

Health Series
Number 22

**Health status of
young people
in the ACT**

Linda Halliday
Josie McConnell

Health Status Monitoring
Epidemiology Unit
Population Health Group
ACT Department of Health and Community Care

December 1998

ACKNOWLEDGEMENTS

This publication has drawn on the expertise and knowledge of several individuals and sections within the Department of Health and Community Care, Community Health Services and Australian Bureau of Statistics.

The authors are particularly grateful to colleagues in the Department of Health and Community Care including Ms Carol Kee, Mr Chris Gordon, Dr Bruce Shadbolt, and Dr Doris Zonta and other staff of the Epidemiology Unit for their support, advice and patience. We are also very grateful to the Health Outcomes Policy and Planning Group, the Medical Records Departments in each hospital, the Information Management Section, and the Communications and Marketing Section for publishing assistance.



Ó Australian Capital Territory, Canberra 1998

ISSN 1325-1090

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced without written permission from the Director, Publications and Public Communication, Department of Urban Services, ACT Government, GPO Box 158, Canberra ACT 2601.

Published by Publications and Public Communication for the ACT Department of Health and Community Care's Epidemiology Unit and printed by the Authority of the ACT Government Printer.

200 - 12/98 A4 (99/2882)

Suggested citation: Halliday L, McConnell J (1998) *Health status of young people in the ACT*, Epidemiology Unit, ACT Dept of Health and Community Care: Health Series No 22, ACT Government Printer, ACT

The ACT Government Homepage address is: <http://www.act.gov.au/>

This publication is on the Internet at: <http://www.health.act.gov.au>

Contents

| | |
|---|-----------|
| 1. INTRODUCTION..... | 8 |
| 1.1 DEFINITION OF YOUNG PEOPLE IN THE ACT | 9 |
| 1.2 POPULATION CHARACTERISTICS..... | 9 |
| 1.3 GEOGRAPHICAL DISTRIBUTION | 10 |
| 1.4 HOUSEHOLDS AND FAMILIES..... | 11 |
| 1.4.1 Households..... | 11 |
| 1.4.2 Families..... | 12 |
| 1.5 CULTURAL DIVERSITY..... | 13 |
| 1.6 INDIGENOUS ACT POPULATION | 13 |
| 1.7 YOUTH AND FAMILY SERVICES | 13 |
| 1.7.1 Child welfare..... | 13 |
| 1.7.2 Funded substitute care..... | 15 |
| 1.7.3 Child health surveillance programs..... | 15 |
| 1.7.4 Childcare services..... | 17 |
| 1.7.5 Schools and education..... | 20 |
| 2. RISK FACTORS | 22 |
| 3. INFANTS AGED 0 - 1 YEAR..... | 23 |
| 3.1 BIRTHS..... | 23 |
| 3.2 MORTALITY | 23 |
| 3.3 MORBIDITY | 26 |
| 3.3.1 Hospital separations..... | 26 |
| 4. CHILDREN AGED 1 - 4 YEARS..... | 31 |
| 4.1 MORTALITY | 31 |
| 4.2 MORBIDITY | 32 |
| 4.2.1 National health survey..... | 32 |
| 4.2.2 Hospital morbidity data..... | 35 |
| 5. CHILDREN AGED 5 - 9 YEARS..... | 42 |
| 5.1 MORTALITY | 42 |
| 5.2 MORBIDITY | 43 |
| 5.2.1 National health survey..... | 43 |
| 5.2.2 Hospital morbidity data..... | 45 |
| 5.2.3 The Child Dental Health Survey, 1995..... | 53 |
| 6. TEN TO FOURTEEN YEAR OLDS..... | 54 |
| 6.1 NATIONAL HEALTH SURVEY | 54 |
| 6.2 THE LAST YEARS OF PRIMARY SCHOOL: 10 AND 11 YEAR OLDS | 56 |
| 6.2.1 Mortality..... | 56 |
| 6.2.2 Morbidity..... | 56 |
| 6.3 THE JUNIOR HIGH SCHOOL YEARS: 12 TO 14 YEAR OLDS..... | 61 |
| 6.3.1 Mortality..... | 61 |
| 6.3.2 Morbidity..... | 61 |
| 7. THE SENIOR HIGH SCHOOL AND COLLEGE YEARS: 15 TO 19 YEAR OLDS..... | 64 |
| 7.1 MORTALITY | 64 |
| 7.2 MORBIDITY | 65 |
| 7.2.1 Hospital separations..... | 65 |
| 7.2.2 National Health Survey | 70 |
| 7.3 EDUCATION AND EMPLOYMENT..... | 72 |
| 8. EARLY ADULTHOOD: 20 TO 24 YEAR OLDS | 73 |
| 8.1 MORTALITY..... | 73 |
| 8.2 MORBIDITY | 74 |
| 8.2.1 Hospital separations..... | 74 |

| | |
|---|-----------|
| 8.2.2 National Health Survey..... | 77 |
| 9. DISABILITY AND HANDICAP..... | 79 |
| 10. DATA SOURCES AND LIMITATIONS | 80 |
| 10.1 ACT HOSPITAL MORBIDITY DATA..... | 81 |
| 10.2 MORTALITY DATA..... | 81 |
| 10.3 NATIONAL HEALTH SURVEYS..... | 81 |
| 10.4 SURVEY OF DISABILITY, AGEING AND CARERS 1993 | 81 |
| 11. GLOSSARY | 82 |
| 12. END NOTES | 84 |



Executive Summary

Promoting the health of young people in the ACT and nationally is an investment in the health outcomes for all Australians, both now and in the future. Reflecting this, high level health status of young people is an important goal of the ACT Department of Health and Community Care.

From birth to age 24, a young person experiences many life changes and events such as starting school at around age four or five, learning to drive in their mid to late teens, going on to further education or joining the workforce in later adolescence or even starting a family in early adulthood.

Demographics

Young people from birth to age 24 represent a declining but significant population group in the ACT and Australia. Additionally, households and family size are reducing. In 1996, Tuggeranong had the highest percentage of 0-4 (40%) and 5-9 year olds (40%) in the ACT while Belconnen had the largest proportion of 15- 19 (33%) and 20-24 year olds (31%). Most 10-14 year olds in Australia live with both natural parents (73%) while 15 percent live with their natural mother only and 7 percent live with their natural mother and stepfather. Other than Australia, the predominant countries of origin for young people were the United Kingdom (23.9%), New Zealand (4.6%), Germany (3.3%), Italy (3.4%), Croatia (2.3%) and China (2.2%). Aboriginal and Torres Strait Islander young people account for 1.5 percent of all ACT young people.

Childcare and education

The proportion of children in childcare centres in the ACT is greater than in Australia generally. Retention rates have decreased from 1992 by 5.6 percent. However, retention rates of students to year 12 is still greater than that of Australia generally.

General health and welfare

- The ACT has the highest level of children fully immunised against all conditions of the schedule.
- From 1994-95 to 1995-96, the number of child abuse and neglect notifications declined by 9.1 percent (1,652 notifications in 1995-96). The most common source of notification was from a friend or neighbour, followed by a parent or guardian.
- Handicap and disability rates for young males appear to be higher in the ACT than in the rest of Australia while the female rates for the ACT and Australia are fairly similar. Overall, males have 40 per cent higher rates of disability, handicap, and severe handicap than girls.

Birth to 1 year of age

Prior to 1990 the ACT had a birth rate higher than the Australian rate, but after 1990 it has been similar to the Australian rate. The death rate was slightly higher for male infants (4.8 per 1,000) than female infants (4.5 per 1,000). The leading causes of death were conditions originating in the perinatal period such as breathing difficulties and lack of oxygen supply.

1 to 4 years

From 1993 to 1996 in the ACT, accidents were the highest cause of death followed by neoplasms. There were more boys who died from accidents than girls, with drowning and submersion accounting for 70 percent of these deaths. Over the period 1994-97, males consistently had higher rates of hospital separations than females. Diseases of the respiratory and the nervous systems and sense organs were the most common causes of hospitalisation.

5 to 9 years

There were 11 deaths in the ACT between 1993 and 1996 for this age group (73 % male, 27 % female) with external cause of injury and poisoning and neoplasms being the main cause. ACT children reported more long term eye and sight problems and hayfever and ACT males were reported to have more mental disorders and speech impediments than their Australian counterparts. In 1996-97, 5 to 9 year olds were hospitalised at half the rate of 1 to 4 year olds in the ACT.

10 to 14 year olds - National Health Survey

In 1995, the ACT had more 10-14 year old girls (57.5%) than boys (55.1%) who recently took medication. A large proportion of these children had eye or sight problems (21.1% males, 23.5% females).

10 and 11 year olds

Between 1993 to 1996 there were very few deaths of 10 and 11 year olds in the ACT (2 male, 2 female). The majority were due to injuries and neoplasms. Hospital separations were mainly due to injury and poisoning. While male separation rates for external cause of injury and poisoning are decreasing over time, female rates are increasing.

12 to 14 year olds

There were 6 deaths of young people in this age group between 1993 and 1996 (5 male, 1 female). Separation rates for 12-14 year olds were generally higher than those of 10-11 year olds. Injury and poisoning was a far more significant cause of hospital separations for males in the 12 to 14 year age group than for the younger group of males. Diseases of the digestive and respiratory systems were the main cause of hospital separations for females. Of concern is that self inflicted injury was a major cause of hospital separations of females.

15 to 19 year olds

There was a small decline in the death rate of 15 to 19 year olds between 1993 and 1996. Diseases of the digestive system such as disturbances in tooth eruption was the major cause of hospital separations. There was a gradual, but fluctuating increase of females being hospitalised for external cause of injury and poisoning from 1991-92 to 1996-97 with self inflicted injuries (42 separations) being the major cause. There was a general decline in the number of male and female separations due to vehicle accidents. Pregnancy, childbirth and the puerperium were significant causes of hospitalisation for young women, however, this has been decreasing over time.

In 1995, there was a much larger proportion of ACT 15-19 year olds than 10-14 year olds who had recently used medication. Females in the 15 to 19 year age group tended to use medications more than males and young people in the ACT used more medications than their Australian counterparts. Asthma was a more commonly reported recent condition for females than for males. Acne was fairly commonly reported and although it does not have serious health consequences, its effects on self esteem are quite notable. The proportion of 15-19 year old women reporting disorders of menstruation was substantially more than that of the 10-14 year olds. Eye and sight problems were the most commonly reported long term condition.

20 to 24 year olds

In 1996, the death rate of males aged 20-24 years was the highest in 4 years. Injury and poisoning was the major cause of hospital separation for males in 1996-97. Mental disorders were the fourth major cause of hospital separations in 1996-97 (81 male, 103 female seps). The major cause of hospital separations for females of this age group was pregnancy, childbirth and the puerperium.

In 1995, the proportion of 20-24 year olds who had used medication recently was only slightly higher than the proportion of 15-19 year olds. For young women, disorders of menstruation were less of a

problem than for the 15-19 year olds. However, hangover emerged as a problem, especially for young men. Eye and sight problems increase with age, with 9.6 percent more young men and 13.4 percent more young women in the ACT reporting this condition than the 15-19 year olds.

1. Introduction

The World Health Organisation defines health as “*a state of complete physical, mental and social well-being , and not merely the absence of disease or infirmity.*” In an international context Australian children would have to be considered amongst the most fortunate children in the world. However it is worth noting from a 1993 UNICEF report:

“ The consequences of increasing pressure of family life are beginning to show up in some disturbing statistics for almost all industrialised countries. Many nations are witnessing a steady rise in school drop out rates and under performance, in reported cases of physical and sexual abuse of children, of teenage violence and suicide, in eating disorders..... ”¹

An investment in the health of young Australians promotes and maintains high quality health outcomes for all Australians, both now and in the future. Monitoring and improving the health status of young people are amongst the most important goals of the ACT Department of Health and Community Care.

