 per 100,000 in 2001-02 to 1,338.2 per 100,000 in 2009-10, and the rate almost doubled in persons aged 80 years and over from 4,347.1 per 100,000 in 2001-02 to 7,124.3 per 100,000 in 2009-10.

In 2009-10, the main body sites that people aged 65 years and over sustained injuries as a result of falls were the hip and thigh (29%), the head (19%), the shoulder and upper arm (11%), the elbow and forearm (11%) and injuries to the abdomen, lower back, lumbar spine and pelvis (10%).

The most recent data available indicates that in 2007, there were 30 deaths recorded in persons aged 65 years and over where a fall was recorded as either an underlying or contributing cause.

Figure 21: Injury due to falls, hospital separations by age group, ACT residents, 2001-10

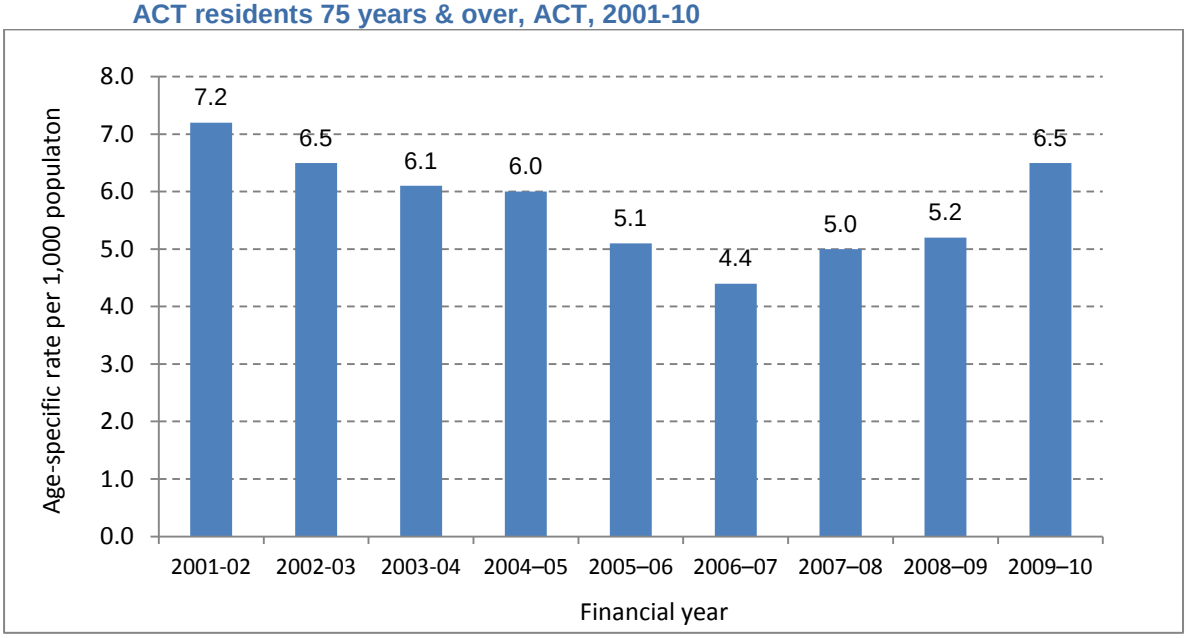


Source: ACT Health, Admitted Patient Care Data Collection, confidentialised unit record file, 2001-10
Note: Hospitalisations due to falls are based on separations with a primary diagnosis of an injury and with a secondary diagnosis of external cause for falls (ICD-10-AM codes S00.0 to T98.99 and W00.00 to W19.99). Statistical discharges and transfers have been excluded.

Rates of neck of femur (hip) fractures are an important indicator of serious injury from falls in the elderly. In 2009-10, the age-specific hospital separation rate for these fractures in ACT residents aged 75 years and over was 6.5 per 1,000 (refer Figure 22). While rates of hip fractures declined steadily between 2001-02 and 2005-06, they have shown an apparent increase since 2007. This is likely to reflect an ageing population with people aged 80 years and over being at highest risk of hospitalisation due to a fall.

Current rates are still lower than the 7.2 per 1,000 reported in 2001-02, however a possible trend cannot be discounted if increases in hospital separations due to fractured neck of femur continue.

Figure 22: Hip (neck of femur) fracture due to falls, hospital separations, age-specific rates, ACT residents 75 years & over, ACT, 2001-10



Source: ACT Health, Admitted Patient Care Data Collection, confidentialised unit record file, 2001-10

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

The social cost of serious casualty road traffic crashes in the ACT was estimated at $15.90 million per 100,000 population in 2008.[35] In the ACT in 2007-08, 568 road vehicle traffic crashes led to serious injury (those that result in the person being admitted to hospital, and subsequently discharged alive either on the same day or after one or more nights stay in a hospital bed). During this period the age-standardised rate for serious injury from road crashes was 160.6 per 100,000 in the ACT compared to a national rate of 153.4 per 100,000. Serious injuries from road crashes have been increasing in the ACT with average annual increase in age-standardised rates of 13.7% from 2000-01 to 2007-08. The ACT reported the highest annual increases in Australia.[36]

In 2010, about 44% of all casualties from recorded road vehicle traffic crashes occurred in people younger than 30 years of age (56% males, 44% females). The single most vulnerable group appears to be between 20 and 24 years of age, accounting for nearly 15% of all casualties.[35] Males accounted for 56% of all road transport injuries in 2010.[37]

Nationally compiled data on trends in age-standardised rates for road vehicle traffic crashes that resulted in serious injuries with a high threat to life, show that all states and territories except South Australia recorded an upward trend in the number of persons seriously injured during the period from 2000-01 to 2007-08. The ACT recorded the highest rates of high threat to life injuries in drivers, motorcyclists and pedal cyclists in Australia in 2007-08, but the lowest rates in pedestrians (refer Table 7). However, none of the average annual changes in these rates during the reporting period were statistically significant.[36]

In total, there were 75 casualties from pedal cycle accidents in the ACT in 2010 reported to Roads ACT.[35] These included two fatalities, 11 hospital admissions and 62 people receiving medical treatment. Pedal cyclists accounted for 9.4% of all on-road causalities in 2010. Over the period 2000-01 to 2007-08, 94 people were hospitalised with high threat to life injuries as a result of a pedal cyclist injury in the ACT.[36] Most pedal cycle casualties involve persons aged less than 20 years, however there is a peak in serious injuries among pedal cyclists aged 35 to 49 years of age.[38] Research by the Australian National University Medical School indicates that pedal cycle-related road trauma is under-reported to police.[38]

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.[39] 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; 19% in 2010).[40]

Table 7: Road vehicle transport crashes, high threat to life injury rates by road user type, ACT & Australia, 2007-08

Road user type	ACT	Australia
	Rate per 100,000	Rate per 100,000
Drivers	16.7	15.2
Passengers	8.0	7.7
Motorcyclists	12.4	9.0
Pedal cyclists	7.0	4.3
Pedestrians	2.1	4.9

Source: AIHW: Henley G & Harrison JE 2011, *Trends in serious injury due to land transport accidents, Australia 2000-01 to 2007-08*. Injury research and statistics series no. 56. Cat. no. INJCAT 132. Canberra: AIHW

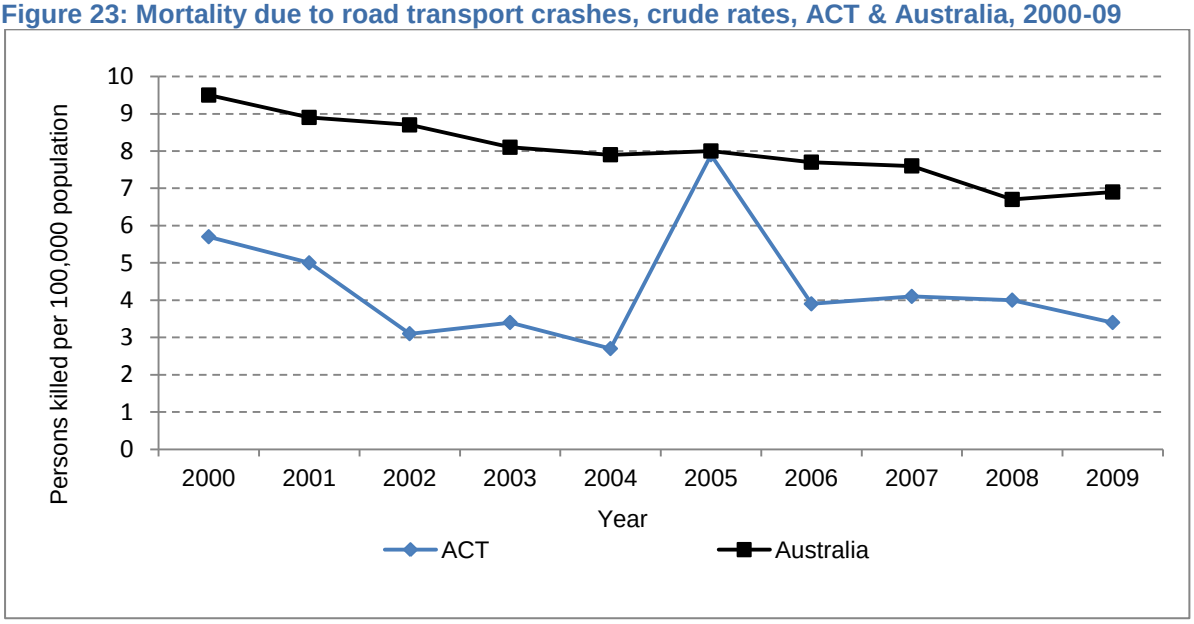
Notes: (a) The rates presented in this table are not comparable with the rates for serious injury due to road vehicle traffic crashes presented in the last report. The rates in this report refer to high threat to life cases, which are a subset of serious injury data and are selected on the basis of having an ICD-based Injury Severity Score of less than 0.941. Rates for all serious injury were not available for 2007-08.

(b) Rates per 100,000 population, adjusted by direct standardisation to the Australian population in June 2001.

In 2009, there were 17 registered deaths for ACT residents with an underlying cause of death due to a road transport injury.[21] Since 1988, rates of persons killed per head of population from road transport crashes have been lower than the national average (refer Figure 23). Apart from 2005, the ACT's rate of persons killed per head of population has also been consistently the lowest amongst all Australian states and territories. This is thought to be because of the better road system, the urbanised environment, and the relatively modern vehicle fleet in the ACT compared to other states and territories.[41]

Over the period 1997 to 2007, males were 2.2 times more likely to die from a road transport injury than females in the ACT.

Figure 23: Mortality due to road transport crashes, crude rates, ACT & Australia, 2000-09



Source: Roads ACT Office of Transport, *2010 Road traffic crashes in the ACT,* Traffic Management and Safety, April 2010

Note: Rates are crude rates per 100,000 population.

Alcohol-related injury

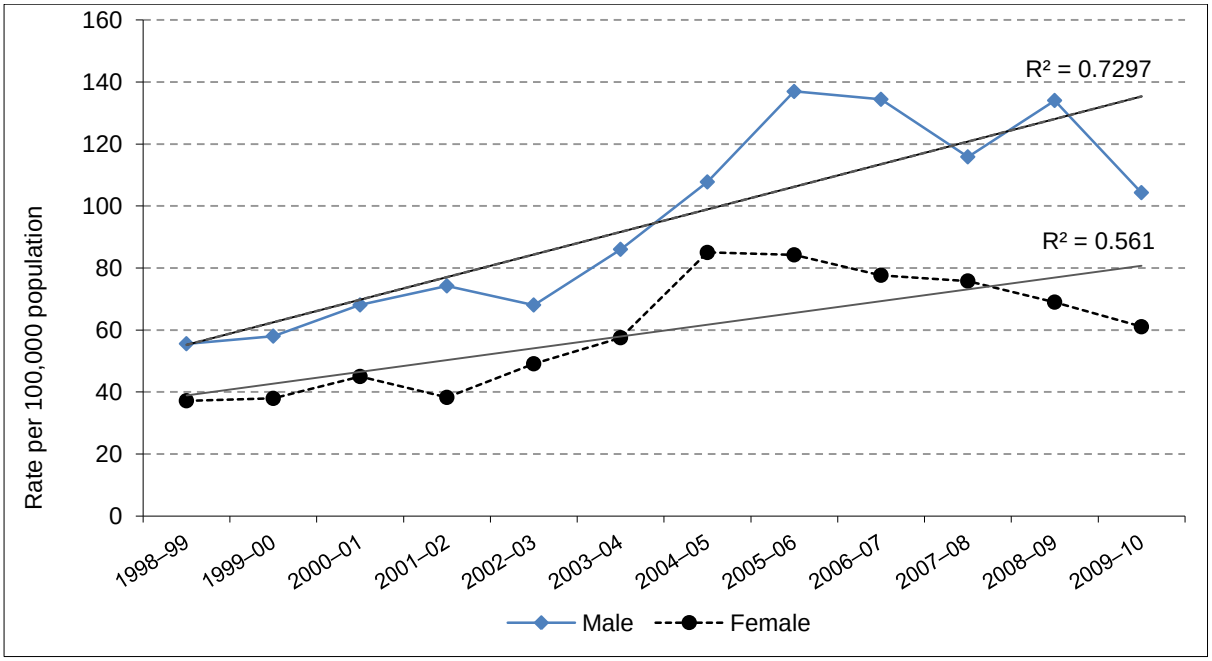
Alcohol abuse is estimated to account for two per cent of the total burden of disease in Australia.[11] Alcohol-related injuries occur in many situations, including motor vehicle accidents, falls, assault and

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.[20]

In 2009-10, there were 302 hospital separations due to an injury where alcohol was involved. Of those persons hospitalised, almost two-thirds (62.2%) were male and 3% were in persons under 18 years of age. The main causes of injury where alcohol was implicated were: suicide and intentional self harm (32.8%), falls (26.8%), assault (10.6%), transport accidents (9.6%) and events of undetermined intent (9.6%).

Between 2000-01 and 2009-10, the age-standardised rates for hospitalisations due to alcohol-related injury (where injury was the primary diagnosis) increased by 53% for males and 35% for females (refer Figure 24).

Figure 24: Alcohol-related injury hospital separations, age-standardised rates, ACT residents, 1999- 2010



Source: ACT Health, Admitted Patient Care Data Collection, confidentialised unit record file,1999–2010

Note: (a) Alcohol related injury hospitalisations are based on separations with a primary diagnosis of an injury (S00.00 to T98.99) and 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).

(b) The rates presented in this figure are not comparable with previous reports due to a change in analytical methods, whereby secondary diagnoses of an injury are excluded.

(c) R^2 is the coefficient of determination of goodness of fit of a model. An R^2 of 1.0 indicates that the regression line perfectly fits the data.

Over the period 1997 to 2007 there was an average of seven injury-related deaths per annum in the ACT where alcohol was recorded as a known contributing factor. Most of these deaths were in males (74.7%) with no apparent age-related trends.

6.5. 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 (refer Chapter 2.1).

6.5.1. Morbidity

In 2009-10 the ACT GHS showed that an estimated 6.7% of the ACT population were ever diagnosed with diabetes or high blood glucose. The proportion of people with diabetes who had a GP annual cycle of care in the ACT was 14%, compared to 18.1% nationally.[42] The ACT Kindergarten Survey showed that about 0.1% of children approximately 5 years of age reported to have diabetes.

In 2007-08, the National Health Survey showed that the proportion of people with diabetes (type 1 and type 2 inclusive) in the ACT (3%) was significantly lower than the national figure (4.2%). According to AIHW's further analysis, after adjusting for difference in age structure, the difference between the ACT and Australia was not statistically significant. This indicates that the difference between the ACT and Australia is due, at least in part, to the fact that people living in the ACT area are slightly younger on average.

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.

Table 8: Diabetes prevalence, estimates & projections, persons, ACT, 2005-20

	2005	2010	2015	2020
High estimate	15,482	17,433	19,650	22,286
Medium estimate	12,827	14,460	16,336	18,494
Low estimate	10,172	11,486	13,022	14,701

Source: ACT Health, 2010

Note: Projections are based on extrapolations from age-specific rates, derived from the National Health Survey series and the AusDiab study. National rates have been applied to the ACT population.

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.[43] 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

Gestational diabetes occurs during pregnancy and is a health risk for both 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 2009, 302 (5.1%) women gave birth in the ACT with a diagnosis of gestational diabetes, slightly lower than in 2007 (314; 5.7%).

In 2010 the International Association of Diabetes and Pregnancy Study Groups recommended new gestational diagnostic criteria which lowers the criteria bases on the fasting blood glucose level alone. These changes in the diagnostic criteria are expected to increase the incidence of gestational diabetes.

Diabetes management

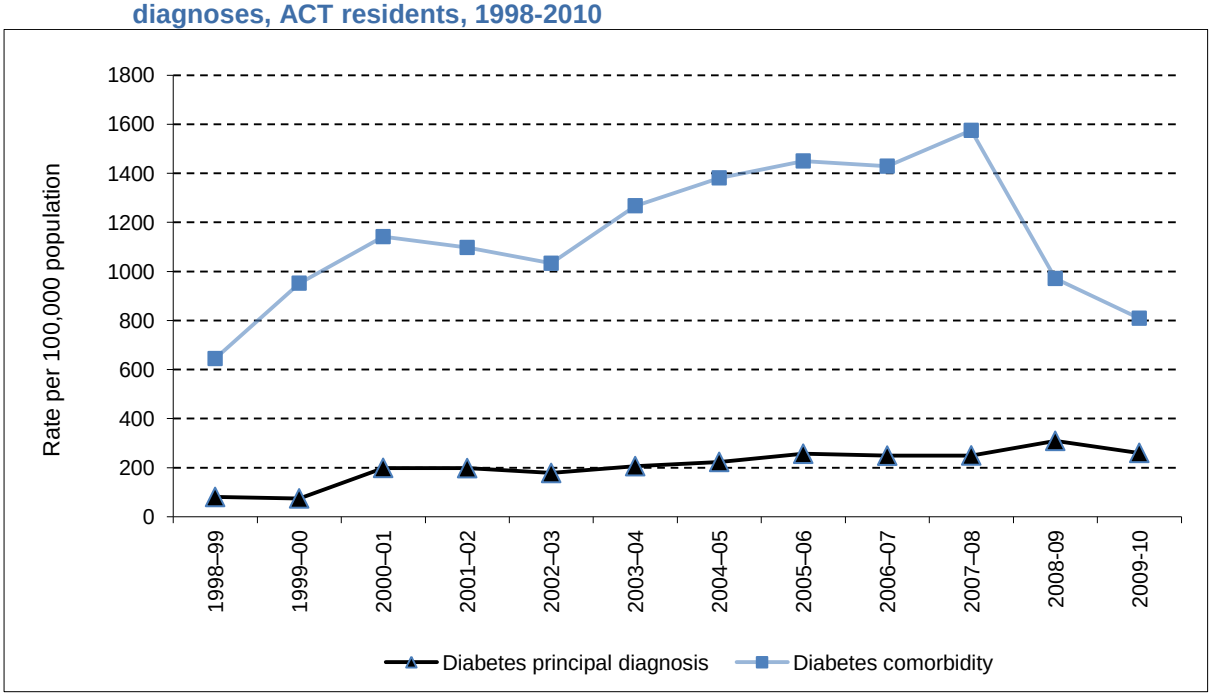
Results from 2009-10 ACTGHS show that:

- 59.4% of persons reporting to have diabetes reported to be on a special diet, 33.2% reported to be exercising on most days, 23.3% reported to be having injections and 58.7% were on tablets; and
- Only 6.4% of persons reporting to have diabetes reported to be losing weight, despite 73.1% 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. Separation rates for other conditions where there is a secondary diagnosis of diabetes, have increased gradually over time until 2008, and decreased notably since that time (refer Figure 25). The decrease may be a change in coding practices however and will be monitored in coming years.

In 2009-10, of those separations with a principal diagnosis of diabetes, the most common secondary diagnosis (co-morbidities) was: endocrine disorders (21%), followed by, circulatory system disorders (16%), digestive system disorders (5%), cancer (5%), respiratory disorders (7%), injury and poisoning (6%) and musculoskeletal conditions (5%).

Figure 25: Diabetes hospital separations, age-standardised rates, by principal or secondary diagnoses, ACT residents, 1998-2010



Source: ACT Health, Admitted Patient Care Collection, confidentialised unit record file, 1998-2010

6.5.2. Mortality

In 2009, there were 52 ACT resident deaths with diabetes recorded as the underlying cause of death (17.4 deaths per 100,000 population). There have been no major changes in the age-standardised death rate from diabetes since 1980. However, diabetes is 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.

6.6. Asthma

Australia has one of the highest prevalence 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). It was the leading specific cause of disease burden in children under 15 years.

6.6.1. Morbidity

In 2007-08, 32,300 (9.6%) ACT residents had current asthma.[44] This is a decrease from 2001 (12.3%).[45] 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 males under 15 years having higher rates than females. However, females aged 15 and over have higher prevalence rates than their male counterparts.[29]

The Kindergarten Screen Survey, run annually by the ACT Health Academic Unit of General Practice and Community Health, found that on average 10.8% of children in each year's cohort in the six years 2005-10, were reported by their parents as having asthma.[46] Of these children, 35% used at least one corticosteroid. Overweight and obese children were significantly more likely to report asthma than other children.[47]

Low exercise levels and obesity are common among people with asthma. Results from the 2009-10 ACT General Health Survey (ACTGHS) showed that:

- 8.2% adults (18 years or over) with asthma were also current smokers;
- 43.0% were sedentary or had low exercise levels;

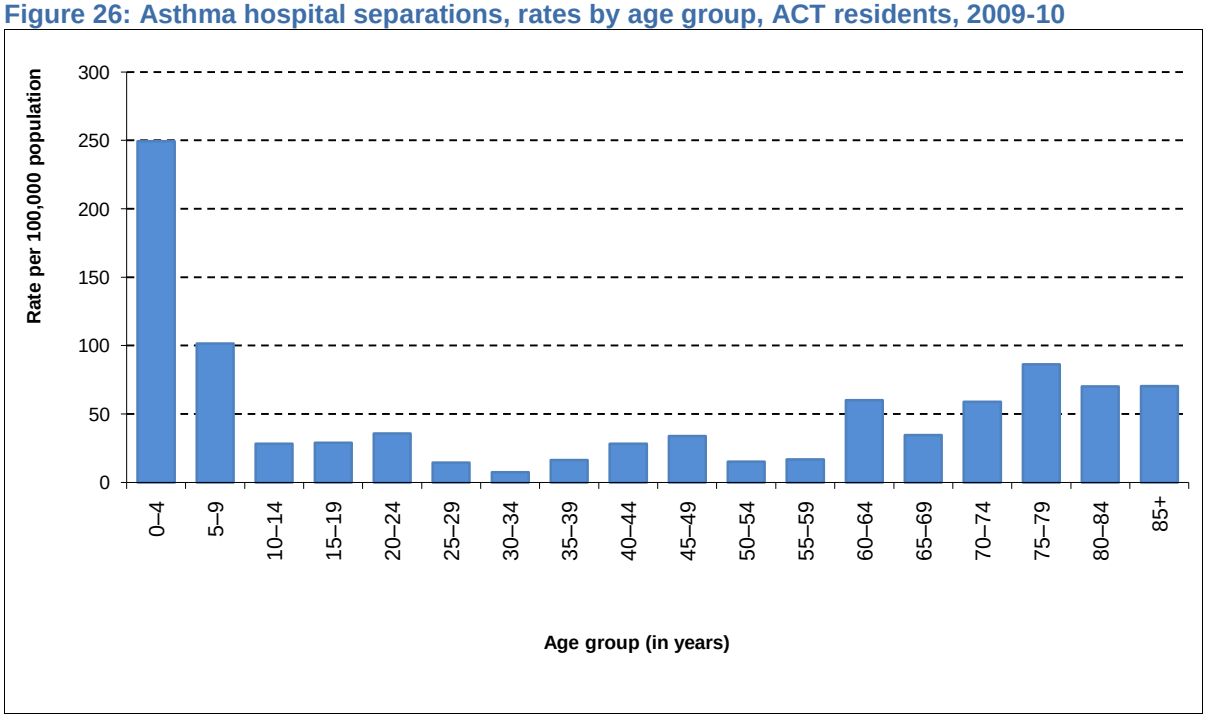
- 59.4% were overweight or obese at the time of survey; and
- 14.5% of adults with asthma reported that this condition interfered with their daily living.

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 2009-10 ACTGHS indicate that around 32.1% of people with asthma in the ACT had a written asthma plan.[42]

Hospitalisation data show a decline in the number of separations with a principal diagnosis of asthma between 2000-01 and 2009-10 at a rate of 3.1% per annum. In 2009-10, asthma separations for ACT residents accounted for less than 0.3% of all hospitalisations in the ACT. This decrease may reflect the continuing improvement of asthma management in the community.

Hospital separation rates are not evenly distributed across the population. Serious asthma morbidity is more common among young children and older people. The highest rate is seen in infants and very young children (0-4 years) accounting for 34 per cent of all asthma separations from ACT hospitals by ACT residents in 2009-10, while older people (60 years and over) accounted for 18.8 per cent (refer Figure 26).

Figure 26: Asthma hospital separations, rates by age group, ACT residents, 2009-10

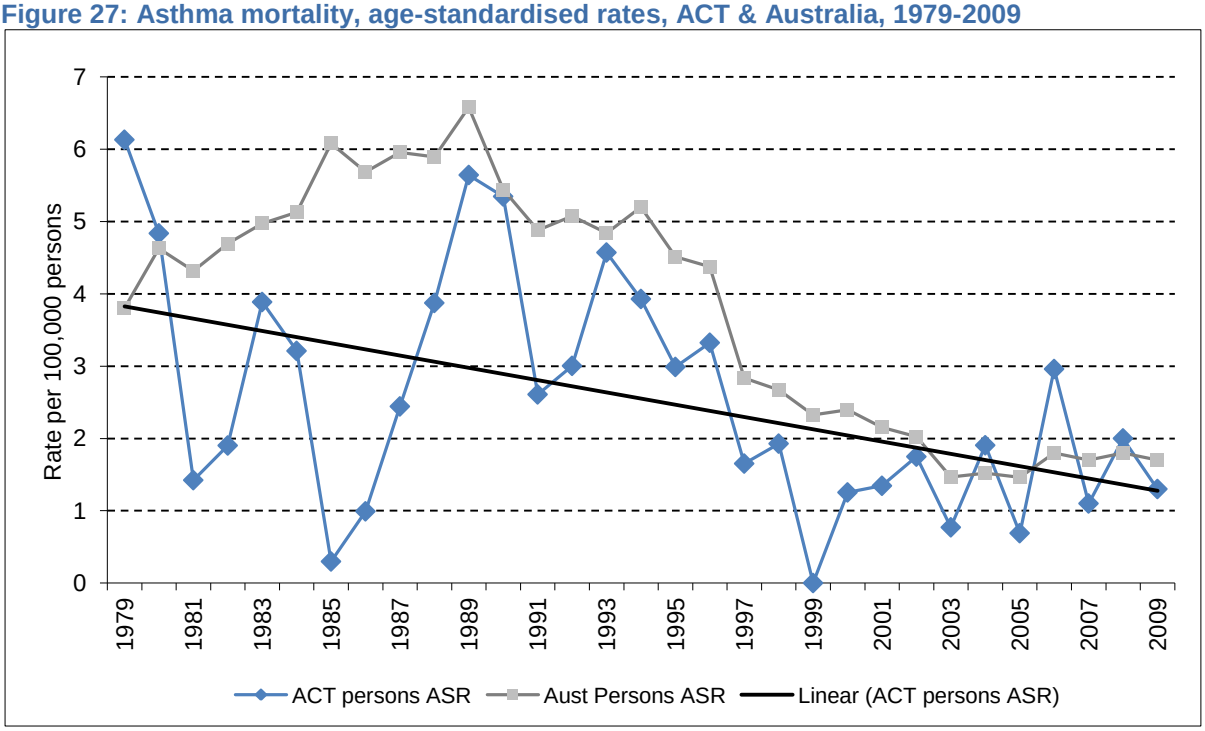


Source: ACT Health, Admitted Patient Care Data Collection, confidentialised unit record file, 2009-10.

6.6.2. Mortality

There has been an ongoing decline in the asthma mortality rate over the last two decades in both the ACT and Australia. ACT rates have fluctuated due to low number of cases. There were less than five deaths due to asthma in 2009 (refer Figure 27).

Figure 27: Asthma mortality, age-standardised rates, ACT & Australia, 1979-2009



Sources: AIHW 2006, State & Territories GRIM Books, AIHW, Canberra
ABS Deaths data, 2007-2009, confidential unit record file

Note: (a) ASR denotes age-standardised rate.
(b) Asthma death based on underlying cause of death, ICD-10 codes J45 & J46.
(c) 2009 ABS Causes of Deaths data are preliminary and should be treated with caution.

6.7. Immunisation

Immunisation is the main primary prevention strategy for the control of communicable diseases. Immunisation protects individuals from infectious diseases for which they are vaccinated. In addition, high numbers of vaccinated people in the community can also reduce the spread of disease, slowing or preventing transmission to others. The *ACT Immunisation Strategy 2007-2010* was launched in December 2007. The Strategy provided direction and focus for immunisation services in the ACT.

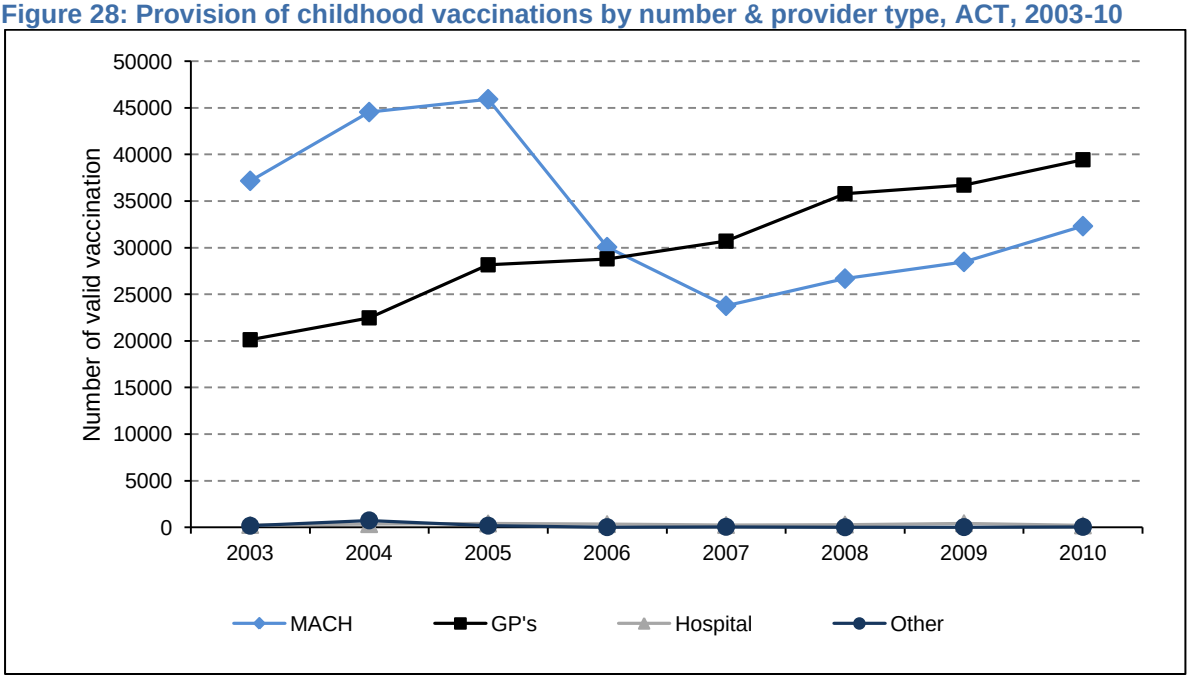
6.7.1. Childhood immunisation

Effective immunisation programs are essential in protecting the community from diseases that can have major and life-threatening impacts on a major scale.[48] The emphasis in immunisation delivery has changed from predominately Maternal and Child Health (MACH) Service immunisation clinics to General Practice, that aimed to improve immunisation services by improving access, holistic care and rapport with the family's primary health care provider. Figure 28 shows there has been an increasing trend for vaccinations provided by GP's. MACH nurses continue to play an important role in the provision of immunisation services across the ACT, providing up to 45% of immunisation to children under seven years of age. MACH have a greater emphasis on services that support children from vulnerable families and children with health development and behavioural difficulties.

ACT maintained or increased childhood immunisation coverage rates for all age groups and consistently remained above the national immunisation coverage rates during the reporting period (refer Table 9).[49]

The average rate of immunisation coverage for Aboriginal and Torres Strait Islander children during 2009-10 was 91.2 per cent, 94.1 per cent and 86.4 per cent for children at 12-15 months, 24-27 months and 60-63 months respectively.

Figure 28: Provision of childhood vaccinations by number & provider type, ACT, 2003-10



Source: Australian Childhood Immunisation Register Statistics, 2003-10

Table 9: Immunisation coverage in children, %, ACT & Australia, 2002-10

	2002	2003	2004	2005	2006	2007	2008	2009	2010
12-15 months									
ACT	90.7	90.4	92.5	93.9	91.4	93.4	93.6	94.0	93.2
Australia	90.9	91.3	91.1	90.9	90.7	91.2	91.2	91.7	91.5
24-27 months									
ACT	87.9	87.0	90.8	93.6	93.4	93.0	95.0	93.7	94.0
Australia	88.5	89.8	91.8	91.9	92.3	92.5	92.7	92.3	92.3
72-75 months									
ACT	81.4	82.5	85.0	89.1	86.8	89.0	na	na	na
Australia	80.2	82.8	83.5	83.6	85.2	88.0	na	na	na
60-63 months									
ACT	na	na	na	na	na	na	86.2	85.4	89.4
Australia	na	na	na	na	na	na	79.4	82.0	88.0

Source: Australian Childhood Immunisation Register Statistics, 2002-10

Notes: (a) The figures quoted are average of quarterly figures.
(b) In 2008 the assessment age for cohort three was reduced from 72-75 months to 60-63 months.
(c) na refers to “not available”.