There are two national policy documents relating specifically to the health of young people:

The Health of Young Australians: a national health policy for children and young people², is a joint statement by the Health Ministers of the Commonwealth, States and Territories of Australia. The plan relates to the future development of the health and health related services of young Australians 0-24 years of age. The document lists seven “key action areas” one of which is “research, information and monitoring”. The document emphasises the crucial role that families and communities play in providing the emotional and material support essential to the well being and healthy development of children and young people. It reaffirms the need for support to parents and carers in providing an optimum environment for their children’s development, particularly where a young person has a disability or is at risk of developing long term health problems.

The Health of Young Australians also draws attention to the impact of poverty, family dysfunction, racial discrimination, geographical isolation and other environmental factors on the long term health of children and young people. It asserts that much of the ill health and injury that occurs among children and young people can be prevented. The policy stresses the critical role the developmental years play in establishing the foundations, skills and attitudes for optimum health throughout life and the need for positive investment in the health of young Australians in order to achieve optimal health outcomes for all Australians.

The National Health Plan for Young Australians³ endorsed by the Australian Health Ministers’ Conference on 4 July 1996, provides an action plan to protect and promote the health of children and young people. It aims to address the seven key areas identified in *The Health of Young Australians*. The plan indicates a need to move towards an evidence based approach to monitoring the health of children and young people. The plan was introduced with effect from 1st July 1996 and will terminate in respect of all parties at the end of a five year period on 30th June 2001.

The strategies to meet the objectives of the key result areas of the plan are designed to take into account recommendations, priorities in related national policies, strategies and research including the *Health Goals and Targets for Australian Children and Youth* and indicators developed for monitoring the five *National Health Priority Areas (NHPAs)* of cardiovascular health, cancer control, injury prevention and control, mental health and diabetes mellitus.

Health Goals and Targets for Australian Children and Youth⁴ is a project report specifying a set of goals and targets for Australian children and youth. The five goals are:

- Reduce preventable premature mortality
- Reduce the impact of disability

- Reduce the impact of vaccine preventable diseases
- Reduce the impact of conditions occurring in adulthood which have their origins in childhood
- Enhance family and social functioning.

*Meeting the National Needs for Public Health Information*⁵ (Mathers and Fogarty 1996) noted that children and young people with, or at risk of developing, serious health related problems require particular emphasis in population health strategies. These children include those:

- living in poverty
- in dysfunctional families
- who are homeless
- located in rural or remote areas
- with disabilities
- with mental health problems
- with chronic illness
- from indigenous origin
- born overseas

The ACT Department of Health and Community Care undertook a review of young people in the ACT which resulted in the document *Health for Young People in the Australian Capital Territory - ACT Youth Health Policy 1997-2000*⁶. This report outlines a strategic framework for addressing a number of health issues in young people aged 12-25 years in the ACT. The report *ACT Health Goals and Targets for the Year 2000*⁷ is a broad strategic plan for achieving health gains in the Canberra region. It defines a number of issues relating to the health and wellbeing of children and youth in the ACT.

This publication, twenty two in the Health Series produced by the Epidemiology Unit examines issues and presents available data associated with the overall health status of young people in the ACT. This information will provide relevant bodies with information on which to base future priorities, baselines and intervention strategies.

1.1 Definition of young people in the ACT

Young people, for the purpose of this publication, have been defined as those persons less than 25 years of age. This report will examine a number of health issues for the following stages of life:

- infants age 0-1 year
- children aged 1-4 years
- children aged 5-9 years
- children aged 10-11 years
- children aged 12-14 years
- adolescents aged 15-19 years
- young adults aged 20-24 years.

1.2 Population characteristics

The young people of the ACT, numbering 121,987 (estimated population June 1996), account for 39.6 percent of the ACT population, which is slightly higher than the total Australian percentage of 36 percent. Children and youth represent a declining but significant population group in the ACT and Australia.

The number of males (62,627) outnumbered the number of females (59,360) in the ACT for the 0-25 year age group, yielding a male to female ratio of 1.06:1. This is consistent with the overall Australian trend for this age group.

The number of young people in each of the stages of life for the period 1981, 1986, 1991, 1996 and projections for the year 2005, are shown in Table 1.

Table 1: Estimated ACT youth population ACT, 1981-96 & projection for 2005

| Age group | 1981 | 1986 | 1991 | 1996 | 2005 |
|-------------------------------|---------------|---------------|---------------|---------------|---------------|
| 0-4 years (No.) | 20401 | 20520 | 22526 | 22067 | 21000 |
| % ACT population | 9.2 | 8.2 | 6.2 | 7.2 | 6.3 |
| 5-9 years (No.) | 22932 | 21400 | 22547 | 22205 | 21500 |
| % ACT population | 10.4 | 8.6 | 7.8 | 7.2 | 6.5 |
| 10-14 years (No.) | 21662 | 23610 | 22897 | 21666 | 22900 |
| % ACT population | 9.8 | 9.5 | 7.9 | 7.0 | 6.9 |
| 15-19 years (No.) | 19175 | 22955 | 27355 | 23941 | 21100 |
| % ACT population | 8.7 | 9.2 | 9.5 | 7.8 | 6.4 |
| 20-24 years (No.) | 18766 | 22129 | 27062 | 31838 | 24400 |
| % ACT population | 8.5 | 8.9 | 9.4 | 10.4 | 7.3 |
| Total 0-24 years (No.) | 102936 | 110614 | 122387 | 121987 | 110900 |
| % ACT population | 46.6 | 44.5 | 42.3 | 39.7 | 33.4 |
| Total ACT | 220818 | 248784 | 289320 | 307511 | 331900 |

Source: *The Australian Capital Territory's Young People 1993*, ABS, Catalogue No.4123.8
Estimated resident population by age and sex, preliminary 30 June 1996, ABS, Catalogue No..3201.0
ACT Population Forecasts 1998-2013, ACT Dept. Urban Services, Demographic s, ACT June 1998

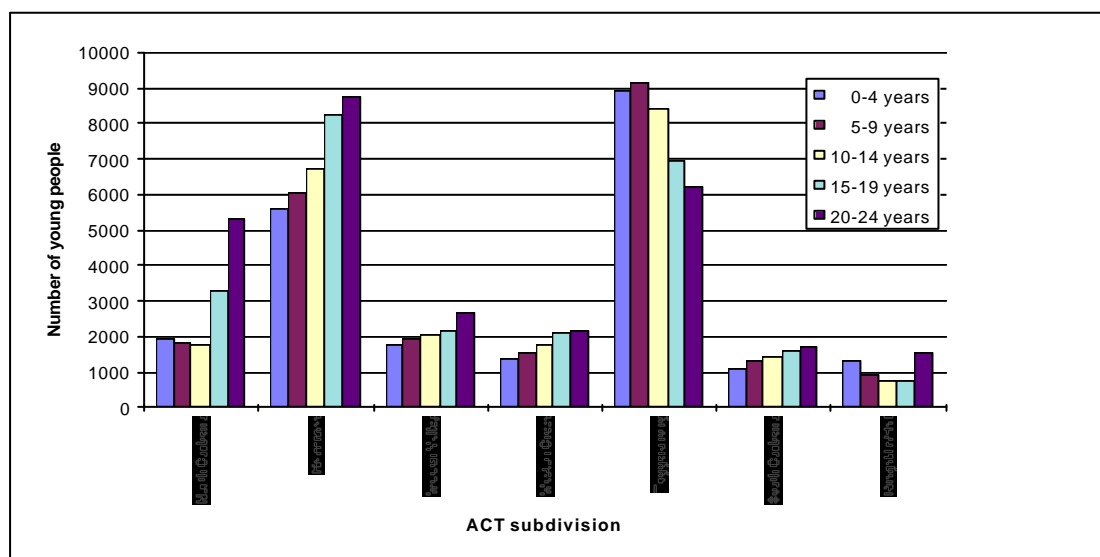
The table shows that the numbers of youth in the ACT underwent a growth phase during 1981 -91, followed by a slight decrease 1991-96. The decrease occurred primarily in the 15-19 year age group.

The proportion of youth in the ACT population has undergone a steady decline since 1981. This is in line with trends for the total Australian population⁸.

1.3 Geographical distribution

In 1996 the highest percentage of all young people was resident in the Tuggeranong and Belconnen areas (refer Figure 1). Tuggeranong showed the highest percentages of the total 0-4 year olds (40%) and 5-9 year olds (40%). Belconnen had the highest percentages of the total 15- 19 year olds (33%) and 20-24 year olds (31%).

Figure 1: Geographical distribution of youth by statistical subdivision, ACT, 1996



Source: *Population by age and sex, June 1996*, ABS, Catalogue No. 3235.8

1.4 Households and families

1.4.1 Households

A household is defined as a group of two or more people who usually reside in the same dwelling, who regard themselves as a household and who make common provision for food or other essentials; or a person living in a dwelling who makes provision for their own food and other essentials without combining with any other person. It excludes persons usually resident in non-private dwellings such as hotels, motels, boarding houses, gaols and hospitals. The proportion of households containing children 0-14 years declined 10.4 percent during the period 1986-1996, with the largest fall being for households with three or more children⁹.

Overall the move has been to smaller sized households, particularly single person and two adult only households, and households containing few or no children 0-14 years. This is partially a result of an ageing population, lower fertility rates, the increasing age of the population at the commencement of family formation, the formation of smaller households through separation and divorce and the growth in the number of people who live on their own.¹⁰

It is interesting to note that the living circumstances of 5-14 year olds in the ACT are the same as for Australia. Most 10-14 year olds in Australia live with both their natural parents (73.2 %). However, a fairly large proportion live with their natural mother only (15.3 %) and a further 7.3 percent live with their natural mother and stepfather¹¹. **There is a greater proportion of 15-24 year olds in the ACT (14.7%) than in Australia (8.9%) overall, who are living in a group household** (see Table 2). This is offset by the fact that fewer 15-24 year olds in the ACT are living with either one or both of their parents as a non-dependent child than in Australia generally (20.6 % in ACT, 30.9 % in all Australia). It must be noted that these statistics give only a snap shot of families' situations in Australia and do not take into consideration the ongoing cycles of people's lives.

Table 2: Household type by household relationship, by age, ACT & Australia, Census 1996

| Household type and relationship | Age group of youth | | | | | |
|---|--------------------|--------------|----------------|--------------|-----------------|--------------|
| | 0-4 year olds | | 5-14 year olds | | 15-24 year olds | |
| | ACT (%) | Aust (%) | ACT (%) | Aust (%) | ACT (%) | Aust (%) |
| Couple family with children | | | | | | |
| <i>Husband, Wife or Partner</i> | 0.0 | 0.0 | 0.0 | 0.0 | 3.7 | 4.5 |
| <i>Child under 15</i> | 85.9 | 85.1 | 82.1 | 82.1 | 0.0 | 0.0 |
| <i>Dependent student (15-24)</i> | 0.0 | 0.0 | 0.0 | 0.0 | 32.3 | 29.1 |
| <i>Non dependent child</i> | 0.0 | 0.0 | 0.0 | 0.0 | 15.9 | 24.6 |
| <i>Total children</i> | 85.9 | 85.1 | 82.1 | 82.1 | 48.3 | 53.7 |
| <i>Total (including other related individual)</i> | 85.9 | 85.1 | 82.1 | 82.1 | 53.0 | 59.8 |
| Couple family without children | | | | | | |
| <i>Husband, wife or partner</i> | 0.0 | 0.0 | 0.0 | 0.0 | 8.2 | 7.9 |
| <i>Total (including other related individual)</i> | 0.0 | 0.0 | 0.0 | 0.0 | 9.1 | 9.1 |
| One parent family | | | | | | |
| <i>Lone parent</i> | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 | 2.1 |
| <i>Child under 15</i> | 14.1 | 14.9 | 17.9 | 17.9 | 0.0 | 0.0 |
| <i>Dependent student (15-24)</i> | 0.0 | 0.0 | 0.0 | 0.0 | 7.4 | 5.9 |
| <i>Non dependent child</i> | 0.0 | 0.0 | 0.0 | 0.0 | 4.7 | 6.3 |
| <i>Total children</i> | 14.1 | 14.9 | 17.9 | 17.9 | 12.0 | 12.2 |
| <i>Total (including other related individual)</i> | 14.1 | 14.9 | 17.9 | 17.9 | 14.5 | 15.3 |
| Other family | 0.0 | 0.0 | 0.0 | 0.0 | 2.8 | 2.7 |
| Unrelated person living in family house. | 0.0 | 0.0 | 0.0 | 0.0 | 2.4 | 2.5 |
| Group household member | 0.0 | 0.0 | 0.0 | 0.0 | 14.7 | 8.9 |
| Lone person | 0.0 | 0.0 | 0.0 | 0.0 | 4.8 | 3.5 |
| Total (a) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

(a) Excludes visitors within Australia and overseas and those not applicable

Source: ABS, *Census data 1996*, unpublished data

There have been several notable trends in the living arrangements of 20-24 year old men and women in Australia. The percentage of young women living with their parents has increased from 30.9 percent in 1986 to 38.2 percent in 1996. For men however, this rate has remained fairly stable from 51.5 percent in 1986 to 50.7 percent in 1996. Young men continue to live with their parents in greater numbers than young women. Another notable change is the rise in both young men and women living in group houses. In 1986, 12.7 percent of men were living in group houses (11.5 % of women) and by 1996, this had increased to 22.6 percent (21.1 % of women). On the decline are young men and women living as a couple with or without children. For example, there were 23.5 percent of women living as a couple without children in 1986 (14.5% of men). By 1996, this had decreased to 15.7 percent (9.9% of men). Young people living as couples with children has also declined from 19.7 percent for women in 1986 (8.7% of men) to 10.6 percent of women in 1996 (5.3% of men)¹².