6.7.2. Influenza

The H1N1 pandemic in 2009, commonly referred to as the 'swine flu pandemic' that started in early 2009 required a substantial mobilisation of public health resources to contain the outbreak. The ACT implemented a graded public health response in line with the *Australian Health Management Plan for Pandemic Influenza* (AHMPPI). A Special Response Unit (SRU) coordinated the pandemic response in the ACT.

Public health measures to control the pandemic included enhanced surveillance, management of cases and contacts with isolation or quarantine, school class closures, public education messages, the provision of antiviral medications and immunisation.

The H1N1 immunisation program began on 30 September 2009. Health Protection Service (HPS) delivered more than 121,800 doses of vaccine in 2009-10, with more than 75,000 doses reported as administered. Recipients included more than 900 pregnant women, more than 15,500 people with risk factors and more than 7,700 children. Notifications from reporting practices on doses administered indicate that more than 24 per cent of the ACT population had been vaccinated with the H1N1 vaccine by June 2010.

With regards to the seasonal influenza vaccine, HPS distributed over 43,000 doses of vaccine in 2010 for all people 65 years and older, Aboriginal and Torres Strait Islander people over 15 years of age, pregnant women and people from six months of age with underlying medical conditions which predispose them to the risk of complications from influenza.

In April 2010, following reports of increased adverse reactions in children who had received the 2010 seasonal influenza vaccine, the influenza vaccination program for children under 5 years was temporarily suspended nationally. Following extensive investigations, it was found that the increased adverse reactions were associated with a particular brand of influenza vaccine. The program recommenced in July 2010 with the use of other brands of influenza vaccines.

In 2009-10, ACT Health undertook significant promotional activities to ensure that people in 'at risk' groups were aware of their risk and encouraged them to protect themselves with influenza vaccination. Promotional activities included radio, television and newspaper advertising and the production of posters and brochures, whole-of-government messages, information from the Chief Health Officer and health provider education sessions. The ACT community also gained information through the ACT Health's immunisation and communicable disease inquiry lines.

While the majority of clinical cases of H1N1 influenza occurred during the winter and spring of 2009, the pandemic continued in 2010. In August 2010, the World Health organisation formally moved into the post-pandemic phase. An evaluation of the ACT response to the pandemic has informed ongoing pandemic preparedness activities that include immunisation for influenza.[49]

6.7.3. 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 included a two-year catch-up for 13-18 year old girls in school through the school immunisation program and for 18-26 year old women delivered through a GP delivered program. The school-based catch up program finished at the end of 2008 whilst the community based program finished in 2009.

In the 2007-08 financial year 58,000 doses of the vaccine were distributed to immunisation providers in the ACT. In the 2008-09 financial year 23,133 doses were distributed with 8,727 doses in 2009-10. The significant reduction in the distribution of doses to immunisation providers in the 2008-10 period was due to the cessation of the catch up program in both schools and the community.

Data from the 2008 schools program indicate that 65.4% of girls in year 7 completed the vaccination course. This trend showed a gradual increase over the following two years with 67.1% of year 7 girls completing the course in 2009 and 68% in 2010.

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.

6.8. Notifiable communicable disease

In the ACT certain infectious diseases and all cases of cancer are notifiable to the Chief Health Officer (CHO) under the *Public Health Act 1997*. Notifiable conditions are communicable diseases or medical conditions determined by the Minister or declared by the CHO. The CHO monitors these conditions and undertakes necessary public health action to protect the health of the ACT population. The CHO also provides advice to the Minister for Health of any actions that the ACT Health Directorate and the ACT Government need to implement to reduce disease rates in the ACT.

The surveillance and control of communicable diseases remain a significant public health priority both in Australia and internationally. Reporting to the CHO, the Health Protection Service (HPS) within the Population Health Division of the ACT Health Directorate monitors and implements strategies aimed at reducing the spread of these diseases in the ACT. HPS assesses notifications in line with national guidelines to determine whether a public health response is required. These responses include recommending immunisation and/or treatment of contacts to prevent the further spread of disease.

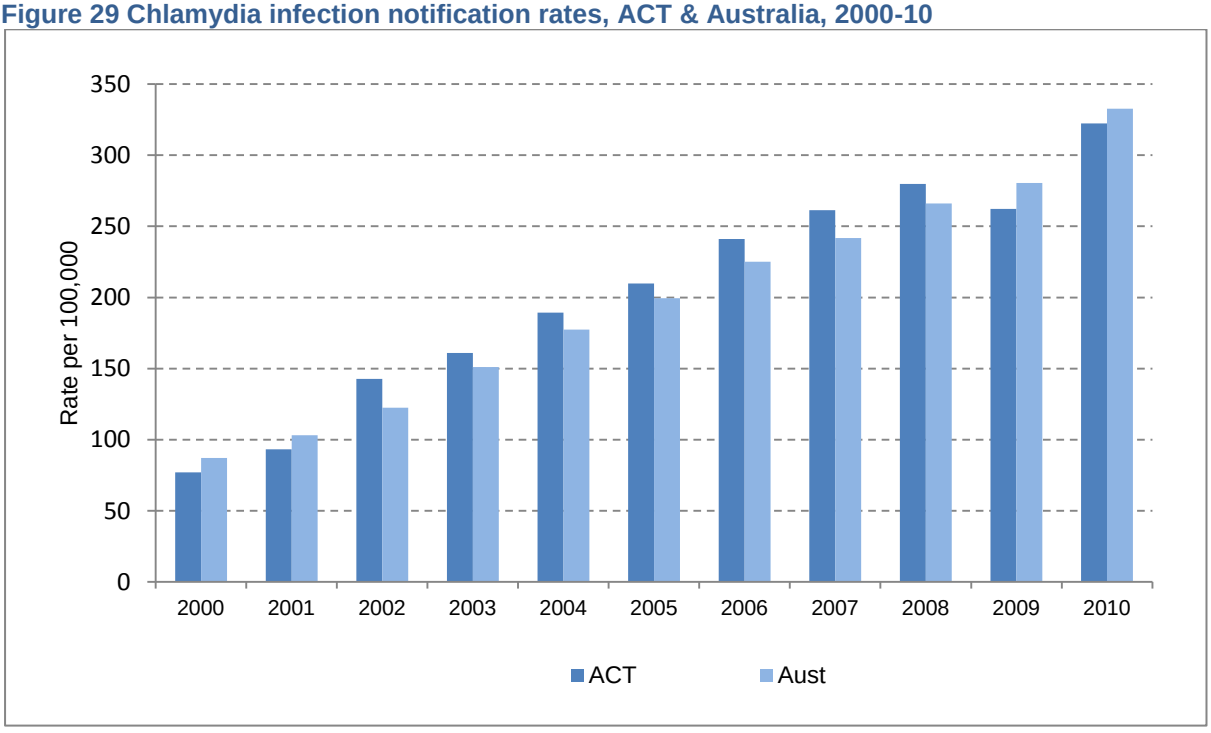
Information on cancer is detailed separately at Chapter 6.2.

6.8.1. Status and trends

Although notifications of communicable diseases are generally an underestimate of the number of cases that actually occur in the community, they provide valuable information on disease patterns.

During 2009 and 2010 calendar years there was an increase in reports for notifiable conditions compared to previous years (10,070 reports of notifiable conditions compared to 5,314 in the 2007 and 2008 period). Chlamydia infections (refer Figure 29) were the most commonly notified infectious condition (31% of all notifications), followed by influenza (16%), campylobacter (14%) and pertussis (12%). This increase reflects the fivefold increase in influenza notifications during 2009 (refer Figure 30) and the four-fold increase in pertussis notifications in 2010 (refer Figure 31) as compared to 2008.

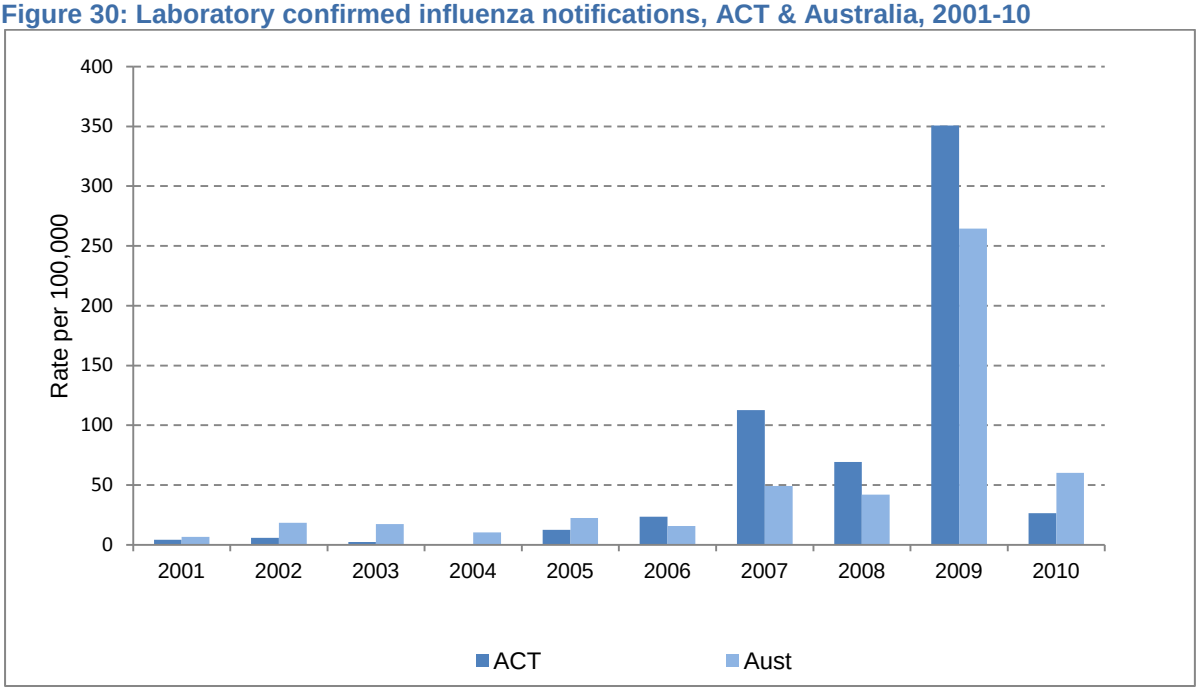
Figure 29 Chlamydia infection notification rates, ACT & Australia, 2000-10



Source: DoHA, National Notifiable Diseases Surveillance System Data, 2000-10, ACT & Australia

In 2009, there were 1,265 notifications of influenza in the ACT, a fivefold increase from 2008. This increase is consistent with national trends and is mostly explained by the 2009 influenza pandemic and the associated increase in influenza testing.

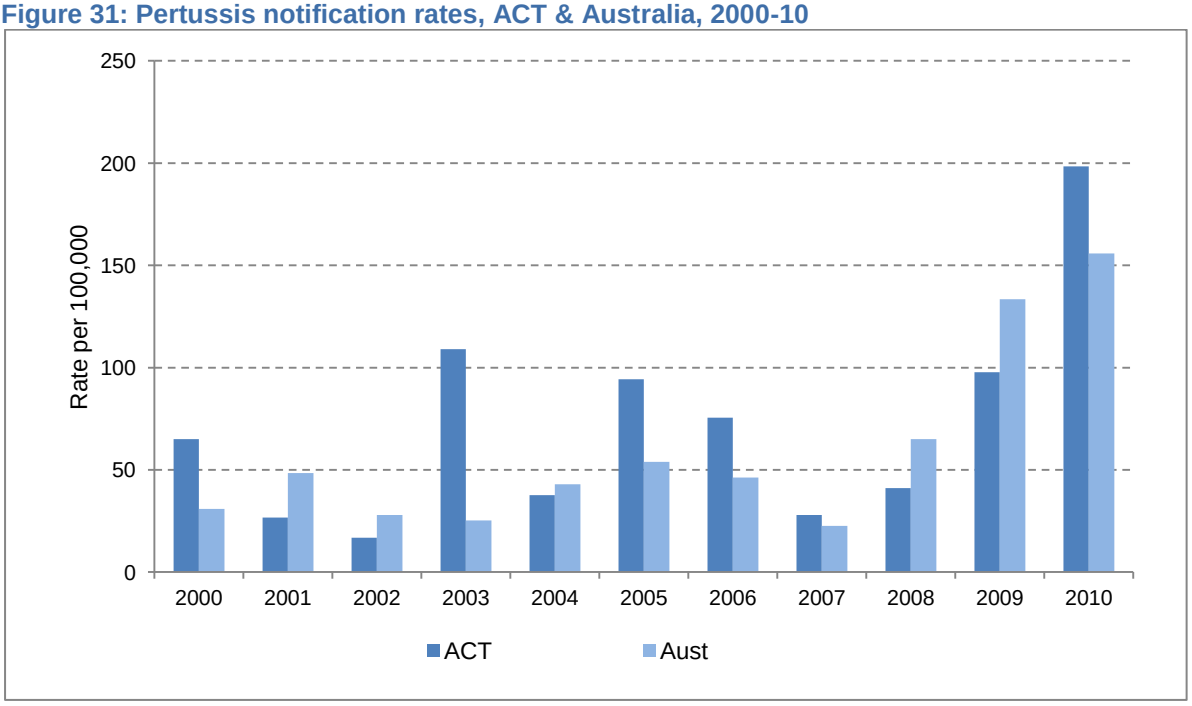
Figure 30: Laboratory confirmed influenza notifications, ACT & Australia, 2001-10



Source: DoHA, National Notifiable Diseases Surveillance System Data, 2001-10, ACT & Australia

In response to the increase in pertussis (whooping cough) notifications in the ACT and nationally, the ACT Targeted Adult Pertussis Vaccination Program was implemented in April 2009. This pilot program offered free petussis vaccine to parents of babies less than 12 months of age and grandparents who had regular contact with them. The main objective of this targeted program was as a 'cocooning' strategy to protect infants too young to be immunised against pertussis.

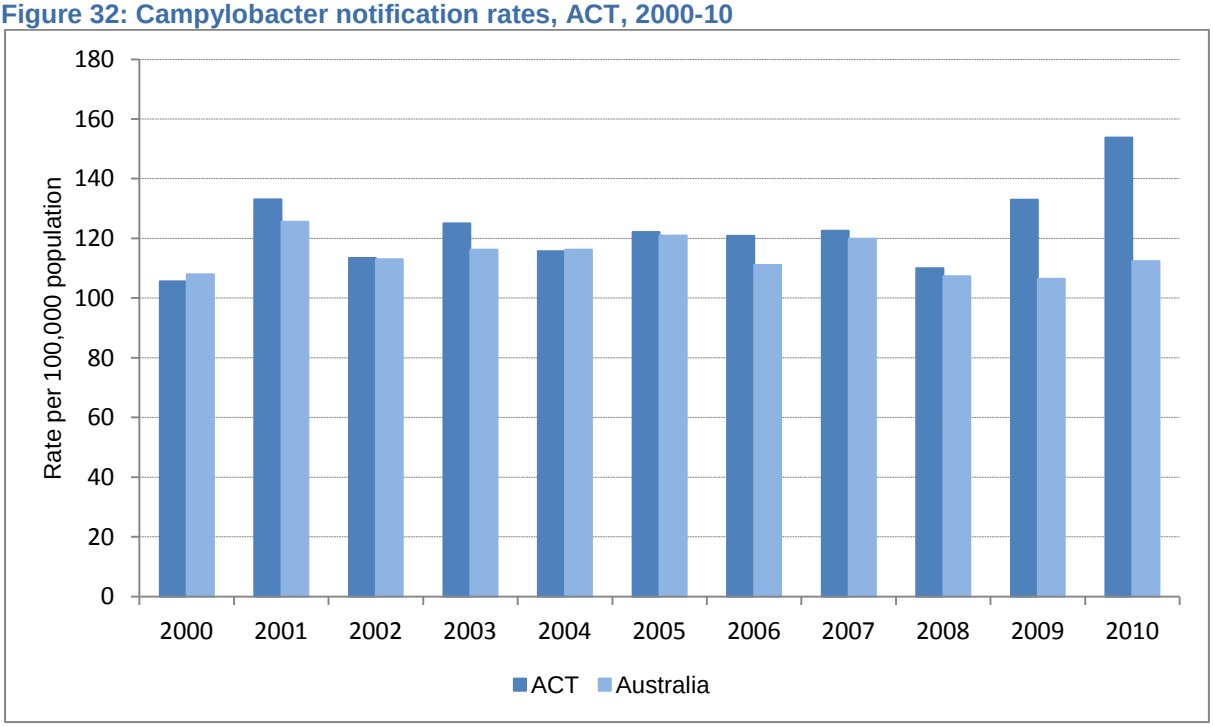
Figure 31: Pertussis notification rates, ACT & Australia, 2000-10



Source: DoHA, National Notifiable Diseases Surveillance System Data, 2000-10, ACT & Australia

During 2009 and 2010, an ongoing increase in the rate of campylobacter notifications occurred, due in part, to an identification and correction of a laboratory under-reporting issue involving a large NSW based pathology provider.

Figure 32: Campylobacter notification rates, ACT, 2000-10



Source: DoHA, National Notifiable Disease Surveillance System Data, 2000-10, ACT & Australia

6.9. Maternal and child health

The number of women giving birth in the ACT increased by six per cent between 2007 and 2009. In 2009, 5,735 women gave birth to 5,850 babies. Sixteen per cent of the women who gave birth in the ACT were non-ACT residents. Over 99% of these women were from the surrounding regions of NSW, many of whom access specialist obstetric services in the ACT for high-risk and multi-fetal pregnancies.

Table 10: Women who gave birth by maternal state of residence, ACT , 2007-09

	2007	2008	2009
Number of women who gave birth	**5,420**	**5,589**	**5,735**
ACT residents	4,547	4,713	4,822
Non ACT residents	873	876	913
Number of babies born	**5,536**	**5,705**	**5,850**
to ACT residents	4,624	4,794	4,894
to Non ACT residents	912	911	956

Source: ACT Maternal and Perinatal Data Collection, 2007-09
Note: Expanded table in Chapter 10.

6.9.1. Key maternal and perinatal indicators, ACT and Australia

Summary perinatal health information for the ACT and Australia, is presented in Table 11. Key points for the ACT include:

- The ACT was significantly less likely to have teenagers giving birth during 2009 than nationally.
- The percentage of women who smoked tobacco during pregnancy was significantly lower in the ACT than nationally.
- However, the percentage of ACT Aboriginal and Torres Strait Islander women who reported smoking during pregnancy was five times higher (50.6%) than the overall ACT percentage.
- Women were significantly more likely to have a spontaneous onset of labour and/or an instrumental birth in the ACT than nationally. They were significantly less likely to have a caesarean section.
- The ACT had significantly fewer low-birthweight babies than Australia as a whole.
- However, the percentage of low-birthweight babies born to ACT Aboriginal and Torres Strait Islander women was significantly higher than the overall ACT percentage.
- The ACT perinatal (20 weeks gestation to 28 days after birth) death rate was low and similar to the national rate.

Table 11: Selected maternal & perinatal summary indicators, 2007, 2009, ACT & Australia

	ACT		Australia	
	2007	2009	2007	2009
Maternal age				
Percentage of mothers who were teenagers (less than 20 years)	2.6	2.4	4.1*	4.0*
Percentage of first-time mothers aged 35 years and over	14.6	15.5	14.4	na
Aboriginal status				
Percentage of women who identified as Aboriginal or Torres Strait Islander	1.5	1.7	3.8*	3.8*
Smoking				
Percentage of women smoking during pregnancy	12.5	10.4	16.6*	14.5*
Percentage of ATSI women smoking during pregnancy	52.9	50.6	na	na
Mothers country of birth				
Percentage of women born in Australia	79.1	76.4	75.2*	72.8*
Hospital sector				
Percentage of women who gave birth in public hospitals	64.8	64.1	70.2*	69.9*
Multiple pregnancy				
Percentage of women who had a multiple pregnancy	1.6	1.4	1.6	1.6
Onset of labour				
Percentage of women who had a spontaneous onset of labour	63.0	63.3	56.6*	56.1*
Induction of labour				
Percentage of women who had an induced onset of labour	20.4	21.2	25.3*	25.3*
Instrumental vaginal birth				
Percentage of women who had an instrumental (forceps or vacuum extraction) birth (a)	12.7	12.9	11.2*	11.7*
Caesarean section				
Percentage of women who had a caesarean section (a)	27.5	26.9	30.9*	31.5*
Maternal postnatal stay				
Median length of hospital stay (days) for women who were discharged home	3.0	3.0	3.0	3.0
Preterm birth				
Percentage of all births that were less than 37 weeks gestation	6.7	6.9	8.1*	7.4
Low birthweight				
Percentage of liveborn babies weighing less than 2,500 grams at birth	5.7	5.0	6.7*	6.2*
Apgar scores				
Percentage of liveborn babies with an Apgar score of less than 7 at 5 minutes	1.5	1.8	1.4	1.5

Sources: ACT Maternal and Perinatal Data Collection, 2009
AIHW, *Australia's Mothers and Babies, 2009*, AIHW, 2010

Notes: (a) For multiple births, the method of birth of the first born baby was used.
(b) * significantly different at p<0.05.
(c) na not available.

In 2009, the Child, Youth and Women's Program, ACT Health, implemented a simple data collection among Maternal and Child Health Nurses (MACH Nurses) in the ACT. When a baby presents for immunisation at 2, 4, 6 and 12 months, the MACH Nurse asks if the baby is breastfed. Given the success of initial implementation, further development of the data collection is continuing.

Results from the first nine months of breastfeeding data collection indicate that 73% of babies were still breastfed at 2 months, 63% at 4 months, 50% at 6 months and 23% at 12 months.

6.9.2. Key indicators of child health and wellbeing, ACT and Australia

In 2005, the Australian Health Ministers' Conference (AHMC) and the Community and Disability Services Ministers' Conference (CDSMC) approved a project to develop a set of nationally agreed Headline Indicators to monitor the health, development and wellbeing of Australian children and to explore processes to facilitate ongoing data collation, analysis and reporting.

In 2011, the Australian Institute for Health and Welfare (AIHW) released a report on the Children's Headline Indicators. The following information is sourced from that report and includes headline indicators that are not reported in the maternal and perinatal health section above. ACT results were similar overall to national results, but a higher proportion of students met the national minimum standards for reading (94% compared with 92% for Australia overall).

Table 12: Headline indicators for child health & wellbeing, ACT & Australia, 2003-10

	Year[(a)]	ACT	Australia
Infant mortality			
Mortality rate for infants less than one year of age (deaths per 1,000 live births) [(b)]	2009	3.5	4.3
Immunisation			
Proportion of children on the ACIR fully immunised at 2 years of age (%)	2010	94.9	92.6
Overweight and Obesity			
Proportion of children who were 'overweight' and 'obese' (%)	2007-08	21.7	23.1
Dental Health			
Mean number of decayed, missing or filled teeth (DMFT) among primary school children aged 12 years	2003-04	1.1	1.0
Injuries			
Age-specific death rates from all injuries for children aged 0-14 years (deaths per 100,000 population)	2005-07	3.2	5.8
Transition to primary school			
Proportion of children developmentally vulnerable on one or more domains of the AEDI (%)	2009	22.2	23.5
Literacy			
Proportion of Year 5 school children achieving at or above national minimum standards for reading (%)	2009	94.0	91.7
Numeracy			
Proportion of Year 5 school children achieving at or above national minimum standards for numeracy (%)	2009	95.5	94.2
Family economic situation			
Average real equivalised disposable household income for households with children aged 0-12 years in the 2nd and 3rd income deciles ($ per week)	2007-08	423	412

Source: AIHW (2011). *Headline indicators for children's health, development and wellbeing, 2011*. Available at: http://www.aihw.gov.au/publication-detail/?id=10737419587&tab=2

Note: (a) Latest available data.
(b) Infant mortality rate from ABS (2011). Deaths, Australia. cat. no. 3302.0.

6.9.3. Morbidity

During the 2008-09 and 2009-10 financial years there were 21,581 ACT hospital separations for ACT resident children aged 0-14 years (10,648, and 10,933 respectively). Excluding live births and conditions arising in the perinatal period, which accounted for approximately half of hospital separations for this age-group, the leading causes of hospitalisation were respiratory disorders (10.0%), digestive system disorders (7.2%) and injuries and poisonings (6.7%). The leading respiratory disorders were diseases of the tonsils and adenoids and asthma.

6.9.4. Mortality

Over the two year period 2008 and 2009, there were 55 deaths of children aged 14 years or under. The majority of these (75%) were for infants aged less than one year, with most of these deaths being related to complications of pregnancy, birth and the perinatal period or congenital malformations.

The 2009 infant mortality rate for the ACT was 3.5 deaths per 1,000 live births, slightly lower than the Australian rate of 4.3 deaths per 1,000 live births.[21]

The leading causes of death for ACT children aged one to 14 years in 2008 and 2009 were cancer and accidental drowning. The 2009 age-specific mortality rate for ACT children aged one to 14 was 8.3 per 100,000 population, slightly lower than the Australian rate of 13.2 per 100,000.

7. Access and equity indicators relevant to health

At a glance

- In 2009-10, the most common health services attended by ACT residents in the previous 12 months were a GP, followed by a specialist, a community health care centre, an emergency department, and spending at least one night in hospital.
- Most residents rated the care they received at these facilities as being excellent, very good or good.
- Overall, 21.9% of ACT adults aged over 18 years had difficulties obtaining healthcare when they needed it, down from 23.7% in 2007-08.

Aboriginal and Torres Strait Islander people

- Tobacco use by ACT Aboriginal and Torres Strait Islander residents is consistently significantly higher than that reported by non-Aboriginal ACT residents.
- Of the 3,029 hospital separations for ACT residents who identified as Aboriginal and Torres Strait Islander between in 2008-10, over a third were for renal dialysis.
- Nearly two per cent (1.7%) of ACT resident women who gave birth in 2009 identified as Aboriginal and Torres Strait Islander. They gave birth at younger ages (less than 20 years) with the teenage fertility rate being four times higher than for non-Aboriginal women.
- Over half of the Aboriginal and Torres Strait Islander women reported smoking during pregnancy in 2009 (50.6%).
- The percentage of babies born to Aboriginal and Torres Strait Islander women who were low birthweight was significantly higher for each three year period between 2000 and 2008, than the percentage of low birthweight babies born to non-Aboriginal women.

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.[50] The ACT General Health Survey provides useful information on factors influencing healthcare access.

In 2009-10, the most common health service attended by ACT residents was a GP, with 87.3% reporting having done so in the previous 12 months and more than a third (35.3%) reporting seeing a GP in the previous 4 weeks. This is comparable to 2008 where 87.4% reporting having visited a GP in the previous 12 months and 33.4% reported visiting a GP in the previous 4 weeks. One third (32.6%) of respondents reported seeing a specialist in the previous 12 months, 14% reported attending a community health care centre, 15.8% reported attending an emergency department for medical care and 11.6% reported spending at least one night in hospital. Females (53.6%) were more likely than males (46.4%) 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 compared to other facilities (2007-08: 23.2%, 2009-10: 21%).

Overall, 21.9% of ACT adults aged over 18 years had difficulties obtaining healthcare when they needed it, down from 23.7% in 2007-08. 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: 19.5% of ACT residents over 18 years of age in 2009-10 reported to have delayed using a health service because they couldn't afford it, and 7.1% 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.

7.1. Aboriginal and Torres Strait Islander people

Comprehensive information on the health status of Aboriginal and Torres Strait Islander people in the ACT is improving, however not yet fully available. This is due to the small population size, degree of population mobility and issues concerning the recording of Aboriginal and Torres Strait Islander status in health data collections.

ACT Health Directorate has a number of initiatives in progress to improve the quality of data for Aboriginal and Torres Strait Islander people in the ACT, including education and training of staff in collecting information about Aboriginal and Torres Strait Islander status, participating in a study to determine the accuracy of identification in hospital administrative data collections and data linkage activities.

The small population of Aboriginal and Torres Strait Islander people in ACT limits the extent to which statistics can be reported without compromising confidentiality of individuals and the extent that reliable rates can be calculated. For example, the ABS has determined that the population is too small to calculate life expectancy tables specific to the ACT.

It is well documented that Aboriginal and Torres Strait Islander people experience significantly more ill health than 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.[6] In particular, the ACT Aboriginal and Torres Strait Islander population has a younger age structure with the median age being 21 years compared with 34 years for non-Aboriginal ACT residents. These differences have important implications for health, as health service needs vary across the age spectrum.

Survey results give some indication of health status. Almost half of respondents to the National Aboriginal and Torres Strait Islander Social Survey 2008 reported their health to be excellent or very good.[51] A further third reported their health to be good. These results are similar to those reported for Aboriginal and Torres Strait Islander people nationally.

Tobacco Use

Tobacco use by ACT Aboriginal and Torres Strait Islander residents is consistently significantly higher than that reported by non-Aboriginal ACT residents across both survey and administrative data collections.[52,53,54] Four in ten Aboriginal and Torres Strait Islander ACT adult residents reported using tobacco daily in national surveys. Aboriginal and Torres Strait Islander women who gave birth were also significantly more likely to report tobacco use than non-Aboriginal ACT counterparts.

Hospital Service Use

There were 3,029 hospital separations for ACT residents who identified as Aboriginal and Torres Strait Islander between July 2008 and June 2010. Just over a third of these separations (1,181) were for renal dialysis. The average age at hospital separation (excluding renal dialysis) for Aboriginal and Torres Strait Islander ACT residents was 30 years, significantly lower than that of their non-Aboriginal and Torres Strait Islander counterparts (49 years).

Excluding renal dialysis the most frequent reasons for hospitalisations included factors influencing health status (including separations for babies born in hospital), injury and poisoning, pregnancy and disorders of the digestive system.

Maternal and Perinatal Health

Just under two per cent of ACT resident women who gave birth in 2009 identified as Aboriginal and Torres Strait Islander (1.7%).

The teenage fertility rate for Aboriginal and Torres Strait Islander women was four times higher than for non-Aboriginal and Torres Strait Islander women (48 per 1,000 ACT women compared with 9.5 per 1,000 ACT women).[55] The fertility rate for Aboriginal and Torres Strait Islander women aged 20 to

24 years was over three times as high as that for non-Aboriginal women in the same age group (109.1 per 1,000 ACT women compared with 32.8 per 1,000 ACT women respectively).

The percentage of babies born to Aboriginal and Torres Strait Islander women who were low birthweight (less than 2,500 grams) was significantly higher than the percentage of low birthweight babies born to non-Aboriginal women between 2000 and 2008. The percentage of low birthweight babies born to ACT Aboriginal and Torres Strait Islander women has remained stable at around 12% and for babies of non-Aboriginal and Torres Strait Islander ACT women it has remained around 5%.[55]

Over half of the Aboriginal and Torres Strait Islander women reported smoking during pregnancy in 2009 (50.6%).[54] The average birthweight of babies born to Aboriginal and Torres Strait Islander ACT women who smoked during pregnancy (2,983 grams) was significantly lower than the average birthweight of babies born to ACT Aboriginal and Torres Strait Islander women who did not smoke during pregnancy (3,320 grams).[55]

There was no significant difference in the average birthweight of babies born to Aboriginal and Torres Strait Islander ACT women who did not smoke during pregnancy (3,308 grams) and non-Aboriginal and Torres Strait Islander ACT women who did not smoke during pregnancy (3,411 grams) between 2006 and 2008.[54]

8. Health services

The provision of safe, timely and effective health care is a major priority of the Health Directorate. Monitoring performance in order to gauge progress of health initiatives over time and identifying health system gaps or shortcomings is critical to ensuring that health services in the ACT meet the needs of the 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 the ACT Health Directorate (formerly 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.

This Chapter reports on a number of key national performance indicators related to health services.

At a glance

- ACT rates of *potentially preventable hospitalisations* have not changed significantly since 2006-07, remaining lower than national rates.
- In 2010, the ACT continued to have the highest proportion *of private health insurance* holders in the country, but below national average rates of insurance utilisation.
- The ACT, like other jurisdictions, has ongoing difficulties in attracting *trained health staff*. In 2009-10, the ACT had a lower full time workload equivalent (FTE) GP rate, but a slightly higher rate of FTE nursing staff (public hospitals) than the national average.
- Of the 88,356 ACT public hospital separations in 2009-10, 24% were for non-ACT residents.
- The number of *elective surgery procedures* performed in ACT public hospitals was 9,754 in 2009-10. Interstate patients accounted for 30% of the procedures.
- The ACT's provision of community *aged care services* exceeded the national average for Community Aged Care Packages, Extended Aged Care at Home Packages and Transition Care.
- Although improving, the provision of residential aged care (80.8 per 1,000 persons aged 70 years and over, in 2010), remained below the rest of Australia (87.1).
- The ACT continues to have the highest number of occasions of *community mental health services* when compared with national figures.
- 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 2008-09 there was significant growth in demand and activity, both in inpatient and outpatient services.
- In 2008-10, the *Health Promotion Grants Program* administered 203 grants aimed at funding projects and organisations that facilitate healthy lifestyles and create healthy policies and environments.

8.1. 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 2006-07, remaining lower than national rates (refer Table 13).

In 2009-10, as for previous years, approximately half of the total potentially preventable hospitalisations were due to chronic diseases in the ACT and more than half nationally.