1.4.2 Families

A family is defined as two or more people related by blood, registered marriage, adoption, or a defacto relationship who live in the same household. Three types of families are identified: couple families, one parent families and families of related adults.

Families and the roles of parents are very important in the health and well being of children. Parenting is probably the most important public health issue facing our society. It is the single largest factor implicated in childhood illnesses and accidents; teenage pregnancy and substance misuse; truancy, school disruption, and under achievement; child abuse; unemployment; juvenile crime; and mental illness. These are serious in themselves but are even more important as precursors of problems in adulthood and the next generation.¹³

The ACT had 78,500 families in 1997 compared to 69,000 in 1993. The average family size was 3.2 persons, a slight increase on the Australian average of 3.1 persons. The median age of mothers at first birth within a registered marriage was 28.6 years which is the same as the Australian median age and slightly higher than the median age in 1993 (28.2 years).

The crude divorce rate in the ACT was 5.9 per 1,000 of the population which is higher than the Australian average of 2.6, however this can be explained in part by the number of divorces granted in the ACT where usual residence was in another state, and is not representative of the ACT population. The number of divorces where children were involved was 56.4 percent in 1996.¹⁴ Compared with 30 years ago children are much more likely to experience the breakdown of their parent's relationship or to be born outside of marriage. On the other hand, far fewer children now are given up for adoption. The ACT has more one parent families and couples with dependants and both parents employed than the national average.

Income is a major factor in the well-being of a family. For most families employment is the main source of income. Long term unemployment can mean that families struggle to achieve the basic requirements of life and often can not afford activities like holidays and entertainment. Children in families with persistent unemployment can grow up with no experience of family involvement in the labour force¹⁵. There is strong association between unemployment and psychological and physical illhealth in young people aged 15-24 years¹⁶.

Table 3: Unemployment rates, ACT, November, 1997

| | Units | ACT | Aust. |
|-------------------------------------|-------|------|-------|
| Unemployment rate (all persons) | % | 7.4 | 7.9 |
| Youth unemployment rate 15-19 years | % | 25.4 | 28.1 |
| Youth unemployment rate 20-24 years | % | 13.4 | na |

Note: na - not available

Source: *Labour Force*, Australia, ABS, Catalogue No. 6203.0

1.5 Cultural diversity

The ethnic composition of the ACT population is varied. People born overseas accounted for 25.7 percent of all persons encountered in the 1996 census. The predominant countries of origin were the United Kingdom (23.9%), New Zealand (4.6%), Germany (3.3%), Italy (3.4%), Croatia (2.3%) and China (2.2%). This is comparable to the 1991 census where 25.4 percent of people were born overseas. There were 16.7 percent of persons over the age of four in 1996 who spoke a language other than English at home in the ACT. The languages most commonly spoken were Chinese, Italian, Croatian, Greek, Spanish and German.

The predominant religion of the ACT in 1996 was Christian (66.6%). Non Christian religions accounted for 3.4 percent of the population. The largest groups identified were Buddhism, Islam and Hinduism. Approximately 20 percent of the ACT population stated that they were not religious in 1996 compared to 16.3 percent in 1991.

1.6 Indigenous ACT population

Aboriginal and Torres Strait Islander young people account for 1.5 percent of all ACT young people and 61.1 percent of the total indigenous ACT population, indicating a younger age structure in the Indigenous ACT population.

Table 4: Indigenous population 0-25 years, by age group, ACT, 1996

| Age group | No. of ACT Indigenous pop. | % of total ACT Indigenous pop. | % of indigenous in ACT pop. for age | % of age group in total Aust. Indigenous pop. |
|-------------|----------------------------|--------------------------------|-------------------------------------|---|
| 0-4 years | 434 | 14.7 | 2.0 | 0.1 |
| 5-9 years | 384 | 13.0 | 1.7 | 0.1 |
| 10-14 years | 358 | 12.1 | 1.6 | 0.1 |
| 15-19 years | 305 | 10.3 | 1.2 | 0.08 |
| 20-24 years | 323 | 10.9 | 1.1 | 0.09 |
| Total | 1804 | 61.1 | 1.5 | 0.5 |

Note: Excludes Jervis Bay Territory

Source: Population Distribution, Indigenous Australians, ABS, Catalogue No. 4705.0

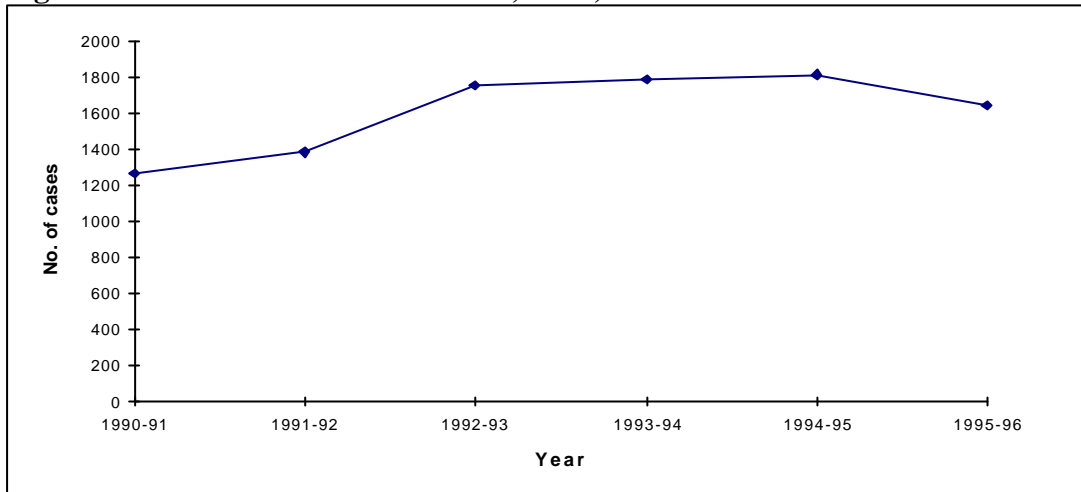
1.7 Youth and family services

The ACT Department of Education and Training and Children's Youth and Family Services Bureau has a number of programs designed to care for and protect children in the ACT. The Children's Youth and Family Services program is designed to help protect children from abuse, neglect and exploitation.

1.7.1 Child welfare

The number of notifications of child abuse and neglect investigated by the Department during 1995-96 was 1,652 a fall of 166 (9.1%) notifications on the previous year (Figure 2). The most common source of notification was from a friend or neighbour (21.1%), followed by a parent or guardian (14.9%)¹⁷.

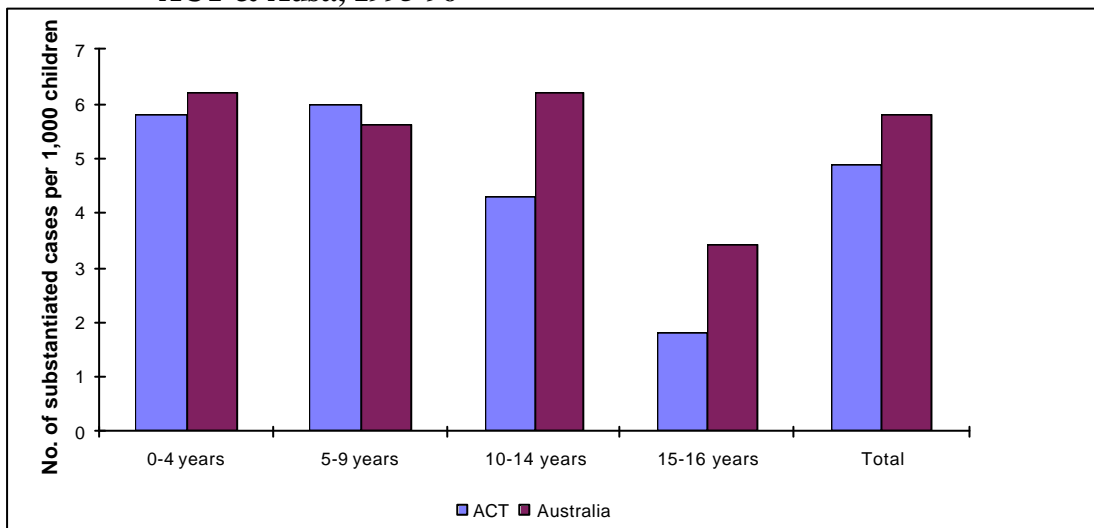
Figure 2: Notifications of child abuse , ACT, 1990-96



Source: ACT Department of Education and Training and Children’s Youth and Family Services Bureau

A notification of child abuse and neglect is substantiated on the basis of information gathered during an investigation. The notification is considered substantiated if, in the professional opinion of the officers concerned, there is reasonable cause to believe that the child has been, is being or is likely to be abused or neglected.¹⁸

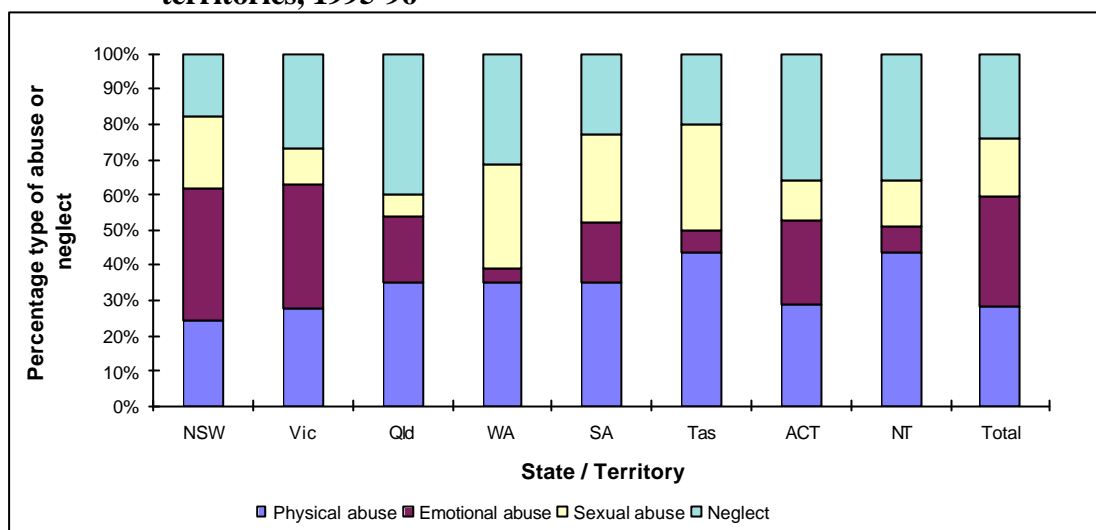
Figure 3: Children, 0-16 yrs in substantiated child abuse cases, by age group, ACT & Aust., 1995-96



Source: *Child abuse and neglect Australia, 1993-94*. AIHW, Child Welfare Series No.13

Many children suffer more than one type of abuse or neglect. In the data presented in Figure 4, the type of abuse and neglect recorded is the one most likely to be most severe in the short term, or most likely to place a child at risk in the short term, or the most obvious.