Table 13: Potentially preventable hospitalisations, age-standardised rates, ACT & Australia, 2006-10

	2006-07		2007-08		2008-09		2009-10	
	ACT	Aust.	ACT	Aust.	ACT	Aust.	ACT	Aust.
All selected potentially preventable hospitalisations(a)	22.2	32.5	22.3	33.1	23.6	30.6	20.7	30.4
Vaccine-preventable conditions (b)	0.4	0.6	0.8	0.7	0.5	0.7	0.5	0.8
Acute conditions (c)	10.4	13.0	10.5	13.3	11.5	13.5	9.8	13.8
Chronic conditions	11.4	19.0	11.1	19.2	11.7	16.5	10.4	16

Source : AIHW Australian Hospital Statistics, 2006-10
Notes: (a) These conditions are defined using ICD-10-AM codes.
(b) In 2007-08 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.
(c) Excludes multiple diagnoses for the same separation within the same group.
(d) Rates per 1,000 population, directly age-standardised to the 2001 Australian population.

(refer also Health Status Chapter: 2.4).

8.2. Health insurance

In 2010, the ACT continued to have the highest proportion of private health insurance holders in the country (ACT: 55.7%, Australia: 44.9%), reflecting the relatively high socio-economic status (refer Table 32). However, the ACT had below national average rates of insurance utilisation, with only 6.3% of ACT public hospital patients using private health insurance during their admissions. Overall, 30.5% of all ACT hospital admissions, in both public and private hospitals, recorded a funding source from private health insurance.

8.3. 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 2009-10, the ACT had a lower full-time workload equivalent (FTE) GP rate (66.7 per 100,000 population) than the national average (90.7) (refer Table 29). ACT public hospitals had a slightly higher rate of FTE nursing staff than the national average (1,275 per 100,000 population compared to 1,261 nationally) (refer Table 31). These rates do not account for the non-ACT residents the GPs and nurses are required to service, especially in the hospital environment.

8.4. Hospital service use

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.

The ACT has two public teaching hospitals which provide emergency department, inpatient and outpatient services to ACT residents and people from surrounding regions of NSW. Both are teaching

hospitals of the Australian National University (ANU) Medical School, the University of Canberra nursing and allied health schools and the Australian Catholic University nursing school.

The Canberra Hospital (TCH) has over 600 beds and is the major trauma and tertiary care facility providing acute and other specialty care. Calvary Public Hospital (CPH) is a major urban hospital with 174 beds. 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 economically or resource viable.

The three private hospitals offer a range of services including rehabilitation and orthopaedic fracture clinic (Calvary John James Hospital); maternity unit, surgery, mental health facility (Calvary Private Hospital); and medical and surgical services (National Capital Private Hospital).

In 2009-10, the public hospitals had a combined bed availability of 2.6 beds per 1,000 population (national rate of 2.5). The private hospitals had a rate of 1.2 beds per 1,000 population, in line with the national rate (2008-09).[56]

Of the 88,356 ACT public separations in 2009-10, 24% were for non-ACT residents, the same percentage as for 2008-09. Only 5% of ACT residents accessed public hospitals outside of the ACT in 2009-10.

8.4.1. Relative Stay Index

The Relative Stay Index (RSI) is an indicator of hospital efficiency. It takes into consideration factors such as patient's 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 public hospital RSI is continuing to decrease, from a high of 1.07 in 2002-03 to 0.91 in 2007-08 and 0.90 in 2009-10.

8.4.2. Emergency department waiting times

In 2009-10 the proportion of total presentations seen within recommended timeframes at ACT public hospital emergency departments remained less than the national average. All of the most urgent emergency department presentations (Category 1 - resuscitation) were seen immediately in both the ACT and nationally.

8.4.3. Elective surgery procedures

The number of elective surgery procedures performed in ACT public hospitals was 9,918 in 2008-09 and 9,754 in 2009-10. In both years, interstate patients accounted for 30% of the procedures. The separation rate (26.8 per 1,000 population in 2009-10) was less than the national average (29.8), but higher than NSW (25.9), Queensland (also 25.9) and the Northern Territory (25.5). The median waiting time for elective surgery was 75 days in 2008-09 (34 days nationally) and 73 days in 2009-10 (35 days nationally) (National Hospital Morbidity Database).

8.5. Aged care

The ACT's provision of community aged care services exceeded the national average for Community Aged Care Packages, Extended Aged Care at Home Packages and Transition Care. The provision of residential aged care however (80.8 per 1,000 persons aged 70 years and over, in 2010), remained below the rest of Australia (87.1). However, the gap between the two rates is decreasing.[57] (refer Table 33).

8.6. Mental health

Community service contacts are clinically significant services provided to people requiring care as well as their 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).

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. The ACT continues to show a trend for the highest number of community service contacts per 1,000 population when compared with national figures. In the 2006-07 period the ACT performed well above the national figures (ACT: 603 contacts per 1,000 population, Aust: 288). This trend has continued for the

2007-08 period (ACT: 598 contacts per 1,000 population, Aust: 302) and the 2008-09 period (ACT: 633, Aust: 292). Mental Health ACT provided 223,328 community occasions of service in 2008-09, increasing to 257,497 in 2009-10.

The provision of adequate follow-up and support to mental health patients within the first 7 days post hospital discharge is recognised as a crucial time for patients as their vulnerability for relapse and risk of readmission is highest during this time. The ACT recorded the highest rate of community follow up for people within the first seven days of discharge from hospital for the entire reporting period. In 2008-09 the ACT reported 79.9% of discharges receiving 7 day community follow-up (50% nationally). This trend continued in the 2009-10 period with the ACT reporting 82.8% (52% nationally).

8.7. 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 2008-09 there was significant growth in demand and activity, both in inpatient and outpatient services. Compared with 2007-08, inpatient activity had increased by 18% and outpatient activity had increased by 12%, for all services combined. The Government provided an additional $4.2 million over four years, from 2007-08 to meet the increasing demand for cancer services.

BreastScreen ACT and SE NSW received funding from the ACT and Commonwealth governments to upgrade mammography x-ray machines from analogue to digital systems. Three new machines were installed in April 2010, one in the Phillip clinic and two in the city clinic. The new system provides lower dose screening and higher quality images that can be transferred and viewed electronically between the clinics and other medical practitioners. (refer Table 23).

The Radiation Oncology Department successfully recruited radiation therapists, achieving a full staff establishment by the end of March 2010. From April 2010 treatment capacity was back to normal and this was reflected in improved waiting times. Refurbishment of the radiation oncology brachytherapy bunker at the Canberra Hospital was completed in June 2010. The refurbished bunker, along with the procurement and commissioning of a new high-dose rate Brachytherapy machine in June 2010, will allow a new prostate treatment service to commence in 2010-11.

Table 14: Radiation oncology waiting times, %, ACT, 2006-10

Category	2006-07	2007-08	2008-09	2009-10
Urgent (commence treatment within 48 hrs)	98.4*	100.0*	100.0	98.0
Semi-urgent (commence treatment within 4 weeks)	94.0	74.4	88.0	93.0
Non-urgent category A (commence treatment in 4 weeks)	65.2	64.5	62.1	75.0
Non-urgent category B (commence treatment within 6 weeks)	68.5	58.4	73.1	86.0

Source: Capital Region Cancer Services, administrative data
Note: * Treatment commenced within 24-28 hours.

8.8. Quality and safety in health care

ACT Health currently reports on three major national patient safety and quality indicators (refer Table 15). In recognition of The Canberra Hospital's role as the major teaching and referral centre for the region, different performance targets apply to the two public hospitals. This means that The Canberra Hospital (TCH) provides services to the more complex patients and is therefore 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 2009 and 2010. Maximum acceptable rates for unplanned returns to the operating room were slightly exceeded by TCH in 2009, but were met by Calvary Public Hospital in both years. Rates of hospital acquired bacteraemia met the acceptable target for both hospitals in 2009 and 2010.

Table 15: Safety & quality indicators, % of separations, ACT, June 2009 & 2010

	Unplanned hospital readmissions within 28 days		Unplanned Return to Operating Room		Hospital Acquired Bacteraemia (rates per 1,000 non-same day occupied bed days)	
	Year to date		Year to date		Year to date	
	Rate	Target rate	Rate	Target rate	Rate	Target rate
Jun-09						
TCH	1.6%	2.0%	1.0%	< 0.7%	0.8	< 1 per 1,000
Calvary	0.9%	1.0%	0.3%	< 0.5%	0.2	< 1 per 1,000
Jun-10						
TCH	1.6%	2.0%	0.8%	< 0.85%	0.7	< 0.7 per 1,000
Calvary	0.8%	1.0%	0.4%	< 0.5%	0.1	< 0.3 per 1,000

Sources: Safety & Quality Unit (TCH) & Performance & Casemix Unit (Calvary Hospital)

Note: TCH 2009 & 2010 Return to the Operating Theatre Data - Counting in relation to this measure is currently under review. New counting methodology may result in changes to these results, that will be available for future reports.

8.9. Health promotion

Health promotion activities aim to strengthen the skills and capabilities of individuals, as well as influence the social, environmental and economic conditions that impact on public and individual health. This approach recognises the complex individual, community and environmental interactions that influence health often referred to as the *social determinants* of health. There is sound evidence that health promotion and prevention are cost-effective strategies to improve health and wellbeing and minimize the burden of preventable disease.[58]

Key health promotion priorities for the ACT Health Directorate are reducing harm from tobacco, reducing levels of obesity in the population, reducing harm from alcohol, and promoting good mental health. These require a mix of interventions including regulatory approaches, policy development and implementation, health promotion and prevention programs, and social marketing campaigns.

A settings-based approach was adopted in recent years that offers opportunities for comprehensive interventions aimed at both sustainable health behaviour change and supportive socio-environmental change. During the reporting period the settings engaged included schools and early childhood centres, workplaces, and communities with high needs.

In 2008-10, health promotion activities within the ACT Health Directorate continued to align with the Australian Government's Australian Better Health Initiative (ABHI). This was a 4 year initiative (2006-10) bringing together national, state and territory governments with the aim of reducing the prevalence of risk factors for chronic disease, limiting the incidence and impact of these diseases and reducing morbidity and mortality rates.

The national Measure Up campaign was implemented through the ABHI and launched in October 2008. This campaign encouraged Australians to make sustainable healthy lifestyle choices that would support the reduction of morbidity and mortality due to lifestyle related chronic diseases. A key activity to support this campaign was a partnership between the ACT Health Directorate and the ACT Division of General Practice through a direct mail out to 45-49 year olds to encourage use of the Medicare Benefits Scheme (MBS) 45-49 year old Health Check and the MBS Aboriginal and Torres Strait Islander Adult and Child Health check. Twenty-three thousand Canberrans were contacted through this initiative.

Other activities that contributed to the Australian Better Health Initiative at the local level included:

- Kids at Play Early Childhood program and resource development that promoted five key health messages: promoting water as the drink of choice; breastfeeding; physical activity; fruit and vegetable consumption; and reducing 'screen time'. This was a partnership with Territory and Municipal Services (Sport and Recreation) and the Heart Foundation ACT. A key strategy was to develop and deliver training for early childhood sector staff on applying these messages in early childhood settings, supported by the development of an interactive website and resources such as fact sheets and brochures.

- Heartmoves program - This is a Heart Foundation program aimed at increasing physical exercise for people with risk factors for chronic disease.
- Development of the Active Living project in collaboration with the Heart Foundation. This project advocates for changes to the built environment that support active living and increased physical activity. It brings together sectors such as planning, environment, transport policy, private industry and health.
- A senior public health nutritionist was appointed within the Health Promotion Branch to build capacity for high level strategic planning and policy advice and support the establishment of key partnerships in the nutrition area.
- Implementing the patient care register to monitor the care of those living with chronic heart failure, type 2 diabetes and chronic obstructive pulmonary disease.

The reporting period also saw the devolution of ABHI and the introduction of the *National Partnership Agreement on Preventive Health* (NPAPH), signed by the Council of Australian Governments in November 2008 (Performance benchmarks are outlined in Table 34). Facilitation payments for program implementation started in late 2009-10. Implementation Plans for the Measure Up Social Marketing Initiative and the Healthy Communities Initiative were submitted and approved by the Commonwealth Department of Health and Ageing. Implementation plans for healthy children, and healthy workers were developed in anticipation of commencement in 2011.

The 2009-10 ACT Budget allocated $11 million over three years to support a Healthy Future – Preventative Health Program. Priority areas of action closely reflected those of the NPAPH, positioning the ACT well to respond to its commitments under the NPAPH 2009-15. A range of initiatives were introduced or supported under the Program in 2009-10 including:

- Youth Health Feasibility Study that examined potential models of service delivery for youth health initiatives, particularly from an early intervention and prevention perspective, for those aged 12-25 years. Preparatory work was undertaken over 2008-10 including literature reviews; establishment of a Steering Group to assist scoping the study; and planning for a Youth Health workshop to gather stakeholder views on priority issues.
- Healthy Kids, Healthy Future initiatives included:
    - development of the ACT Breastfeeding Strategic Framework 2010-2015 to promote breastfeeding, in partnership with the Child, Youth and Women's Health Program;
    - Find 30® physical activity social marketing campaign;
    - Go for 2 fruit & 5 veg® social marketing campaign;
    - 'SmartStart for Kids' program developed by Robert de Castella for primary school aged children, aiming to improve children's health and fitness;
    - implementation of school canteen training for ACT school canteen managers;
    - funding of a position within the Department of Education and Training to facilitate, integrate and promote ACT/NPAPH school based interventions in ACT schools and policy;
    - funding of the SunSmart program (Cancer Council) targeting school-aged children; and
    - STEPS – The Sustainability, Training, Education, Participation and Skills programs for vulnerable young parents developed and delivered by the YWCA.
- *Healthy at Work* initiatives included:
    - stakeholder workshop, establishment of an advisory group and commissioning a needs analysis into the health status of ACT workers;
    - development of an ACT Healthy@work pilot in 5 workplaces in the ACT to be conducted in 2010-11;
    - pilot implementation of the ACT Health Smoke Free policy in ACT alcohol and other drug, and mental health community services, delivered by the Alcohol, Tobacco and Other Drug Association (ATODA); and
    - a review of workplace health promotion programs nationally and internationally.

In 2008-10, the Health Promotion Grants Program administered annual funding rounds aimed at funding projects and organisations that facilitate healthy lifestyles and create healthy policies and environments. In 2008-09, 99 projects were funded for a total of $2.13M. In 2009-10, 104 projects were funded for a total of nearly $2.17M.

9. Intersectoral activities relevant to health

At a glance

- The major challenges for improving health of ACT residents lie in modifying lifestyle-related risk factors for disease.
- A concerted effort between different sectors of government and commercial sectors and between government and non-government organisations is required to address many of these.
- The ACT Health Directorate has worked across these sectors to understand the drivers behind specific risk factors for ill health.
- Implementation of strategies to address risk factors for disease has also required a joint effort across the whole of government, and between government and non-government sectors.
- Further work is being done to strengthen the capacity of ACT Government to align programs with the need to promote healthy choices in the community.

Lifestyle factors which have a strong influence on chronic diseases such as physical activity, nutrition, maintaining a healthy weight, tobacco use and alcohol can best be improved by collaboration between the Health and other sectors. The ACT Health Directorate engages in cross-sectoral approaches to better understand and respond to social factors that influence health in the ACT. Examples include links between Health and the Directorate of Education and Training (DET) to promote physical activities in children and school, and between Health Directorate the AIDS Action Council to deliver harm minimisation programs for HIV and other sexually transmitted diseases.

Some of the partnerships between Health Directorate, other sectors of Government and non-governmental organisations are promoted through the ACT Health Promotion Grants Program which delivers funding for programs which promote better health in the ACT (2008-09: $2.13 million for 99 projects, 2009-10: $2.17 million for 104 projects) (refer Chapter 8.9). Recognising the impact on health of government actions, and harnessing the positive contribution of commercial and non-government organisations towards improving health, will make the ACT a place in which it is easier for people to make lifestyle choices which improve their health. Further examples of partnerships include:

- The *Mental Health Services Plan 2009-2014* outlines the vision for mental health services in the ACT to the year 2020. It identifies current and future mental health service needs in the ACT, as well as workforce planning and development implications. It also proposes a framework for mental health sector development and for monitoring and implementation. The plan was developed in consultation with mental health consumers, carers and service providers, the Mental Health Community Coalition of the ACT, Health Directorate staff and representatives from other government agencies.
- The *ACT Breastfeeding Strategic Framework 2010-2015* aims to increase the number of infants being exclusively breastfed from birth to six months, and to encourage ongoing breastfeeding with complementary foods until at least 12 months of age, in line with National Health and Medical Research Council recommendations.[59] The framework is the outcome of an extensive consultation process with health professionals including general practitioners, key stakeholders and policy makers from government and non-government organisations as well as parents and grandparents.
- The Population Health Division undertook a number of initiatives in tobacco control (refer Chapter 8.9). To support these initiatives, funding was provided to the ACT Quitline (a smoking cessation telephone counselling service) and the Cancer Council ACT (providing smoking cessation courses and support in schools, community groups, workplaces and to individuals).