Figure 4: Substantiated notifications of child abuse & neglect by type, states & territories, 1995-96



Source: *Child abuse and neglect Australia 1995-96*, AIHW, Catalogue No. CWS 1

It can be seen from Figure 4 above, that in the ACT the proportion of notifications concerning neglect is higher than for any other state and territory with the exception of Queensland and the Northern Territory. This is balanced by smaller proportions of sexual and physical abuse.

1.7.2 Funded substitute care

The substitute care program provides a range of care options including foster care, group home placement and various independent living alternatives for children and young people (0-18 years) who are unable to live with family members. During the year to 30 June 1996 there were 146 children in substitute care in various government-funded programs and specialist programs operating in the ACT. Throughout 1995-96 the average occupancy in foster care programs was 109 persons (up 17.2%) and for residential care the average daily occupancy was 19 persons (down 5.0%).

Table 5: Numbers of young people in funded substitute care, ACT, 1991-96

| | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 |
|---------------------------------|---------|---------|---------|---------|---------|
| Foster care | 76 | 104 | 81 | 93 | 109 |
| Residential care | 31 | 31 | 20 | 23 | 19 |
| Special arrangements (a) | 18 | na | 12 | 19 | 22 |
| Total | 125 | 135 | 113 | 135 | 150 |

(a) Special arrangements includes family services allowance, boarding school and other special arrangements.

Source: ACT Dept of Educ. & Training & Children's, Youth & Family Services Bureau, Family Services Support Unit, unpublished data.

1.7.3 Child health surveillance programs

Screening of children for particular disorders is important as early detection may enable preventive measures to be taken to stop or slow further development of the problem, thus minimising the effects of the disorder.

Table 6: Type of screening test on children 0-14 years, ACT, 1995

| | ACT(%) | Australia(%) |
|---|--------------|--------------|
| Whether has ever had sight and/or hearing test | | |
| Both sight and hearing tests | 50.1 | 52.6 |
| Sight tests only | 13.7 | 10.0 |
| Hearing tests only | 10.6 | 13.3 |
| Neither sight nor hearing tests | 25.3 | 23.1 |
| Other | 1.2 | 1.0 |
| Total | 100.0 | 100.0 |
| Whether has ever visited a dentist or dental professional(1) | | |
| Has visited a dental professional | 74.2 | 75.0 |
| Has not visited a dental professional | 25.5 | 24.8 |
| Not known | 0.3 | 0.2 |
| Total | 100.0 | 100.0 |

(1) Data relating to dental visits refers to children aged 2-14 years

Source: *Children's Health Screening*, April 1995, ABS, Catalogue No. 4337.0

In Australia the likelihood of children having had sight and /or hearing tests and of having visited a dental professional differed according to family characteristics. The proportion of children tested was considerably higher in families where English was spoken at home than in families where a language other than English was used. This difference was statistically significant for sight and hearing tests and dental visits. In general, children in families where one or both parents were employed were significantly more likely to have had sight and/or hearing tests and have visited a dental professional. Consistent with this finding, results show children from higher income families were more likely to have been tested than those from lower income families.¹⁹ The ACT tends to follow national trends (refer Table 6).

Children aged 0-3 years in the ACT visit baby health clinics less than their counterparts in most other states and territories (Table 7). It is not known whether these visits are substituted by other alternative examinations.

Table 7: Baby health clinic visits, children aged 0-3 years, ACT, April 1995

| Whether visited a clinic? | NSW | Vic. | Qld | SA | WA | Tas. | NT | ACT | Aust |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Yes | 89.4 | 97.4 | 73.3 | 86.5 | 94.9 | 95.1 | 96.5 | 86.3 | 88.9 |
| No | 9.9 | 2.6 | 25.8 | 13.2 | 5.1 | 4.5 | 3.5 | 10.9 | 1.06 |
| Not known | 0.7 | - | 0.9 | 0.3 | - | 0.3 | - | 2.8 | 0.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: *Children's Health Screening*, April 1995, ABS, Catalogue No. 4337.0

Immunisation is an important aspect of preventative health strategies (refer to Health Series Number 16)²⁰. For all diseases covered by the recommended immunisation schedule, a higher proportion of those children who had been regularly checked at the baby health clinics were fully immunised²¹.

Table 8: % of fully immunised children aged 3 mths to 6 yrs: type of immunisation schedule by states & territories, April 1995

| Schedule | NSW | Qld. | Vic. | SA | WA | Tas. | NT | ACT | Aust. |
|--------------------------|------|------|------|------|------|------|------|------|-------|
| Current schedule | 32.1 | 34.3 | 28.9 | 31.8 | 41.5 | 26.8 | 36.5 | 47.5 | 33.1 |
| Previous schedule | 53.9 | 51.2 | 47.5 | 49.7 | 59.3 | 43.0 | 53.5 | 63.5 | 52.1 |

Source: *Children's Immunisation Australia*, April 1995, ABS, Catalogue No. 4352.0

The impact on immunisation levels of changes in the recommended immunisation schedule can explain the overall fall of children classified as fully immunised. Introduction of the Hib vaccine was the major factor contributing to this fall. The ACT has the highest level of children fully immunised against all conditions covered by the schedule. The National Immunisation Survey showed that for all conditions covered by the Schedule, a substantially higher proportion of children for whom

records were consulted were fully immunised, than children for whom records were not consulted. The highest levels of record use were in the ACT (73.2%) and W.A. (71.8%).

Table 9: No.s & proportion of children vaccinated, ACT 1993-97 birth cohort by NHMRC recommended schedules

| Schedules | Count (%) fully vaccinated | Count (%) fully vaccinated 'on time' |
|--|----------------------------|--------------------------------------|
| 1 at 2 months (TA1 and Sabin1 and Hib1) | 20535 (82) | 18138 (73) |
| 2 at 4 months (TA2 and Sabin2 and Hib2) | 18795 (78) | 14961 (62) |
| 3 at 6 months (TA3 and Sabin1 and Hib1) | 15743 (67) | 11662 (50) |
| 4 at 12 months (Measles-Mumps-Rubella) | 15642 (74) | 10448 (50) |

Source: ACT Communicable Disease Unit, February 1997

For the period 1993-1997, the coverage rate for children who were fully vaccinated to the NHMRC schedule was 82 percent at 2 months, 78 percent at 4 months, 67 percent at 6 months and 74 percent at 12 months (see Table 9). Despite the high coverage rate at 2 months of age, less than 75 percent of children received the third dose of triple antigen and Hib vaccine (Table 9), and only 67 percent of children had received the full three dose series of triple antigen, Hib and Sabin vaccine at the 6 months of age.

The proportion of children who received their vaccinations within one month of their schedule due date was relatively low for all schedules. The proportion of children vaccinated 'on time' was 73 percent at 2 months, 62 percent at 4 months, 50 percent at 6 months and 50 percent at 12 months. It appears there is a decreased proportion of 'on time' vaccinations as children get older.

1.7.4 Childcare services

Until the 1980's most Australian children under five years old were cared for at home by their mothers. However social and economic changes in the last decade have resulted in a shift towards non maternal childcare. Non parental childcare is now an important feature in the lives of many young children. (For definitions of different types of childcare refer to Glossary.)

Children in the care of others will have their emotional, social, intellectual and physical development strongly influenced by the quality of care they experience. Their experience in day care should be positive. Quality child care gives them opportunities to experience learning, companionship, healthy surroundings, good equipment and have fun. Children's best interests are served in settings where child to staff ratios are low, group sizes are small, staff have been specifically trained in child development and related areas and the pay and conditions of care givers are reasonable.

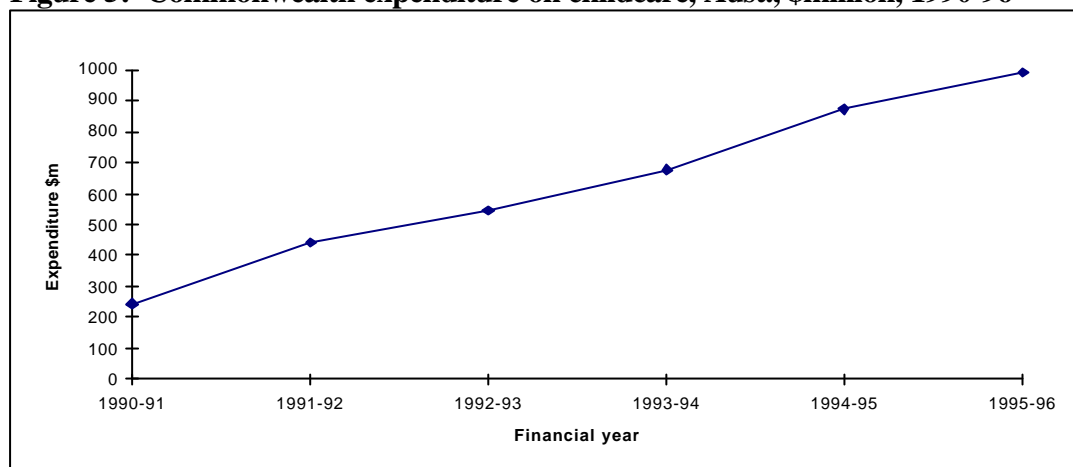
In order to ensure that centres offer children good quality care and to remove inconsistencies in the standard of child care services across Australia, the Federal Government introduced an Accreditation System in 1994. The 52 principles of good child care on which the accreditation system is based cover four areas:

- Interaction between staff and children, staff and parents and between staff
- The program
- Nutrition, health and safety practices
- Centre management and staff development.

The effect of non parental care on child health has been extensively reviewed and debated. Gay Ochiltree who has extensively reviewed research finding for the past 40 years on the effects of non parental care on young children concluded that "*despite endless research to find negative effects of non parental care, no evidence has been found that good quality care harms children*".²²

The childcare industry is extremely complex in terms of funding and administration. The Commonwealth, through the Children's Services Program, funds the majority of services in partnership with states and territories, local government or community organisations. Commonwealth expenditure (current prices) on childcare from 1990- 1996 (Figure 5), had almost a fourfold increase in expenditure.

Figure 5: Commonwealth expenditure on childcare, Aust., \$million, 1990-96



Source: Australia's Welfare, 1997, AIHW, Catalogue no. AUS 8

The ACT in 1994 had approximately 2.5 percent of children using childcare in Australia and attracted 2.0 percent of the funding (Table 10).

Table 10: Commonwealth-funded childcare services by state and territory, 1993-94

| | NSW | Vic | Qld | WA | SA | Tas | NT | ACT | Aust(a) |
|--|---------|--------|--------|--------|--------|--------|-------|-------|---------|
| Expenditure on child care by C'wealth (\$m) | 197.1 | 150.6 | 178.4 | 58.9 | 49.6 | 14.9 | 10.9 | 13.6 | 676.4 |
| Proportion (%) | 29.1 | 22.3 | 26.4 | 8.7 | 7.3 | 2.2 | 1.6 | 2.0 | 100.0 |
| Number of children attending C'wealth funded child care services(b) | 129,530 | 83,900 | 98,050 | 30,890 | 29,230 | 11,450 | 3,770 | 9,900 | 396,720 |
| Proportion (%) | 32.7 | 21.1 | 24.7 | 7.8 | 7.4 | 2.9 | 1.0 | 2.5 | 100.0 |

(a)The total for Australia does not equal the sum of State and Territory expenditures as HSH Central Office expenditure of \$2.4m is included in the total.

(b) Totals of children are indicative only, as children who attend more than one service type are counted in each

Source: HSH unpublished data, HSH 1995b:130.

There was an increase in the number of ACT children using formal child care services, in particular outside hours care and occasional care between 1994 and 1996.

Table 11: Estimated no. of children attending Commonwealth funded child care services, ACT, 1994,96

| Formal care service type | 1994 | 1996 |
|---|--------------|---------------|
| Long day care centres | | |
| Community based | 1,500 | 1,600 |
| Private for profit | 1,200 | 1,400 |
| Employer and other non profit | 1,200 | 1,300 |
| Family day care | 3,300 | 3,700 |
| Occasional care centre | 500 | 900 |
| Multifunctional Aboriginal children's services | 0 | 0 |
| Outside school hours care | 2,200 | 4,900 |
| Total children who use formal care | 9,900 | 13,800 |

Note: Multifunctional aboriginal services are culturally specific children's services which are provided to meet the needs of Indigenous communities.

Source: *Australia's Welfare 1995,97*, AIHW

The proportion of children using formal childcare, in particular long day care centres, in the ACT is greater than the proportion of children using these services in Australia (Table 12).

Table 12: Proportion of children using formal childcare, ACT & Aust., 1996

| Formal care service type | Percent of total children in ACT | Percent of total children in Aust. |
|---|---|---|
| Long day care centres | 7.4 | 5.7 |
| Family day care | 4.4 | 3.1 |
| Occasional care centre | 1.9 | 1.7 |
| Outside school hours care | 3.4 | 3.6 |
| Preschool | 5.1 | 6.5 |
| Total children who use formal care | 29.0 | 20.1 |

Children refers to all children under 12 years of age

Source: *Childcare Australia, 1996*, ABS Catalogue No. 4402.0

The proportion of children using informal child care services is also higher than that for Australia. Overall there are fewer ACT children who do not use any form of childcare, than in Australia.

Table 13: Proportion of children using informal care in the ACT & Aust., 1996

| | Percent of total children in ACT | Percent of total children in Aust. |
|--|---|---|
| Brother /sister care | 8.3 | 5.3 |
| Other relative | 20.9 | 23.4 |
| Non-relative | 13.4 | 10.2 |
| Total children using informal care | 39.2 | 36.4 |
| Total children using neither informal nor formal care | 43.5 | 51.6 |

Children refers to all children under 12 years of age

Source: *Childcare Australia, 1996*, ABS Catalogue No. 4402.0,

Statistical Overview 1993-94, Department of Human Services and Health, 1995b:130.

The ACT has fewer centre based places and long day care places (per 1,000 children) than the Australian average, but more family day care places than the Australian average (refer Table 14).

Table 14: Long day care places, by state & territory, June 1996

| | NSW | Vic. | Qld | WA | SA | Tas. | ACT | NT | Aust. |
|---|---------|---------|---------|--------|--------|--------|--------|-------|---------|
| Total long day care places | 73,378 | 51,448 | 61,042 | 17,571 | 13,252 | 3,728 | 5,460 | 2,275 | 228,154 |
| Target population(a) | 238,831 | 159,292 | 114,962 | 57,821 | 54,977 | 13,734 | 12,506 | 6,968 | 659,091 |
| Centre-based places per 1,000 chn | 227 | 220 | 438 | 240 | 148 | 149 | 236 | 203 | 255 |
| Family day care places per 1,000 chn | 80 | 103 | 93 | 64 | 93 | 122 | 201 | 123 | 91 |
| Total long day care places per 1,000 chn | 307 | 323 | 531 | 304 | 241 | 271 | 437 | 326 | 346 |

Note: Day care places refer to those places funded by Children's Services Program only

(a) Population of children aged 0-4 with both parents or sole parent in the labour force or studying/training in 1994

Source: Department of Health and Family Services, unpublished data

The ACT has equal or lower ratios of children to child care workers in long day care centres compared to other states and territories (refer Table 15).

Table 15: Regulation no. of children by age per worker in long day care centres, by state & territory 1992

| Age of child | NSW | Vic | Qld | WA | SA | Tas | NT | ACT |
|-------------------------|-----|-----|-----|----|----|-----|----|-----|
| Less than 1 year | 5 | 5 | 4 | 4 | 5 | 3 | 5 | 5 |
| 1 year | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 |
| 2 years | 8 | 5 | 6 | 5 | 5 | 7 | 7 | 5 |
| 3 years and over | 10 | 15 | 12 | 10 | 11 | 7 | 11 | 10 |

Source: McNeice et al.1995:36

Considering the growing use of childcare, this is an area which will have an increasingly large impact on the health and wellbeing of children.

1.7.5 Schools and education

Schools have a vital role in the health and well being of young people. The social and academic aspects of school are a challenge to any child. It is important to be able to identify children at risk of developing social problems, educational disorders or nervous disorders to allow early intervention. Health education at school is an important aspect of the school curriculum. Health screening and immunisation monitoring allows the general status of children's health to be monitored.

The "Safe schools policy framework" provides clear support and direction from government for ACT government school boards, principals and staff. The framework emphasises positive student management to minimise violence, bullying and all forms of harassment.²³

In August 1997 there were 140 schools operating in the ACT. Of these 99 were government schools and 41 were non-government schools. The number of government schools has increased by one since August 1995 and the number of non government schools by 2. Four special schools operate in the ACT.

The number of full time students attending government schools in August 1997 totalled 39,595, a decrease of 1.3 percent from 1995. The number of children attending non-government schools in August 1997 totalled 21,639 an increase of 3.1 percent from 1995. There were equivalent of 2,571 fulltime teaching staff in government schools and 1,336 in non government schools in 1997.

There was a total of 481 Aboriginal and Torres Strait Islander children in attendance at primary schools and 274 in attendance at secondary schools in the ACT. Eighteen percent of Aboriginal and Torres Strait Islander children attended non-government schools.

The ACT generally has higher student to staff ratios in both government and non-government schools than the Australian ratios. Primary schools have a male to female teacher ratio of 1:4.8. This ratio decreases in secondary schools where the male to female teacher ratio is 1:1.5.

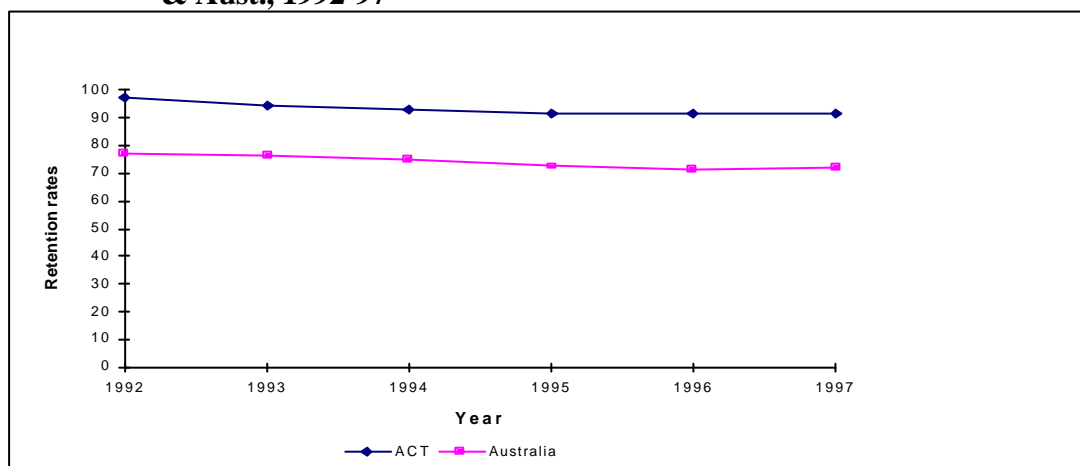
Table 16: Full-time student to teaching staff (FTE) ratios by level of education & category of school, ACT, 1997

| | <u>Government</u> | | <u>Non-government</u> | | <u>All schools</u> | |
|------------------|-------------------|-------|-----------------------|-------|--------------------|-------|
| | ACT | Aust. | ACT | Aust. | ACT | Aust. |
| Primary | 18.5 | 17.6 | 20.5 | 18.7 | 19.1 | 17.9 |
| Secondary | 12.7 | 12.7 | 13.5 | 12.8 | 13.0 | 12.7 |
| Total | 15.4 | 15.3 | 16.2 | 15.3 | 15.7 | 15.3 |

Source: *Schools, 1997*, ABS, Catalogue No. 4221.0

Although the retention rates of students to year 12 exceeds that of Australia generally, the ACT rates have decreased from 1992 by 5.6% (Figure 6). The Australian rate has also decreased in this period.

Figure 6: Apparent retention rates of full-time secondary students to year 12, ACT & Aust., 1992-97



Source: *Schools, 1997*. ABS Catalogue No. 4221.0

In 1996 there were 20,559 students enrolled in higher education in the ACT, a small decline from the 20,585 enrolled in 1995. The ANU had the highest number of enrolments with 9,925 (48.3%) students, followed by the University of Canberra with 8,541 (41.5%) students. Most enrolments in 1997 (75%) were at the bachelor level while a further 13.8 percent were enrolled in higher degree courses. Student mobility was the second highest of all states and territories in 1995, when 74 percent of higher education students were permanent residents of the ACT with the remaining 26 percent having their permanent home residence overseas or in another state or territory. There were slightly more females enrolled in higher education than males in the ACT.



2. Risk factors

Certain risk factors are commonly recognised as contributing to poor health (refer Health Series No. 19). Education and monitoring of risk taking behaviour in young people is vital in the prevention and control of diseases associated with risk factors.

The home environment contributes to accident and injury particularly in younger age groups. Risk taking behaviour is more common in young people. Vehicle accidents and risky sexual behaviour are most common in the 15-29 age group. General injuries associated with drowning and water safety are more likely to be associated with the 0-14 age group.

The quality of the environment has an impact on children's health. In particular, attention has focused on the effects of lead on the mental development of children aged under 4 years. Young children tend to have the highest blood lead levels of any age group. Lead in petrol is a significant source of environmental lead, but deteriorating lead based paint is considered the most dangerous source of lead exposure. Other possible environmental sources are lead in the solder of canned acidic foods, lead released from smelters and passively inhaled cigarette smoke. The National Survey of Lead in Children aged 1-4 years (1995) found that 7 percent of the children surveyed had blood lead levels greater than the target set by the NHMRC. Two percent had blood levels greater than 0.72 umol/L and were thus notifiable. The lowest blood levels among children aged 1-4 were from children in the ACT (0.22). This finding may be explained partially by the fact that many of the children surveyed lived in houses built after 1970 when paint lead concentrations were lower. The absence of heavy industry in the ACT may also be a factor²⁴.

Tobacco smoking is a risk factor for a number of diseases. Results from the ACT Secondary School Survey 1996 shows a clear relationship between age and the prevalence of cigarette smoking. Prevalence is lower in the younger years and increases substantially to a peak in students in years 11-12. Heavy alcohol consumption in the 15-24 age group is a risk factor for a number of cardiovascular diseases later in life and adverse social behaviours. The use of alcohol is strongly associated with the use of other drugs. An emerging trend in Australia is that young people have higher levels of illicit drug use compared with older Australians.

Physical activity is health protective and good exercise habits are developed in childhood. The percentage of participants in organised sport in the 5-24 age group has decreased between 1995-96 and 1996-97. Good nutrition is vital to the general health and well being of the population. Good nutritional practices start in childhood and are reinforced in the adolescent years. ACT Community Care conduct nutrition promotion programs in schools and throughout the community. The ACT has a higher proportion of 15-24 year olds that are at an acceptable weight than the Australia as a whole (52.9% as opposed to 46.8%). The ACT also has a lower proportion of the 15-24 age group that are considered obese. Young women with poor dietary habits and a lack of well-being are at risk of developing eating disorders.

It is widely recognised that sun exposure can cause minor to serious skin conditions and cancer in humans. Melanoma of the skin is far more prevalent in Australia than in any other country and rates are increasing at a rate of four to six percent per year. Living in Australia for the first fifteen years of life contributes roughly to two-thirds of a life time risk of melanoma for those living in Australia all their lives. The ACT age standardised incidence rates for melanoma are consistent with those of Australia. Since the critical period for sustaining damaging levels of sun exposure occurs through the school years, schools have the potential to have a major impact on the level of sun exposure sustained and hence the risk of developing sun cancer. Results from the 1996 ACT Secondary School Survey showed that females were more likely to apply sunscreen and wear glasses than males. However, males were more likely to wear hats than females.