- The Health Directorate Epidemiology Branch made significant progress on projects to strengthen the quality of its information on Aboriginal and Torres Strait Islander people through cross-government activities to improve Aboriginal and Torres Strait Islander identification in ACT datasets. In addition, the Branch has worked to strengthen research capacity by developing data linkage infrastructure across the ACT Health Directorate.[48]
- The report, *Mental Health and Wellbeing in the ACT*, was a collaborative endeavour of the Centre for Mental Health Research at the Australian National University and the ACT Health Directorate. It outlines the results from the Personality and Total Health (PATH) Through Life Project focusing on mental health status and the implications for government program and policy development. The partnership between the two bodies has provided an opportunity for translation of research into health policy and practice with policy makers and researchers working together to build knowledge and exchange information to support evidence for informed decision making in relation to mental health.[60]
- The ACT Ministerial Advisory Council on Sexual Health, HIV/AIDS, Hepatitis C and Related Diseases (SHAHRD) was formed to provide advice to the ACT Minister for Health from community and consumer perspectives on issues related to the health and well-being in the areas of sexual health and blood borne diseases. Membership specifically includes individuals recruited for their experience, expertise and connection with relevant communities of interest. This approach values the participation of community organisations, affected communities and clinical communities in producing optimal health outcomes, and is based on a commitment to consultation and joint decision-making.

Implementation of programs to address health issues has followed from this commitment to inter-sectoral consultation (see chapter 8.9). The ACT Health Promotion Grants Program provides funding for organisations which facilitate healthy lifestyles. The Australian Better Health Initiative (AHBI) and National Partnership Agreement on Preventative Health (NPAPH) both support programs to modify lifestyle and environmental contributors which involve collaboration with non-Health Directorates. These include:

- The Directorate of Education and Training (DET), Territory and Municipal Services and the Heart Foundation providing programs to improve levels of physical activity and the quality of nutrition of children.
- Non-health Directorates such as Justice and Community Safety Directorate (JACS) were pilot sites for programs to modify risk factors for ill health among workers.
- NSW Health Department, the ACT Health Directorate and the Tasmanian Health Department collaborated to provide access to a telephone service to provide advice to support adults in making healthy lifestyle choices.
- The Alcohol, Tobacco and Other Drug Association (ATODA) provided pilot drug and alcohol harm reduction programs in the workplace.
- A longstanding partnership between private sector health providers, the DET and the ACT Health Directorate allowed the ACT to continue its high levels of childhood immunisation.

Legislative and regulatory approaches have also contributed to enabling healthy lifestyle choices among ACT residents and organisations. Examples of these included:

- The Population Health Division working across Government, particularly with ACT Policing and JACS to support new ‘drug driving’ tests.
- Collaboration between JACS, Office of Regulatory Services (ORS), Australian Federal Police and Population Health Division to implement legislation to control the exposure of children to smoking in cars.
- Increased involvement by the Health Directorate in relation to public health aspects of major events in the ACT, such as the annual multicultural festival, to ensure food safety and planning for health-related emergencies provisions are in place.

10. Health indicator tables

ACT PROFILE

Table 16: Population profile, by age group, ACT, 2006-10

Population	Units	Age group	2006	2007	2008	2009	2010
Total population (estimated resident)	no.	all	334,119	339,761	344,236	352,189	357,958
Infants (as at 30 June each year)	no.	0-<1	4,430	4,503	4,602	4,855	5,272
Young children (at 30 June)	no.	1-4	16,278	17,017	17,746	18,207	18,862
Children (at 30 June)	no.	0-14	62,723	63,292	64,098	65,027	66,077
Children	% pop.	0-14	18.8	18.6	18.5	18.4	18.4
Young people (at 30 June)	no.	15-24	54,250	54,522	54,743	54,961	55,247
Young people	% pop.	15-24	16.2	16.1	15.8	15.6	15.4
Younger adults (at 30 June)	no.	25-44	103,591	105,337	107,970	110,347	112,522
Adults (at 30 June)	no.	25-64	185,287	188,765	193,079	196,916	200,364
Adults	% pop.	25-64	55.5	55.6	55.8	55.8	55.8
Adults (at 30 June)	no.	45-64	81,696	83,428	85,109	86,569	87,842
Older people (at 30 June)	no.	65+	31,859	33,182	34,374	35,704	37,206
Older people	% pop.	65+	9.5	9.8	9.9	10.1	10.4
Older people (at 30 June)	no.	65-74	17,616	18,427	19,196	20,085	21,060
Elderly (at 30 June)	no.	75+	14,243	14,755	15,201	15,178	16,146
Total population growth (rounded)	no.	all	4,000	6,900	4,500	8,000	5,800

Sources: ABS 2006-10, Australian Demography, cat no. 3101.0 & 3101.8

Table 17: Social indicators relevant to health, ACT & Australia, 2006-10

		ACT					Aust.
Indicator	**Units**	**2006**	**2007**	**2008**	**2009**	**2010**	**2009**
FAMILY FORMATION							
Registered marriages							
Number of marriages	'000	1.6	1.6	1.7	1.6	na	120.1
Crude marriage rate (per 1,000 population)	rate	4.9	4.7	4.8	4.4	na	5.5
Marriages, both partners married for the first time - of all marriages	%	68.0	68.8	68.8	69.8	na	70.6
Median age of males at first marriage	years	29.2	29.1	29.4	29.0	na	29.6
Median age of females at first marriage	years	27.5	27.6	27.7	27.8	na	27.7
Divorce							
Number of divorces	'000	1.5	1.3	1.4	1.4	na	49.4
Median duration of marriage until final separation	years	9.6	9.6	9.8	9.6	na	8.7
Divorces involving children aged under 18 years - of all divorces	%	52.2	51.8	48.2	51.0	na	49.1
Fertility							
Births	'000	4.5	4.8	4.8	4.9	na	295.7
Indigenous births	no.	109	129	134	135	na	n.a.
Total fertility rate (babies per woman)	rate	1.7	1.8	1.8	1.7	na	1.9
Births to mothers aged under 20 - of all births	%	2.4	2.6	2.0	2.4	na	4.1
Births to mothers aged 35 and over - of all births	%	23.6	23.7	26.0	24.5	na	22.8
Births outside marriage - of all births	%	27.2	28.4	27.7	29.0	na	34.5
Births outside marriage acknowledged by father - of all births outside marriage	%	92.4	91.3	92.0	91.3	na	90.2
LIVING ARRANGEMENTS							**Aust.**
Households							**2010**
Total households	'000	127	129	131	133	136	8,395
Families							
Total families	'000	93	94	94	97	100	6,271
Families with children aged under 15 years	'000	36	35	35	37	37	2,336
Couple families	'000	78	80	81	80	85	5,221
De facto couple families - of all couple families	%	16.7	na	na	na	na	na
Couple-only families - of all couple families	%	43.3	43.3	42.8	43.4	42.3	45.8
Couple families with children aged under 15 - of all families with children aged under 15	%	80.9	80.1	81.9	78.8	83.1	79.5
Lone-father families with children aged under 15 - of all families with children aged under 15	%	*2.3	*2.8	*3.2	*4.5	*3.1	2.7
Lone-mother families with children aged under 15 - of all families with children aged under 15	%	16.7	17.0	14.8	16.7	13.8	17.7
Families with at least one child aged under 5 - of all families with children aged under 15	%	43.2	46.0	45.7	48.8	50.2	47.0
Persons							
Children aged under 15 living in one-parent families - of all children aged under 15	%	17.2	18.5	16.3	20.5	14.7	18.5
Persons aged 20-24 living with parents - of all persons aged 20-24	%	40.9	41.2	45.3	48.6	46.7	49.7
Persons aged 25-34 living with parents - of all persons aged 25-34	%	12.4	13.2	15.6	9.6	12.2	13.9
Persons aged 15-64 who live alone - of all persons aged 15-64	%	8.2	9.4	8.1	8.7	7.5	8.6
Persons aged 65 and over who live alone - of all persons aged 65 & over	%	23.0	22.4	24.1	24.0	23.6	24.9

Source: ABS, Australian Social Trends, cat. no. 4102.0, 2011

(Table 17 continued on next page)

Table 17: Social indicators relevant to health, ACT & Australia, 2006-10 (continued)

		ACT					Aust.
HOUSING	**Units**	**2006**	**2007**	**2008**	**2009**	**2010**	**2010**
Separate houses	%	81.5	na	78.6	na	78.7	78.6
Semi-detached houses	%	10.7	na	11.9	na	13.1	10.4
Flats	%	7.6	na	9.5	na	7.6	10.7
Average persons per household	%	2.5	na	2.5	na	2.6	2.6
Owner without a mortgage	%	27.3	na	30.6	na	29.1	32.6
Owner with a mortgage	%	42.5	na	40.3	na	40.9	36.2
Renter - Territory housing authority	%	8.0	na	8.5	na	6.4	3.9
Renter - private landlord	%	19.4	na	17.3	na	21.3	23.7
FAMILIES AND WORK							**2010**
Both parents employed - of all couple families with children aged under 15	%	74.0	71.1	76.0	72.1	75.4	60.6
One-parent families with children aged under 15, parent employed - of all one-parent families with children aged under 15	%	75.5	70.2	75.4	56.1	64.3	55.0
LABOUR FORCE (June)							
Participation, employed/unemployed (15+ years)	%	72.5	74.0	73.0	72.8	72.8	65.3
Employed part-time (of total employed)	%	25.5	24.5	24.5	24.7	25.2	29.9
Unemployment rate (15+ years)	%	3.3	3.0	2.6	2.9	3.5	5.5
Employed in highest skill occupations (of total employed)	%	38.6	39.3	40.9	41.6	43.3	30.1
Employed in lowest skill occupations (of total employed)	%	13.6	12.4	12.5	12.4	12.0	18.2
INCOME							
Ave. weekly ordinary time earnings, full-time (May)	$	1,197	1,250	1,298	1,352	1,459	1,305
							2009
Age pension	%	5.4	5.3	5.5	5.7	na	9.6
Age pensioners - of persons of qualifying age	%	51.1	50.8	52.6	53.7	na	70.1
Disability support pension	%	2.1	2.0	2.1	2.1	na	3.4
Austudy	%	0.1	0.1	0.1	na	na	n.a.
Single parent	%	1.4	1.2	1.0	0.9	na	1.6
							2010
Youth allowance	%	1.6	1.5	1.4	1.6	1.7	1.7
EDUCATION							
Apparent retention, fulltime students (Years 7, 8-12)	%	88.7	85.2	85.2	86.8	90.8	78.0
Bachelor degree or above (25-64 years)	%	39.0	41.9	42.4	46.9	44.6	26.9
FAMILY STRUCTURE							
Average family size	no.	3	3	3	na	na	na
COMMUNITY							
Attended any sporting event (adults)	%	46.9	na	na	na	47.9	42.4
Participated in organised sport (adults)	%	28.7	na	na	na	34.7	24.4
Attended a live performance (adults)	%	61.7	na	na	na	64.4	51.9
							2009
Organised sports activities (children, outside school hours)	%	70.5	na	na	71.3	na	63.1
Singing (children, outside school hours)	%	*4.9	na	na	7.5	na	6.1
Playing a musical instrument (children, outside school hours)	%	25.0	na	na	22.2	na	19.7
COMMUNICATIONS							
Household access to computer at home	%	82.2	83.9	86.4	87.5	na	78.1
Household access to the internet at home	%	71.8	73.4	80.5	81.5	na	71.8
CRIME AND SAFETY							**2010**
Victim of assault	%	na	na	na	7.1	4.8	5.7
Victim of actual or attempted break-in, last 12 mths	%	na	na	na	4.2	3.8	3.0
OTHER							
Passenger vehicles per 1,000 population	no.	576	578	596	594	596	551

Sources: (a) ABS, Australian Social Trends, Data cubes, cat. no. 4102.0, 2011

(b) SCRGSP Report Vol 2 2010

Notes: (a) na not available.

(b) * estimate has a relative standard error of 25% to 50% and should be interpreted with caution.

Table 18: Selected mortality statistics, ACT, 2002-09

	2002	2003	2004	2005	2006	2007	2008	2009
Number of deaths								
Males	712	751	739	743	741	815	847	817
Females	661	663	684	748	743	782	850	831
Persons	1,373	1,414	1,423	1,491	1,484	1,597	1,697	1,648
Standardised mortality rate (deaths per 1,000 standard population)**								
Males	7.0	7.3	7.0	6.6	6.4	6.7	6.9	6.4
Females	5.2	4.7	4.6	4.9	4.7	4.7	5.0	4.7
Persons	5.9	5.8	5.6	5.6	5.5	5.6	5.8	5.5
Median age at death (years)								
Males	69.3	73.9	75.2	75.3	76.0	76.6	78.3	76.6
Females	75.2	81.5	80.8	82.0	82.6	82.4	83.0	83.2
Persons	72.3	78.1	77.6	78.5	79.6	79.5	80.3	79.9
Infant mortality rate (deaths at age less than 1 year, per 1,000 live births)								
Males	4.3	7.5	6.0	5.2	5.2	4.1	6.5	4.3
Females	2.5	4.0	7.9	6.3	5.0	3.4	3.4	2.6
Persons	3.4	5.8	6.9	5.7	5.1	3.8	5.0	3.5
***Premature mortality rate (deaths per 1,000 population aged less than 80 years)**								
Males	2.6	3.2	3.1	2.9	2.9	3.0	na	na
Females	2.0	1.8	2.0	2.0	1.8	2.0	na	na
Persons	2.3	2.5	2.5	2.5	2.3	2.5	na	na
***Avoidable mortality rate (deaths per 1,000 population aged less than 80 years)**								
Males	1.8	2.3	2.1	2.0	1.8	2.0	na	na
Females	1.3	1.2	1.3	1.3	1.2	1.3	na	na
Persons	1.6	1.7	1.7	1.7	1.5	1.7	na	na
Life expectancy (years) select ages								
Males								
0	79.2	79.2	79.7	79.9	80.0	80.3	80.1	80.5
65	18.2	18.3	18.6	18.8	18.9	19.2	19.0	19.3
85	5.8	5.8	6.0	6.1	6.1	6.1	5.9	6.1
Females								
0	83.3	83.8	83.9	84.0	83.9	84.0	84.0	84.3
65	21.0	21.4	21.5	21.9	21.7	21.6	21.6	21.9
85	6.9	7.0	7.0	7.2	7.1	6.9	7.0	7.1

Sources: ABS, Deaths, Australia, cat. no. 3302.0, Canberra, 2002-10

* ABS deaths data 2001-09, confidentialised unit record files

Notes: (a) The data relates to ACT residents only, including those who died interstate.

(b) ** Standardised to 2001 Australian population.

(c) 2009 ABS Deaths data are preliminary and should be treated with caution.

(d) na not available.

Table 19: Selected long-term conditions, by age group, ACT, 2007-08

	Age-group (%)			
Condition	0–24 years	25–44 years	45–64 years	65+ years
Arthritis (includes 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)]	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 2007-08: Summary of results, state and territory tables, cat. no. 4368.0

Notes: (a) Includes depression.

(b) nec not elsewhere classified.

(c) na not available.

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Table 20: Selected long-term conditions, %, ACT 2001, 2004-05, 2007-08 & Australia, 2007-08

	2001	2004-05	2007-08	Aust. 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 (includes osteoarthritis)	11.8	13.0	13.0	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
Malignant neoplasms	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.

(c) nec not elsewhere classified.

HEALTH RISK FACTORS

Table 21: ASSAD, selected results, ACT, 1996-2008

	1996	1999	2002	2005	2008	Sig.[e]
Tobacco						
% Smoked at least part of a cigarette in lifetime	55.7	53.7	45.9	32.0	26.4	p<.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
Mean number of cigarettes smoked in last 7 days by current smokers	31.0	29.0	29.0	25.0	23.8	ns
Alcohol						
% 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
Mean number of drinks consumed in last 7 days by current drinkers	7.0	7.0	8.0	6.0	6.0	ns
Illicit substances						
% Used at least one illicit substance in lifetime	37.5	35.0	29.6	20.3	14.8	p<.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<.05
% Used cannabis at least once in last week	10.7	8.8	7.6	3.7	2.7	ns
% 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 tranquillisers at least once in lifetime	20.6	19.1	15.1	14.7	19.4	p<.05
% Used hallucinogens at least once in lifetime	8.0	7.1	4.0	4.1	2.4	p<.05
% Used amphetamines at least once in lifetime	6.1	7.7	6.1	5.8	3.3	p<.05
% Used steroids at least once in lifetime	2.5	3.7	4.1	2.8	2.4	ns
% 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<.05
% Used ecstasy at least once in lifetime	4.5	4.5	5.3	5.0	3.8	ns
% Injected drugs with needles in lifetime	4.8	4.2	4.1	3.8	3.9	ns
% Used multiple substances in the last week[b]	6.7	5.2	4.4	2.3	1.4	ns
% Non-users (never tried tobacco, alcohol or any illicit in lifetime)	9.0	8.8	8.1	9.5	13.6	p<.05
Healthy weight[c]						
% Met the dietary guidelines for fruit consumption (3 serves)	na	na	na	41.7	41.7	ns
% Met the dietary guidelines for vegetable consumption (4 serves)	na	na	na	22.0	22.3	ns
% Met the dietary guidelines for cereal consumption (5 serves)	na	na	na	18.5	17.7	ns
% Met the physical activity guidelines for daily activity (60mins.+)	na	na	na	13.9	15.6	ns
% Met the physical activity guidelines for daily TV/computer use (<=2hrs)	na	na	na	29.9	25.0	p<.05
% Overweight or obese	na	na	na	22.5	19.5	ns
Sun protection[d]						
% usually or always wear a hat	53.1	45.8	43.6	40.2	29.2	p<.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<.05
% usually or always most of time inside	17.8	20.6	22.4	20.2	26.7	p<.05

Source: ASSAD (Australian Secondary Student Alcohol & Drug Survey) confidentialised unit record files, 1996-2008, ACT Health

Notes: (a) five or more drinks on any day of last week for females & seven or more drinks for males.
(b) Used alcohol, tobacco & at least one illicit in 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 and 3 pm.
(e) ns not significant (p>0.05).
(f) na not applicable.
(g) p<0.05 implies a significant change between 2005 & 2008.