3. Infants aged 0 - 1 year

Infants in this age group are entirely dependent on adults for their care and wellbeing. Between 6 and 12 months, infants become mobile and start to explore their immediate environment. This is reflected by the emergence of accidents and injuries associated with the commencement of walking, entry of foreign objects, and poisoning.

3.1 Births

The numbers of babies born in the ACT remained fairly constant between the years 1993 and 1996. There were slightly more males born each year, which is consistent with the rest of Australia. 1.4 percent of all confinements in the ACT (average of 1993-96) resulted in a multiple birth, which is similar to the Australian percentage of 1.4.

Table 17: No. of births in the ACT 1993-96

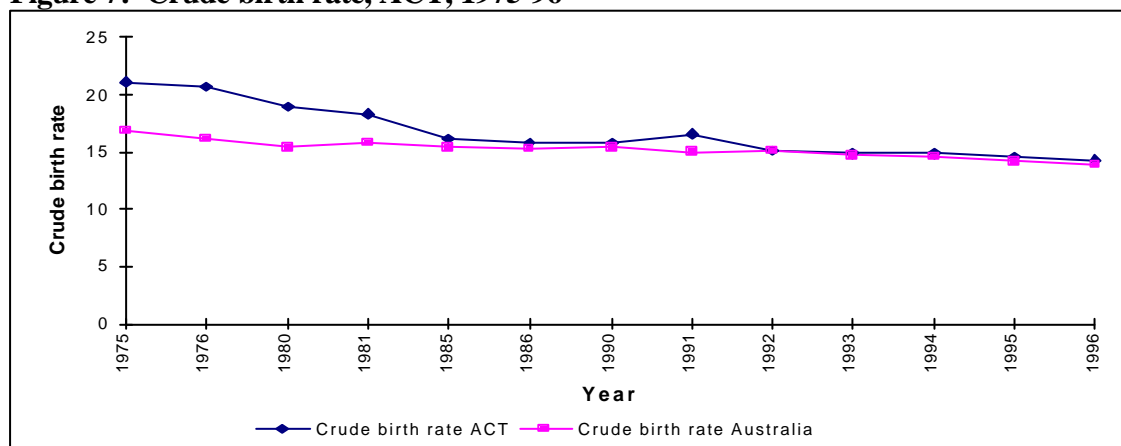
| | 1993 | 1994 | 1995 | 1996 |
|---------------------------|-------|-------|-------|-------|
| Live births | 4414 | 4461 | 4415 | 4396 |
| Male | 2234 | 2232 | 2291 | 2241 |
| Female | 2180 | 2229 | 2124 | 2155 |
| Male:Female ratio | 102.5 | 100.1 | 107.9 | 104.0 |
| Twins | 133 | 87 | 116 | 125 |
| Triplets and higher order | na | 3 | 0 | 11 |
| Stillbirths(a) | na | 15 | 22 | 23 |
| Male | -na | 6 | 13 | 14 |
| Female | -na | 9 | 9 | 9 |

(a) Including those where it was not known if the heartbeat ceased before or after the delivery
na refers to "not available"

Source: *Births Australia 1993-96*, ABS, Catalogue No. 3301.0

Prior to 1990 the ACT had a crude birth rate higher than the Australian rate. The crude birth rate since 1990 has been similar to the Australian rate.

Figure 7: Crude birth rate, ACT, 1975-96



Source: *Births Australia 1993-96*, ABS, Catalogue No. 3301.0

3.2 Mortality

Infant mortality (defined as deaths of children under one year) is viewed as an indicator of the general level of mortality, health and well being of a population. The survival of infants and young children is highly affected by preventive health measures and public health programs which aim to improve life expectancy.²⁵

Over the 3 years from 1994 to 1996, 65 infants under one year old died. The crude death rate for this age group remained stable and averaged 4.7 per 1,000 per year. The rate was slightly higher for male infants

(4.8 per 1,000) than female infants (4.5 per 1,000). Numbers of deaths decrease significantly with the increasing age of the infant.

Table 18: Infant age specific death rate, ACT, 1993-96

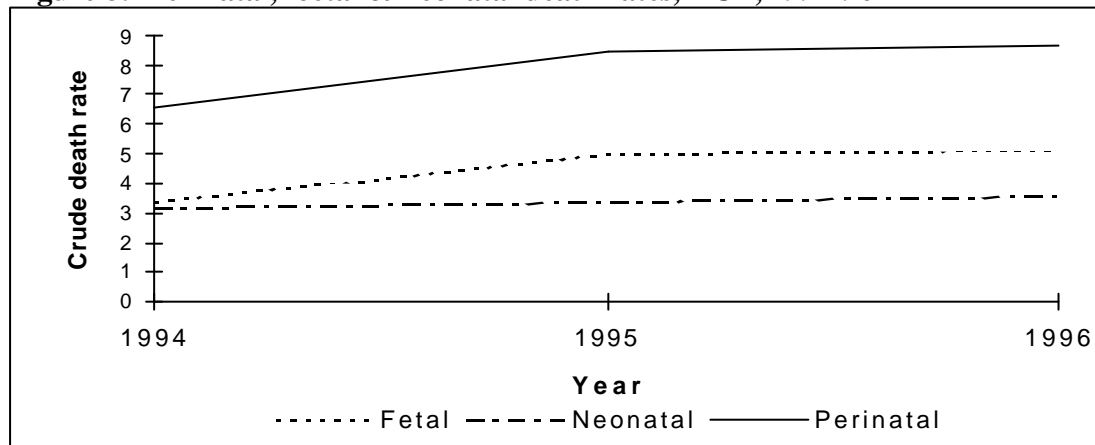
| | 1993 | 1994 | 1995 | 1996 |
|---------------------------------|------------|------------|------------|------------|
| Infant deaths (number) | 19 | 20 | 20 | 25 |
| Male | 15 | 14 | 6 | 12 |
| Female | 4 | 7 | 15 | 13 |
| Neonatal deaths | na | 14 | 15 | 16 |
| Post neonatal deaths | na | 6 | 5 | 9 |
| Perinatal deaths | na | 29 | 37 | 39 |
| ACT Population <1 year (number) | 4480 | 4419 | 4367 | 4480 |
| Crude death rate(a) | 4.2 | 4.5 | 4.6 | 5.6 |

(a) Crude death rate expressed per 1,000 live births. na refers to "not available"

Source: ABS unpublished data, *Causes of Death ACT, 1993-1996*

Over the three year period 1994-96, 70 percent of infant deaths occurred in the neonatal period. 57 percent of perinatal deaths were due to foetal deaths (refer to glossary for definitions).

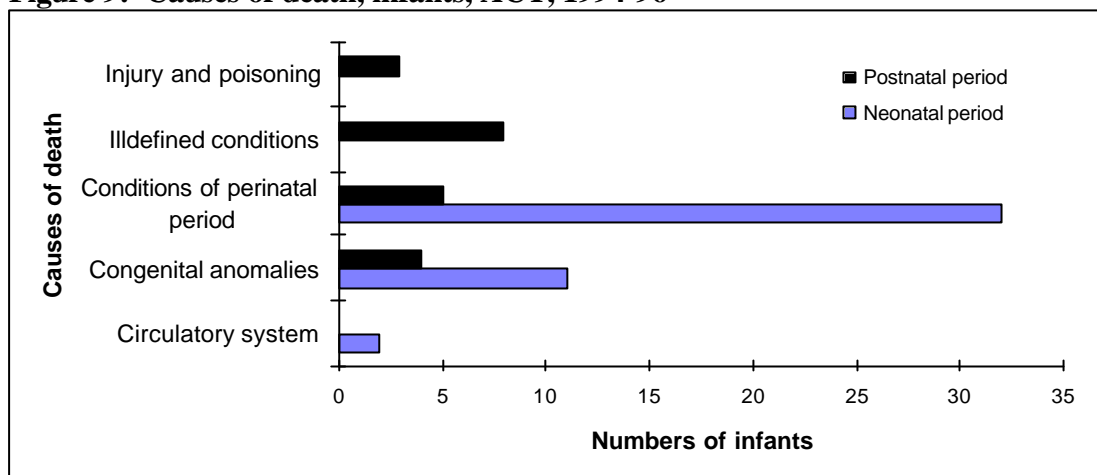
Figure 8: Perinatal, foetal & neonatal death rates, ACT, 1994-96



Source: ABS unpublished data, *Causes of Death ACT, 1993-1996*

The rise in the perinatal death rate for 1995 and 1996 is due to the increase in the foetal death rate. The highest number of foetal deaths since 1992 was recorded in Australia in 1996. Both male and female rates have increased in Australia in recent years. The neonatal death rate has remained stable.

Figure 9: Causes of death, infants, ACT, 1994-96



Source:ABS unpublished data, *Causes of Death ACT, 1993-1996*

The leading causes of death for this age group were conditions originating in the perinatal period, which represented 57 percent of deaths during the years 1994 to 1996. The most common of these conditions were those associated with the respiratory system (30%), especially breathing difficulties and lack of oxygen supply. The second largest cause was congenital anomalies (15 cases), followed by Sudden Infant Death Syndrome (SIDS) (8 cases). There were three deaths associated with injury and poisoning (two infants died as a result of motor vehicle accidents and one by household fire). Six babies died of extreme immaturity and low birth weight.

Table 19: Annual average no.(a) & rate(b) of SIDS infants, ACT & Australia, 1982-96

| | <u>ACT</u> Total | <u>Australia</u> | | |
|----------------|---------------------|------------------|--------|-------|
| | | Male | Female | Total |
| 1982-86 | | | | |
| Number | 8 | 303 | 186 | 489 |
| Rate | 204.2 | 244.8 | 158.0 | 202.5 |
| Percentage | 21.1 | 22.9 | 18.8 | 21.1 |
| 1987-91 | | | | |
| Number | 11 | 291 | 169 | 460 |
| Rate | 243.2 | 224.8 | 138.0 | 182.6 |
| Percentage | 31.4 | 24.8 | 19.4 | 22.5 |
| 1992-96 | | | | |
| Number | 4 | 136 | 96 | 232 |
| Rate | n.p (84.5) | 102.6 | 86.2 | 89.8 |
| Percentage | 17.4 | 15.1 | 14.3 | 14.8 |

(a)Numbers and rates averaged over 5 year period. Components may not add to totals.

(b)Average death rate per 100,000 live births.

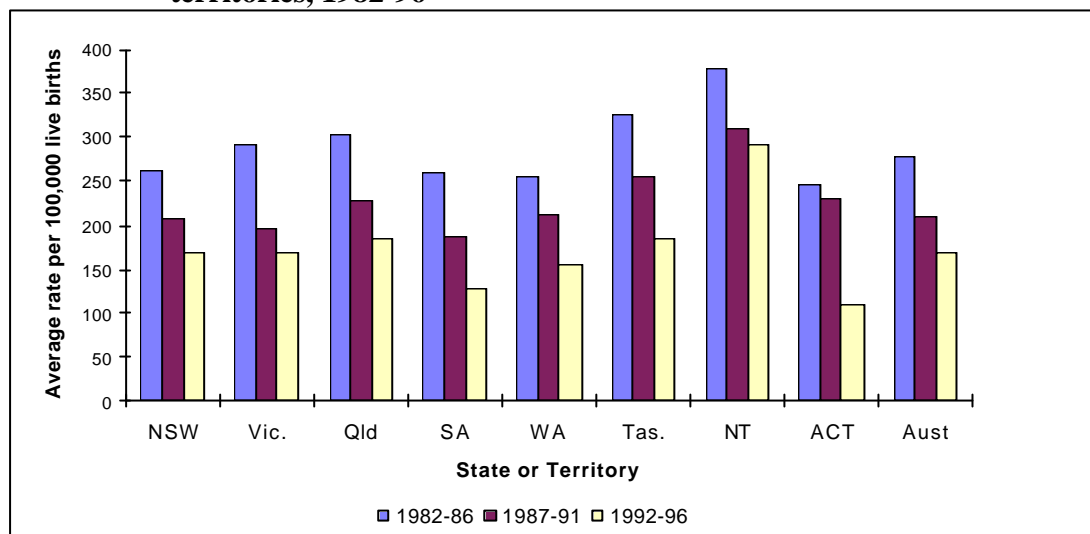
n.p the number of deaths were too few to calculate reliable death rates.

Source:*Causes of Infant and Child Deaths 1982-96*,ABS, Catalogue No.4398.0

The five year average death rate for SIDS in Australia has declined from 202.5 per 100,000 live births 1982-1986 to 89.8 in 1992-96. Throughout the 15 year period the male death rate from SIDS remained higher than the female rate. A fall in the five year average death rate between 1987-91 and 1992-96 could reflect the success of the national health education campaign which was launched in 1990. It should be noted that the ACT rates are unreliable due to the very low numbers of SIDS related deaths.

The ACT consistently had the lowest average death rate for congenital anomalies of all states and territories. The death rate due to these anomalies has shown a decline since 1982 (Figure 10).

Figure 10: Five year average infant death rate for congenital anomalies, states & territories, 1982-96



Source: Causes of Infant and Child Deaths 1982-96, ABS, Catalogue No.4398.0

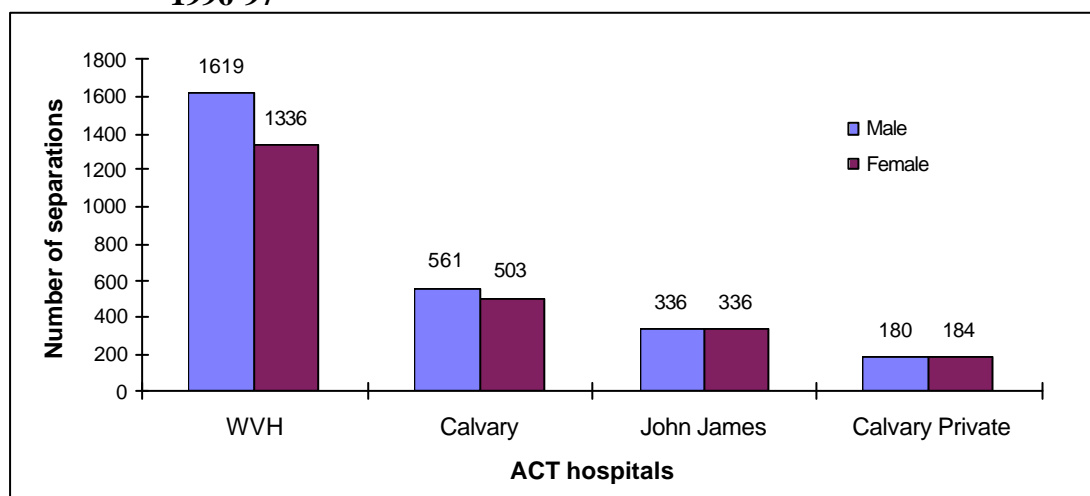
3.3 Morbidity

In Australia the main sources for morbidity information are from hospital inpatient records. Hospital separation data primarily describes those patients with acute or chronic disease, so are not an appropriate measure of non-acute health status. Refer to section 4.2 for details of the National Health Survey.

3.3.1 Hospital separations

A total of 5,035 infants under 12 months living in the ACT were hospitalised during 1996-97 (53% male infants and 47% female infants).

Figure 11: Hospital separations of infants less than 12 mths by hospital by sex, 1996-97



Source: ACT Hospital Morbidity data, 1996-97.

Fifty eight percent of all infant hospitalisations were at The Canberra Hospital (formerly The Woden Valley Hospital), followed by Calvary Public (21%), John James Memorial (13%) and Calvary Private (7%) hospitals. Reasons for hospitalisations can be seen in Table 20.

Table 20: Hospital separations of infants by principal diagnosis, ACT, 1996-97

| Principal diagnosis group | Neonates | | Post neonates | |
|--|-------------|--------------|---------------|--------------|
| | no. | % | no. | % |
| Supplementary classifications | 2498 | (57.8%) | 33 | (4.6%) |
| Certain conditions originating in the perinatal period | 1577 | (36.5%) | 0 | (0%) |
| Congenital anomalies | 190 | (4.4%) | 51 | (7.2%) |
| Symptoms signs and illdefined conditions | 17 | (0.4%) | 75 | (10.6%) |
| Digestive system | 16 | (0.4%) | 68 | (9.6%) |
| Disease of the respiratory system | 8 | (0.2%) | 205 | (28.8%) |
| The musculoskeletal system and connective tissue | 5 | (0.1%) | 0 | (0%) |
| Infectious and parasitic disease | 4 | (0.1%) | 147 | (20.7%) |
| Nervous system and sense organs | 3 | (0.1%) | 44 | (6.2%) |
| Disease of the skin and subcutaneous tissue | 3 | (0.1%) | 8 | (1.1%) |
| Disease of the genitourinary system | 2 | (0.1%) | 37 | (5.2%) |
| Blood and blood forming organs | 1 | (0%) | 3 | (0.4%) |
| Injury and poisoning | 0 | (0%) | 30 | (4.2%) |
| Endocrine, nutritional, metabolic,immunity | 0 | (0%) | 5 | (0.7%) |
| Neoplasm | 0 | (0%) | 0 | (0%) |
| Disease of the circulatory system | 0 | (0%) | 2 | (0.1%) |
| Total | 4324 | (85%) | 711 | (15%) |

Note: Infants under 12 mths can be divided as those in the neonatal period (<28 days) & those in the post neonatal period (28-364 days).

Source: ACT Hospital Morbidity data, 1996-97.

Neonates accounted for 4,324 infants hospitalised during 1996-97. A total of 2444 (60%) and can be considered as newborn infants with no apparent problems at birth. 315 of these newborn infants were born by caesarean section and 7 were born before admission. Problems associated with neonates were primarily conditions originating in the perinatal period 1,577 (36.5%) followed by congenital anomalies 190 (4.4%). Male infants (56%) were more often diagnosed with a condition originating in the perinatal period than female infants (44%), especially in respiratory conditions.

Table 21: Hospital separations, for neonates with conditions originating in the perinatal period as primary diagnosis, ACT, 1996-97

| Conditions originating in the perinatal period | Male | Female | Total |
|--|------------|------------|-------------|
| Other respiratory conditions of the foetus or newborn | 165 | 110 | 275 |
| Illdefined conditions | 106 | 98 | 204 |
| <i>Feeding problems</i> | 92 | 90 | 182 |
| <i>Drug withdrawal syndrome</i> | 8 | 1 | 9 |
| <i>Others</i> | 6 | 7 | 13 |
| Disorder relating to short gestation and low birthweight | 154 | 122 | 176 |
| Slow foetal growth and foetal malnutrition | 51 | 57 | 108 |
| Infections specific to the perinatal period | 68 | 37 | 105 |
| Condition involving integument & temp. regulation of foetus & newborn | 51 | 44 | 95 |
| Birth trauma | 46 | 49 | 95 |
| <i>Injury to scalp</i> | 19 | 17 | 36 |
| <i>Fracture of clavicle</i> | 5 | 3 | 8 |
| <i>Injury to skeleton</i> | 7 | 6 | 13 |
| <i>Facial and nerve injury</i> | 2 | 2 | 4 |
| <i>Other specified birth traumas</i> | 13 | 21 | 34 |
| Perinatal jaundice | 53 | 38 | 91 |
| Intrauterine hypoxia and birth asphyxia | 51 | 36 | 87 |
| Disorder due to long gestation and high birthweight | 39 | 24 | 63 |
| Endocrine and metabolic disturbances | 39 | 24 | 63 |
| <i>Infant of diabetic mother syndrome</i> | 7 | 6 | 13 |
| <i>Electrolyte disturbances</i> | 5 | 5 | 10 |
| <i>Neonatal hypoglycaemia</i> | 27 | 13 | 40 |
| Maternal cause of perinatal morbidity | 22 | 24 | 46 |
| Respiratory distress syndrome | 19 | 9 | 28 |
| Haemolytic disease of the foetus or newborn | 9 | 11 | 20 |
| Foetal and neonatal haemorrhage (includes bruising) | 10 | 4 | 15 |
| Perinatal disorders of the digestive system | 4 | 5 | 9 |
| Haematological disturbances of the newborn | 1 | 1 | 2 |
| TOTAL | 888 | 689 | 1577 |

Source: ACT Hospital Morbidity data, 1996-97

Congenital musculoskeletal deformity was the most common congenital anomaly in 1996-97, more females being affected than males.

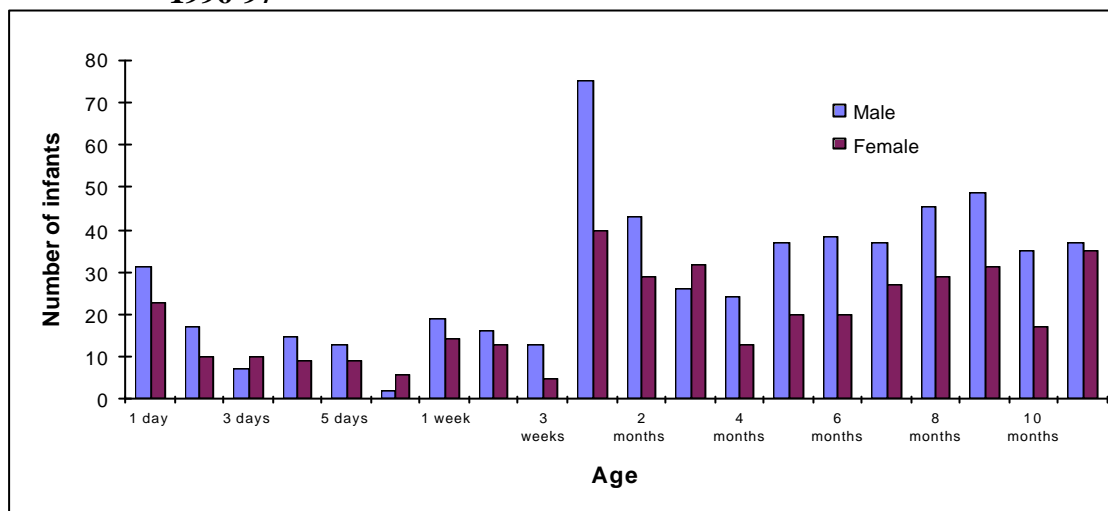
Table 22: No. of neonates with congenital anomalies as primary diagnosis, ACT, 1996-97

| Congenital anomalies | Male | Female | Total |
|--|------------|-----------|------------|
| Congenital musculoskeletal deformities | 28 | 48 | 76 |
| Anomaly of the genital organs | 22 | 0 | 22 |
| Anomaly of the integument | 10 | 8 | 18 |
| Anomaly of urinary system | 10 | 2 | 12 |
| Anomalies of the limbs | 6 | 5 | 11 |
| Anomaly of the cardiac septal closure | 4 | 3 | 7 |
| Cleft palate and cleft lip | 1 | 5 | 6 |
| Anomaly of upper alimentary tract | 3 | 3 | 6 |
| Other musculo skeletal deformities | 4 | 1 | 5 |
| Other anomalies of the heart | 3 | 1 | 4 |
| Anomaly of the circulatory system | 3 | 1 | 4 |
| Anomaly of the respiratory system | 1 | 3 | 4 |
| Congenital anomaly of the eye | 2 | 1 | 3 |
| Congenital anomaly of the ear, face and neck | 1 | 2 | 3 |
| Spina bifida | 2 | 1 | 3 |
| Other Anomalies | 3 | 3 | 6 |
| Total | 103 | 87 | 190 |

Source: ACT Hospital Morbidity data, 1996-97

Infants in the postnatal period comprised 15 percent of total hospital separations for infants under 12 months old. The most common conditions were diseases of the respiratory tract (28.8%), infectious and parasitic diseases (20.7%), symptoms, signs and illdefined conditions (10.6%) and digestive system (9.6%). The majority of diseases of the respiratory tract were classified as either acute respiratory infections or pneumonia and influenza (84%). Diseases classified as intestinal infection associated with organisms accounted for 69 percent of infectious and parasitic diseases. Overall, diseases related to an infectious process accounted for 58 percent of all separations during 1996-97 for infants in the postnatal period. Hernia of the abdominal cavity was the most common condition recorded in the digestive system classification (44%). Figure 12 shows the age sex distributions of all infants admitted to hospital for conditions other than birth.