Table 22: Selected risk factors for chronic disease, %, adults 18 yrs & over, by sex, ACT, 2007-10

	2007-08			2009-10		
	Males	Females	Persons	Males	Females	Persons
Tobacco						
Current smoker	18.1	12.9	15.4	17.2	11.7	14.4
Alcohol						
Long term harm from drinking [(a)]	41.8	19.5	30.3	41.3	19.4	30.0
Physical activity						
Sufficient physical activity [(b)]	63.3	63.3	58.7	59.4	54.5	56.9
Fruit and vegetable consumption						
Sufficient vegetable consumption [(c)]	4.9	12.9	9.1	6.3	13.4	9.9
Sufficient fruit consumption [(d)]	45.6	58.6	52.5	53.3	60.6	57.1
Overweight and obesity						
Per cent of adults who are overweight or obese	59.0	46.7	52.8	59.9	46.1	52.9
Sun protection						
Per cent of adults who use sun protection [(e)]	13.7	21.4	17.7	17.0	23.8	20.5

Source: 2007-10 ACT General Health Survey, unpublished data, ACT Health Directorate

Notes: 2007-08 refers to the 2 calendar years 2007 & 2008 combined and 2009-10 refers to the 2 calendar years 2009 & 2010 combined.

(a) The lifetime risk of harm from drinking alcohol increases with the amount consumed. For healthy men and women, drinking no more than 2 standard drinks any day reduces the lifetime risk of harm from alcohol-related disease or injury.
(b) 30 minutes each day or 150 minutes per week of moderate to vigorous physical activity.
(c) 5 or more serves of vegetables per day.
(d) 2 or more serves of fruit per day.
(e) Those who usually wear sunglasses, apply sunscreen, wear a hat and protective clothing.

CANCER SCREENING

Table 23: Cancer screening, % participation, ACT 2004-10

Screening participation			2004	2005	2006	2007	2008	2009	2010
BreastScreen ACT	%	50-69 yrs	52.7	56.0	58.4	58.2	55.3	55.2	53.9
Pap smear screening	%	20-69 yrs	63.2	64.9	64.5	63.9	64.1	61.0	60.7
Bowel screening	%	55 yrs	na	na	na	40.5	43.6	na	na
Bowel screening (Sep 2006-June2008)	%	65 yrs	na	na	na	48.1	52.4	na	na

Sources: (a) BreastScreen Program's Monthly Cancer Services Reports, 2004-10
(b) ACT Cervical Cytology Register, 2004-10
(c) Bowel screening data for 2007; Colorectal Nurse, The Canberra Hospital, ACT
(d) Bowel screening data 2008-10; National Bowel Cancer Screening Program, Annual monitoring report 2009, data supplement 2010

Note: na not available.

NOTIFIABLE CONDITIONS

Table 24: Communicable disease notifications & rates, ACT 2006-10, Australia, 2010

	ACT	ACT					Aust.
	2010	2006	2007	2008	2009	2010	2010
	Number	Notifications rate per 100,000 population					
Vaccine preventable diseases							
Pertussis	690	76.7	28.5	41.7	103.4	190.7	155.9
Pneumoncocal disease (invasive)	25	5.6	10.0	5.8	7.7	6.9	7.3
Meningococcal disease	1	1.5	0.9	0.9	0.6	0.3	1.0
influenza (laboratory confirmed)	94	23.8	114.4	70.2	360.5	26.0	60.3
Measles	1	0.3	0.0	0.0	0.3	0.3	0.3
Mumps	1	0.3	1.2	0.0	0.0	0.3	0.3
Rubella	1	0.0	0.6	0.0	0.0	0.3	0.2
Rubella-congenital	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	0.1
Tetanus	0	0.0	0.0	0.0	0.0	0.0	0.0
Diptheria	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
Varicella zoster (chickenpox)	4	0.0	0.0	3.5	0.6	1.1	11.6
Varicella zoster (shingles)	32	0.0	0.0	2.0	3.1	8.8	19.8
Varicella zoster (unspecified)	88	0.0	0.0	29.3	19.1	24.3	47.3
Sexually transmitted diseases							
Chlamydial infection	1,152	244.4	265.6	283.8	273.4	318.3	332.7
Gonococcal infection	53	9.8	13.2	6.0	15.7	14.6	44.9
Syphillis < 2 years	13	0.6	2.6	1.2	3.1	3.6	5.0
Syphillis > 2 years	16	3.0	5.6	9.2	5.7	4.4	5.6
Syphillis- congenital	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
Bloodborne diseases							
Hepatitis (NEC)	0	0.0	0.0	0.0	0.0	0.0	0.0
Hepatitis B (incident)	4	1.8	3.8	0.3	1.1	1.1	1.0
Hepatitis B (unspecified)+,++	93	20.8	16.1	16.7	28.8	25.7	33.4
Hepatitis C (incident)	12	4.5	2.6	1.4	2.3	3.3	2.0
Hepatitis C (unspecified)+,++	211	52.6	56.0	56.1	44.7	58.3	52.8
Hepatitis D	0	0.0	0.0	0.0	0.0	0.0	0.2
Gastrointestinal diseases							
Campylobacteriosis	654	119.8	122.7	109.5	103.1	180.7	112.3
Salmonellosis	211	39.5	32.3	38.0	63.5	58.3	53.8
Cryptosporidiosis	15	23.5	2.6	3.2	29.6	4.1	6.6
Shigellosis	6	0.6	0.0	0.9	2.6	1.7	2.5
Hepatitis A	5	0.3	0.6	1.4	2.0	1.4	1.2
Listeriosis	3	0.3	0.0	0.3	0.3	0.8	0.3
Typhoid	2	0.0	0.0	0.0	0.6	0.6	0.4
SLTEC, VTEC	0	0.0	0.3	0.0	0.0	0.0	0.4
Haemolytic Uraemic Syndrome (HUS)	0	0.0	0.3	0.0	0.0	0.0	0.0
Hepatitis E	2	0.6	0.3	0.0	0.0	0.6	0.2
Other bacterial diseases							
Tuberculosis	10	4.2	2.9	3.7	6.5	2.8	5.9
Legionellosis	5	0.3	1.2	1.2	0.9	1.4	1.3
Leprosy	0	0.0	0.0	0.0	0.0	0.0	0.1

Continued on next page

Communicable disease notifications & rates, ACT 2006-10, Australia, 2010 (continued)

	ACT	ACT					Aust.
	2010	2006	2007	2008	2009	2010	2010
	Number	Notifications rate per 100,000 population					
Vectorborne diseases							
Malaria	2	3.3	3.5	4.3	1.1	0.6	1.8
Dengue	17	1.8	0.9	1.7	4.6	4.7	5.4
Ross River Virus infection	22	3.0	3.8	6.0	0.9	6.1	23.0
Barmah Forest Virus infection	3	2.4	1.8	2.0	0.9	0.8	6.6
Arbovirus infection (NEC)	0	0.0	0.0	0.0	0.0	0.0	0.1
Chikungunya Virus infection	NN	NN	NN	NN	NN	NN	0.2
Zoonotic diseases							
Q Fever	1	0.0	0.0	0.6	0.0	0.3	1.5
Ornithosis	0	0.6	0.0	0.0	0.0	0.0	0.3
Leptospirosis	1	0.0	0.0	0.0	0.6	0.3	0.6
Brucellosis	0	0.0	0.0	0.0	0.0	0.0	0.1

Sources: ACT Notifiable Diseases System 2006-01 & Notifiable Diseases Surveillance System (NNDSS) 2006-10

Note: (a) NN not notifiable.
(b) + Unspecified hepatitis includes cases with hepatitis in which the duration of infection cannot be determined.
(c) ++ Analysis by report date.

Table 25: Cancer incidence & mortality, ACT, 2004-08

	Unit	Age	2004	2005	2006	2007	2008
Incidence							
All cancers	no.	0-85+	1,287	1,335	1,293	1,391	1,437
All cancers - total	rate	0-85+	461.0	457.5	438.8	455.4	456.5
All cancers - males	rate	0-85+	557.1	531.1	512.5	549.0	563.6
All cancers - females	rate	0-85+	385.5	402.6	379.1	382.4	369.0
Female breast cancer	rate	0-85+	135.2	124.0	129.4	117.1	117.7
Cervical cancer-female	rate	0-85+	10.6	5.5	4.6	4.4	3.8
Prostate cancer - male	rate	0-85+	196.8	153.1	156.4	184.1	217.4
Lung cancer - total	rate	0-85+	29.4	37.2	34.4	37.3	35.5
Lung cancer - male	rate	0-85+	44.8	42.8	43.1	43.3	37.0
Lung cancer - female	rate	0-85+	17.2	34.0	27.0	33.0	34.4
Colorectal cancer - total	rate	0-85+	58.3	60.9	62.5	62.4	66.1
Colorectal cancer - male	rate	0-85+	73.4	71.3	72.8	64.4	77.8
Colorectal cancer - female	rate	0-85+	45.2	51.7	54.3	60.7	55.4
Melanoma - total	rate	0-85+	47.1	58.4	42.7	33.5	44.7
Melanoma - male	rate	0-85+	54.6	71.9	47.5	41.3	58.0
Melanoma - female	rate	0-85+	39.9	49.4	38.9	28.1	34.4
Mortality							
All cancers	no.	0-85+	402	400	438	466	454
All cancers - total	rate	0-85+	153.9	150.5	157.3	159.5	153.1
All cancers - males	rate	0-85+	210.3	167.0	193.8	208.6	181.6
All cancers - females	rate	0-85+	113.0	144.1	129.9	122.7	135.1
Female breast cancer	rate	0-85+	20.5	26.1	29.1	23.5	20.3
Prostate cancer - male	rate	0-85+	31.6	29.9	26.3	19.4	31.2
Lung cancer - total	rate	0-85+	26.8	21.1	31.7	27.2	28.9
Lung cancer - male	rate	0-85+	42.9	27.1	41.3	37.4	31.3
Lung cancer - female	rate	0-85+	13.8	17.3	24.6	19.0	27.6
Colorectal cancer - total	rate	0-85+	22.1	22.4	20.7	23.5	16.8
Colorectal cancer - male	rate	0-85+	29.0	20.3	31.0	31.4	16.7
Colorectal cancer - female	rate	0-85+	15.9	22.2	12.8	16.7	16.5
Melanoma - total	rate	0-85+	5.4	4.0	8.2	6.8	7.3
Melanoma - male	rate	0-85+	9.0	6.4	13.1	13.5	11.4
Melanoma - female	rate	0-85+	2.3	2.4	3.7	1.5	4.5

Source: ACT Cancer Registry

Note: (a) Rate per 100,000 population was age standardised to the Australian Standard Population, 2001.
(b) The number of new cases and deaths change over time as more information is updated. Therefore, the number of cases/deaths varies according to time of publication.

MATERNAL AND PERINATAL HEALTH

Table 26: Women who gave birth, by state of residence, ACT, 2004-09 & Australia, 2009

	ACT						Aust.
	2004	2005	2006	2007	2008	2009	2009
Number of women who gave birth	4,799	4,995	5,354	5,420	5,589	5,735	294,540
ACT residents	4,018	4,221	4,480	4,547	4,713	4,822	
Non ACT residents	781	774	874	873	876	913	
Number of babies born	4,926	5,088	5,485	5,536	5,705	5,850	299,220
to ACT residents	4,110	4,282	4,576	4,624	4,794	4,894	
to Non ACT residents	816	806	909	912	911	956	

Source: ACT Maternal and Perinatal Data Collection, confidentialised unit record files, 2004-09

HEALTH SERVICES

Table 27: Public hospital summary indicators, ACT & Australia, 2007-10

		ACT		Aust.
	2007-08	2008-09	2009-10	2009-10
No. of separations[(a)]	81,127	89,869	88,356	5,069,288
No. of overnight separations	37,341	41,176	40,729	2,495,229
No. of same-day separations	43,786	48,693	47,627	2,574,059
Same-day separations as a % of total	0.54	0.54	0.54	0.51
Separations per 1,000 population[(b)]	256	275	264	221
Ave. public cost weight of separations[(b)]	1.0	1.0	1.01	1.0
Cost per casemix-adjusted separation (excluding depreciation)	4,510	4,624	4,989	4,703
No. of patient days	277,429	292,947	296,483	18,102,746
Patient days per 1,000 population[(c)]	891.6	909.0	897.0	778.2
Average length of stay (days)	3.4	3.3	3.4	3.6
- excluding same-day separations (days)	6.0	6.0	6.1	6.0
No. of available beds	851	875	907	56,900
No. available beds per 1,000 resident population	2.5	2.5	2.6	2.5
% of beds accredited	100	100	100	90
% of hospitals accredited	100	100	100	90

Source: AIHW 2010, Australian Hospital Statistics, 2007-08 to 2009-10

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 2007-08 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 28: Hospital separations by disease group & Aboriginal & Torres Strait Islander status, ACT, 2009-10

	Aboriginal & Torres Strait Islander	Non-Aboriginal or Torres Strait Islander
ICD-10-AM chapter	%	%
Factors & contact	13.2	16.1
Injury & poisoning	13.1	8.5
Digestive	11.1	10.3
Pregnancy & related	11.1	7.9
Mental & behavioural	7.7	4.0
Symptoms, signs, etc*	6.9	6.6
Respiratory	5.6	5.3
Genitourinary	5.6	6.0
Musculoskeletal	4.3	7.1
Circulatory	3.6	7.0
Perinatal	3.2	1.4
Neoplasms	2.8	7.2
Skin & subcutaneous	2.6	1.7
Endrocrine	2.3	2.1
Nervous system	1.8	2.3
Infectious	1.4	1.5
Ear and mastoid	1.1	0.9
Eye and adnexa	1.0	2.0
Congenital malformations	0.9	0.6
Blood & blood forming	0.7	1.5
Total	100	100

Source: ACT Admitted Patient Care Collection 2009-10

Note: * Symptoms, signs etc. include such conditions as cardiac murmurs, abnormal heart beat and dizziness.

Table 29: GP full-time workload equivalents, rate, ACT & Australia, 2007-10

	ACT	Aust
2007-08	67.5	90.0
2008-09	67.0	90.7
2009-10	66.7	90.7

Source: SCRGSP, *Report on Government Services, 2011*

Note: Rate per 100,000 population.

Table 30: GP service use, by Aboriginal & Torres Strait Islander status, rate, ACT & Australia, 2008-10

	ACT			Australia		
	Indigenous	Non-Indigenous	Total	Indigenous	Non-Indigenous	Total
2008-09	5,586.1	4,332.9	4,359.8	5,248.0	5,421.6	5,416.4
2009-10	5,400.7	4,466.5	4,494.8	5,627.1	5,548.9	5,552.2

Source: SCRGSP, *Report on Government Services, 2011*

Note: Rate per 1,000 population.

Table 31: Employed nurses, selected characteristics, ACT & Australia, 2007-09

Year	ACT	Australia
2007		
Number	4,192	263,331
Average age (years)	43.5	43.7
Per cent male	7.5	9.6
Per cent registered nurses	83.6	80.6
Per cent clinical nurses [(a)]	91.5	91.4
Average hours	34.2	33.3
Population rate[(b)]	1,229.1	1,249.6
Population	341,054	21,072,452
2008		
Number	4,448	269,909
Average age (years)	44.6	44.1
Per cent male	8.0	9.5
Per cent registered nurses	83.0	81.4
Per cent clinical nurses[(a)]	88.2	90.9
Average Hours	34.6	33.4
Population Rate[(b)]	1,284.5	1,255.5
Population	346,294	21,498,540
2009		
Number	4,493	276,751
Average age (years)	44.7	44.3
Per cent male	8.3	9.6
Per cent registered nurses	83.8	81.3
Per cent clinical nurses[(a)]	87.5	90.6
Average Hours	34.8	33.3
Population Rate[(b)]	1,275.3	1,260.7
Population	352,285	21,951,736

Sources: AIHW Nursing Labour Force Survey, 1995 to 2009; & unpublished ABS estimated resident population data

Notes: (a) Clinical nurses includes clinical nurse managers & supervisors of new nurses.
(b) Nurses per 100,000 population.

Table 32: Private health insurance, selected statistics, ACT & Australia, 2006-10

		2006	2007	2008	2009	2010
Percentage of population with private health insurance[(a)]						
	ACT	52.9	55.6	54.9	54.9	55.7
	Australia	43.4	44.2	44.4	44.5	44.9
Percentage of public hospital admissions using private health insurance (ACT residents)[(b)]						
Public hospitals	ACT	5.4	5.1	5.8	5.9	6.3
All hospitals (public & private)	ACT	29.5	28.6	28.3	29.0	30.5

Sources: (a) www.phiac.gov.au/for-industry/industry-statistics/annualsurvey/

(b) ACT Health Admitted Patient Care data (unpublished) 2006-10

Note: Surveyed at 30 June each year.

Table 33: Residential aged care places & packages, persons 70 years & over, ACT & Australia, 2007-10

	2007	2008		2009		2010	
	Rate	Number	Rate	Number	Rate	Number	Rate
ACT							
Residential places	72.6	1,793	76.8	1,768	73.1	2,019	80.8
Community Aged Care packages	22.2	529	22.6	514	21.2	623	24.9
Extended Aged Care at Home packages	5.2	155	6.6	156	6.4	196	7.8
Transition Care Program packages	1.6	35	1.5	37	1.5	41	1.6
Total (places and packages)	101.5	2,512	107.5	2,475	102.3	*2,879	115.2
Australia							
Residential places	87.0	175,472	87.7	178,290	87.0	182,850	87.1
Community Aged Care packages	19.4	40,280	20.1	40,859	19.9	43,300	20.6
Extended Aged Care at Home packages	2.3	6,240	3.1	6,514	3.2	8,167	3.9
Transition Care Program packages	0.8	1,963	1.0	2,228	1.1	2,698	1.3
Total (places and packages)	109.7	223,955	111.9	227,891	111.2	237,015	112.9

Source: Residential Aged Care in Australia, AIHW, 2007-08 to 2009-10

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

* includes 7 Aboriginal & Torres Strait Islander people, mainly women.

Table 34: National Partnership Agreement on Preventive Health, 2009

National Partnership Agreement on Preventive Health

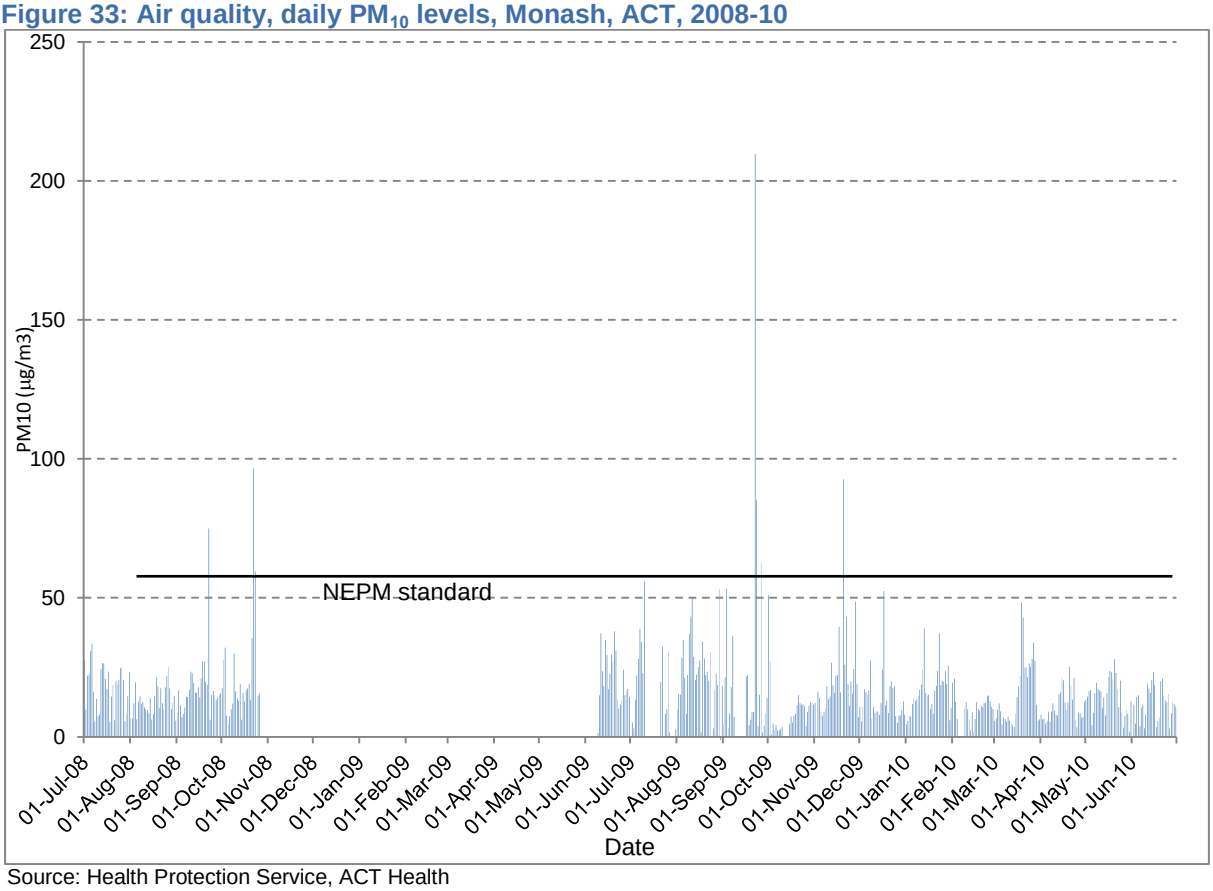
The National Partnership Agreement on Preventive Health (NPAPH) agreed by the Council of Australian Governments (COAG) on 29 November 2008 aims to address the rising prevalence of lifestyle related chronic disease through the implementation of a broad range of health promotion initiatives in settings such as communities, early childhood education and care environments, schools and workplaces.

The National Implementation Plan for the NPAPH was signed by the Australian Health Minister's Advisory Council (AHMAC) in September 2009. The plan outlines the allocation of $307.47 million to the states and territories over four years. States and territories will receive half of their payments to facilitate the interventions. The second half of the payments is conditional on the attainment of the seven performance benchmarks at three time points; June 2011 for smoking targets and June 2013 and December 2014 for all other indicator targets. Baselines for these benchmarks are the last available data at June 2007 for adult smoking and 2009 for all other indicators. For the ACT, meeting these benchmarks amounts to $5.14 million over four years.

The seven key performance benchmarks are as follows:

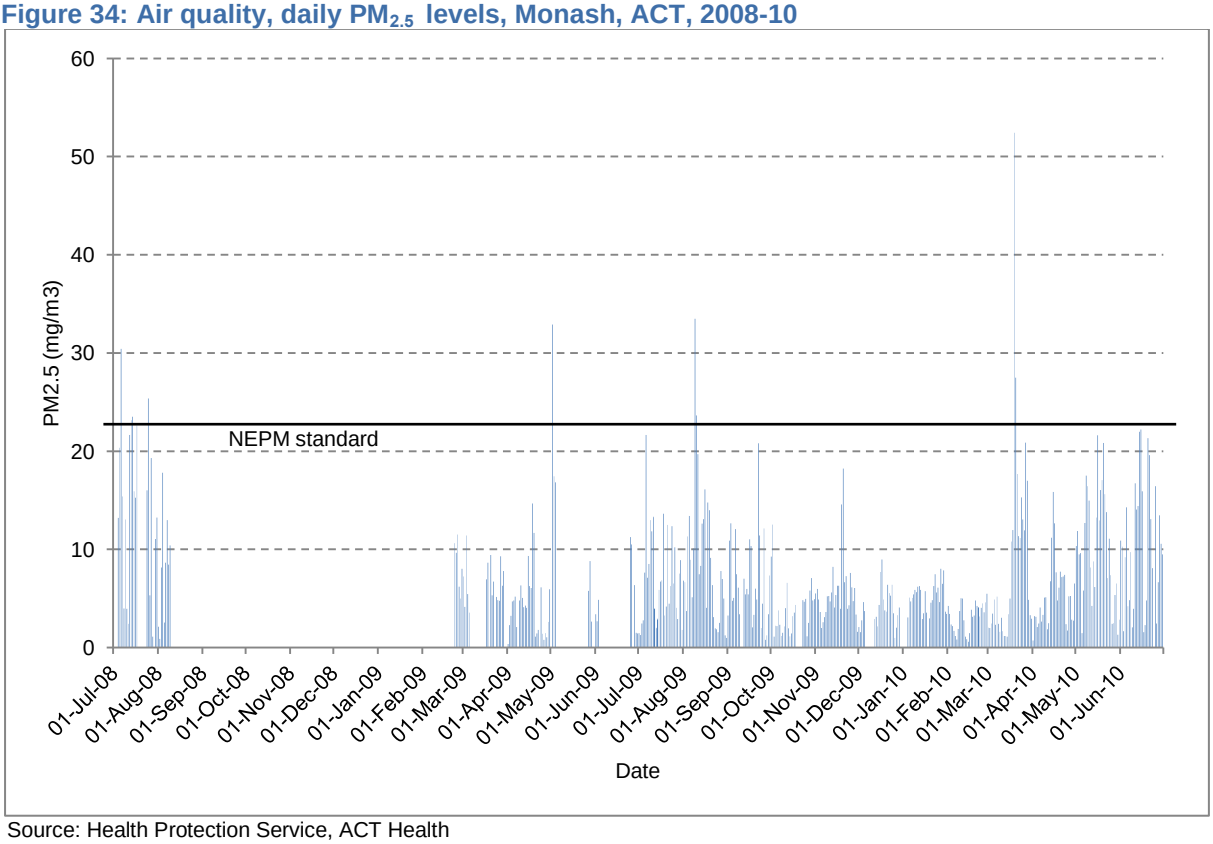
- Increase in the proportion of children at unhealthy weight to be held at less than 5% from baseline for each state and territory by 2013; proportion of children at healthy weight returned to baseline level by 2015.
- Increase in mean number of daily serves of fruits and vegetables consumed by children by at least 0.2 for fruits and 0.5 for vegetables from baseline for each state and territory by 2013; 0.6 for fruits and 1.5 for vegetables by 2015.
- Increase in the proportion of children participating in at least 60 minutes of moderate physical activity every day from baseline for each state and territory by 5% by 2013; by 15% by 2015.
- Increase in proportion of adults at unhealthy weight to be held at less than 5% from baseline for each state and territory by 2013; proportion of adults at healthy weight returned to baseline level by 2015.
- Increase in mean number of daily serves of fruits and vegetables consumed by adults by at least 0.2 for fruits and 0.5 for vegetables from baseline for each state and territory by 2013; 0.6 for fruits and 1.5 for vegetables by 2015.
- Increase in the proportion of adults participating in at least 30 minutes of moderate physical activity every day from baseline for each state and territory by 5% by 2013; by 15% by 2015.
- Reduction in state and territory baseline for proportion of adults smoking daily commensurate with a 2 percentage points reduction in smoking from 2007 national baseline by 2011; 3.5 percentage point reduction from 2007 national baseline by 2013.

Figure 33: Air quality, daily PM_{10} levels, Monash, ACT, 2008-10



Source: Health Protection Service, ACT Health

Figure 34: Air quality, daily $PM_{2.5}$ levels, Monash, ACT, 2008-10



Source: Health Protection Service, ACT Health

11. List of Abbreviations

ABHI	Australian Better Health Initiative
ABS	Australian Bureau of Statistics
ACIR	Australian Childhood Immunisation Register
ACT	Australian Capital Territory
ACTGHS	ACT General Health Survey
AEDI	Australian Early Development Index
AIDS	Acquired Immune Deficiency Syndrome
AIHW	Australian Institute of Health and Welfare
AMC	Alexander Maconochie Centre
ANU	Australian National University
APC	Admitted Patient Care collection
ASR	Age-standardised rate
ASVS	Australian Standard Vaccination Schedule
ASSAD	Australian Secondary Students Alcohol and Drug Survey
BBV	Blood-bourne viruses
BMI	Body Mass Index
BOD	Burden of Disease
CATI	Computer-Assisted Telephone Interview
CHD	Coronary (Ischaemic) Heart Disease
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
ERASS	Exercise, Recreation and Sport Survey
ERP	Estimated Resident Population
ETS	Environmental Tobacco Smoke
FTE	Fulltime Equivalents
FWE	Fulltime Workforce Equivalents
GP	General Practitioner
GRIM books	General Record of Incidence and Mortality Books (AIHW)
GSAHS	Greater Southern Area Health Service
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

K10	Kessler Psychological Distress Scale -10
MBS	Medicare Benefit Schedule
MMR	Measles, Mumps and Rubella
na	not available
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 (now Kirby Institute for Infection & Immunity in Society)
NCSP	National Cervical Screening Program
NDARC	National Drug and Alcohol Research Centre
NDSHS	National Drug Strategy Household Survey
NGO	Non-government Organization
NHMRC	National Health and Medical Research Council
NHS	National Health Survey
NMDS	National Minimum Data Set
NPAPH	National Partnership Agreement on Preventive Health
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
TCH	The Canberra Hospital
TFR	Total Fertility Rate
VPD	Vaccine Preventable Disease
WHO	World Health Organisation
Winnunga	Winnunga Nimmityjah Aboriginal Health Service
YLL	Years of Life Lost
95%CI	95% Confidence Interval

12. Glossary and statistical methodology

ACT RATES

Rates that are specific to the ACT are calculated by dividing the number of ACT resident cases by the ACT population at risk. In some cases, this results in an over-estimate. This occurs with service delivery statistics, where the denominator shows the ACT population, but a high percentage of services are given to non-ACT residents. Consequently (for instance), there may be X number of doctors in the ACT who are servicing the ACT resident population, but they are also servicing non-ACT residents who are not included in the denominator.

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 people:	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.

Data are collected by the ABS and the AIHW. Until 2007 the AIHW collected data by year of occurrence and reported results in the GRIM Books. From 2007 they converted to the ABS reporting frame of year of registration. Release of data from these sources has been historically slow. Data presented for 2008 and 2009 are therefore preliminary data and should be treated with caution.

POTENTIALLY PREVENTABLE HOSPITALISATIONS

Potentially preventable hospitalisations are those conditions where hospitalisation is thought to be avoidable if timely and adequate non-hospital care had been provided.

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: YLL80 = (80 – age at death) x the number of deaths at each age. (All deaths before 80 years are deemed premature).

13. Data sources

ACT population health information

Quality information is vital for monitoring the health status of the population to inform planning and policy activities. ACT Health Directorate invests 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 Directorate 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 (2006 and 2009);
- Kindergarten Screening Survey (ongoing); and
- ACT Secondary School Alcohol and Drug Survey (three yearly).

Information from these surveys is published and available on the ACT Health Directorate 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. The ACT has low numbers of these people 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 to improve information on the ACT Aboriginal and Torres Strait Islander population across all ACT data sets and 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. Major data sources are summarised below.

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.

National Aboriginal and Torres Strait Islander Social Survey, 2008

The National Aboriginal and Torres Strait Islander Social Survey (NATSISS) was conducted from August 2008 to April 2009 and included people who identified or are identified as being of Aboriginal, Torres Strait Islander or both Aboriginal and Torres Strait Islander origin. Further information relating to this survey is available in the National Aboriginal and Torres Strait Islander Social Survey publication. The ACT sample comprised 435 individuals who responded to the survey, therefore there are limits on the level of detail at which the data can be analysed.

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 (three yearly) 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 2007-08 survey included 1,831 fully responding households. Results were not available for this report.

ABS 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. The ABS releases results of analysis using year of registration of death as the reference frame.

ABS National Survey of Mental Health and Wellbeing (SMHWB)

The SMHWB was conducted in 1997 and collected information on a range of mental disorders and disability associated with mental disorders and health service use. 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. It details 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 33,000 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 commencing in 2007. There is an average of thirteen hundred respondents each year. Topics canvassed are similar to those of the 2005 ACT General Health Survey and are mainly able to be compared 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 Directorate. The ACT MPDC is linked to the ACT APC data to provide maternal condition and complications, and birth defects information.

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. A similar survey was again administered in 2009. Results from both surveys are comparable.

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. It 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 who release data in the state and territory GRIM (General Record of Incidence of Mortality) Books. Until 2007 data was analysed using year of occurrence of death. Since then, year of registration has been used.

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. A follow-up study was undertaken in 2005 with people diagnosed with diabetes through blood testing.

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 Directorate 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 (NCSCH)

The AIHW maintains the NCSCH. Information on the incidence of cancer from 1982 in the Australian population is provided to the NCSCH 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 NCSCH produces reports of national incidence and mortality data. 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 1,053 questionnaires completed by people aged 12 years or more in 2007 and 1,057 in 2010.

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