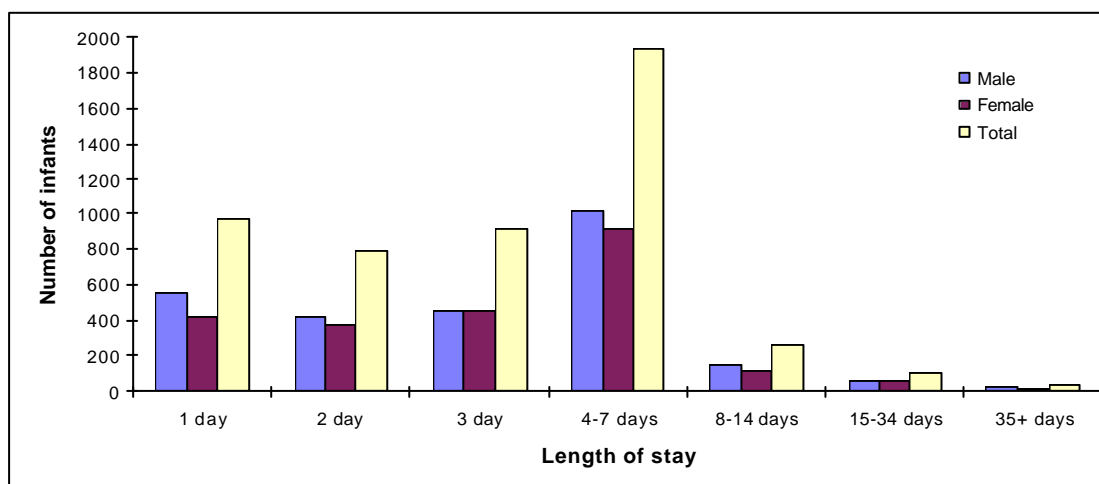
Figure 12: Hospital separations of infants less than 12 mths by age, by sex, ACT, 1996-97



Source: ACT Hospital Morbidity data, 1996-97

Infants in the postnatal period represent the majority of infants admitted to hospital for conditions other than birth. Length of stay in hospital is often a good indicator of acuity (refer Figure 13, Table 23). Fifty three percent of all infants were discharged from hospital within 4 days of admission, a further 38 percent were discharged within 7 days of admission and 2.8 percent of children had hospital stays of greater than two weeks. Disorders relating to short gestation and unspecified low birth weight were the principal diagnoses which accounted for the majority of increased lengths of stay in hospital for infants under one year.

Figure 13: Length of stay in hospital of infants under 12 mths, ACT, 1996-97



Source: ACT Hospital Morbidity data, 1996-97

Table 23: Principal diagnosis, infants, with length of stay greater than 8 days, ACT, 1996-97

| Principal diagnosis | 8-14 days | 15-34 days | >35 days |
|--|-----------------|-----------------|------------------|
| Infectious and parasitic diseases | 7 (2.6%) | 1 (0.9%) | |
| Endocrine, nutritional, metabolic and immunity disorders | 0 | 0 | 1 (2.5%) |
| Diseases of the nervous system and sense organs | 2 (0.7%) | 0 | 1 (2.5%) |
| Diseases of the respiratory system | 7 (2.6%) | 2 (1.8%) | 0 |
| Diseases of the digestive system | 2 (0.7%) | 2 (1.8%) | 1 (2.5%) |
| Congenital anomalies | 19 (7.1%) | 6 (5.4%) | 1 (2.5%) |
| Certain conditions originating in the perinatal period | 187 (69.5%) | 95 (85.6%) | 36 (90%) |
| Symptoms, signs and illdefined conditions | 8 (3.0%) | 5 (4.5%) | 0 |
| Supplementary classifications | 37 (13.8%) | 0 | 0 |
| Total | 269 (5%) | 111 (2%) | 40 (0.8%) |

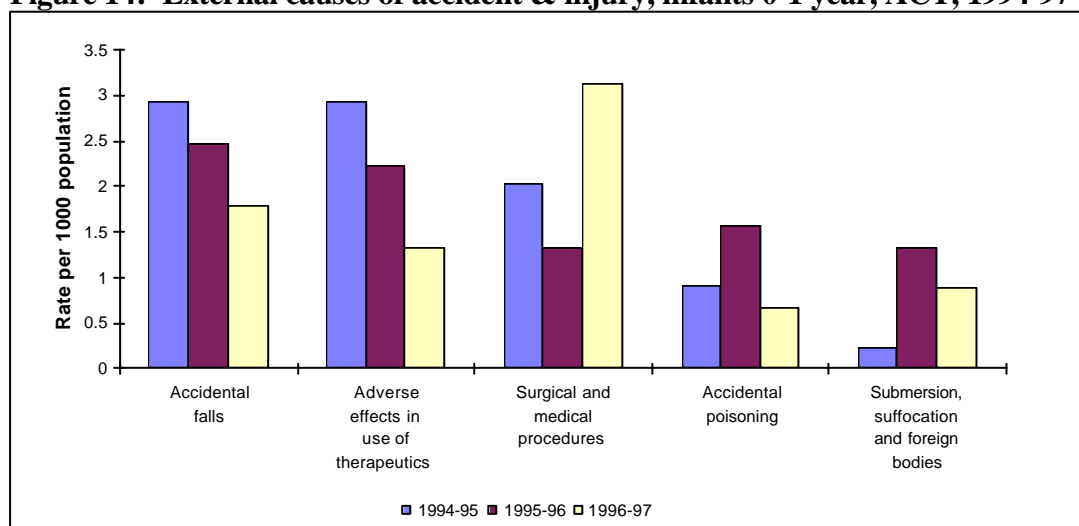
Source: ACT Hospital Morbidity data, 1996-97

Accident and Injury

The percentage of infants hospitalised in this age group due to accident and injury is relatively low compared to other age groups. Accident and injury accounted for only one percent of hospitalisations during 1996-97, and none of these were in the neonatal period (less than 28 days). Hospitalisations due to accident and injury increase as infants develop their gross motor skills and are less dependant on their carers. Recognising the developmental stage at which particular factors are most dangerous provides parents and caregivers with the opportunity to strategically design and target interventions.²⁶

The age specific rate for hospital separations with a principal diagnosis of accident and injury for 1996-97 in the ACT, was 6.7 per 1000 infants, with males having a higher rate (3.6) than females (3.1). Figure 14 shows the major external causes of accident and injury.

Figure 14: External causes of accident & injury, infants 0-1 year, ACT, 1994-97



Source: ACT Hospital Morbidity data, 1996-97

The rate of accident and injury decreased since 1994 for most causes with the exception of accidents caused by submersion, suffocation, and foreign bodies and surgical and medical procedures as the cause of abnormal reaction of patient or later complication. Seventy percent of external injuries as a result of surgical and medical procedures were due to surgical operations and other surgical procedures, without misadventure at the time of the accident.

In this age group accidental falls involved primarily falls from stairs and steps, chairs, slipping and tripping on the same level and falls from one level to another (not specified). Unspecified falls from one level to another accounted for 62 percent of all accidental falls. Accidents involving strollers, babywalkers or prams occurred at a rate of 0.22 per 1,000 in 1996-97, which represented only one hospital separation. Falls from other nursery equipment could not be identified from the hospital morbidity data. It should be remembered that injuries due to hospitalisations represent only a small portion of a much larger picture, most injuries which occur as a result of accident and injury would be treated in the home or at a doctor's surgery.

Adverse effects in therapeutic use due to drugs, medicinal and biological substances has shown a decrease in rate from 2.94 in 1994-95 to 1.34 in 1996-97, primarily due to a decrease in adverse effects of the cephalosporin group of antibiotics and sedatives/hypnotics. Adverse effects due to vaccines remained fairly constant at an average rate of 0.67 / 1000, the introduction of the new acellular vaccine for pertussis (1997-98) may impact on this rate in the future.



4. Children aged 1 - 4 years

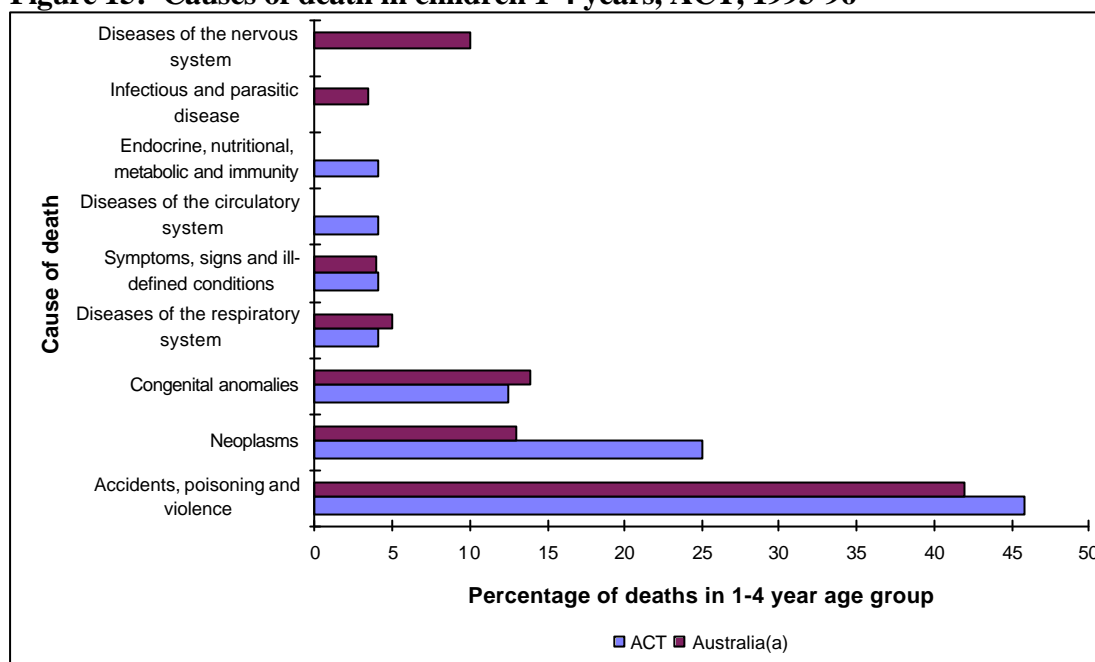
Moving from babyhood to toddler and preschooler marks the emergence of a new range of health issues. As children become more mobile and inquisitive, the rates of accident and injury increase. Children in this age group are developing socialising, language and learning skills and conditions associated with these new developmental stages start to emerge. A number of endocrine, nutritional, metabolic and immunity diseases will start to manifest eg cystic fibrosis, diabetes and asthma. Children are becoming more exposed to the outside world, and many children enter the world of child care and preschool.

4.1 Mortality

In the 4 year period 1993-1996 in the ACT there was a total of 24 deaths in the 1-4 year age group, 62 percent of whom were male and 38 percent were female. The age specific death rate for this age group was 0.3 deaths per 1000 in 1996 compared to the Australian rate of 0.4 deaths per 1000 for that year. The ACT age specific death rate for males (0.3) was slightly higher than for females (0.2).

Owing to the very small number of deaths in the 1-4 year age group, a detailed analysis of the levels and trends in cause-specific child death rates has not been made. Nevertheless, it can be seen from Figure 15 that accidents were the highest single cause of death for children 1-4 years for the period 1993-96, followed by neoplasms. 64 percent of deaths due to accidents were male children and 36 percent female. Accidental drowning and submersion (swimming pool or quenching tank) accounted for 70 percent of the deaths due to injury, poisoning and violence. Accidents caused by fire and flames and motor vehicle traffic accidents caused the other 30 percent of deaths.

Figure 15: Causes of death in children 1-4 years, ACT, 1993-96



Source: ABS unpublished data, *Causes of Death ACT, 1993-1996*
Causes of Infant and Child Deaths, 1982-96. ABS Catalogue No.4398.0

There were very few deaths (6) caused by cancer (malignant neoplasms) in the age group in the ACT but these deaths accounted for one quarter of all deaths for that group. This is a much higher percentage than for Australia as a whole (13 %), however due to the very low numbers of cases these results must be interpreted with caution.

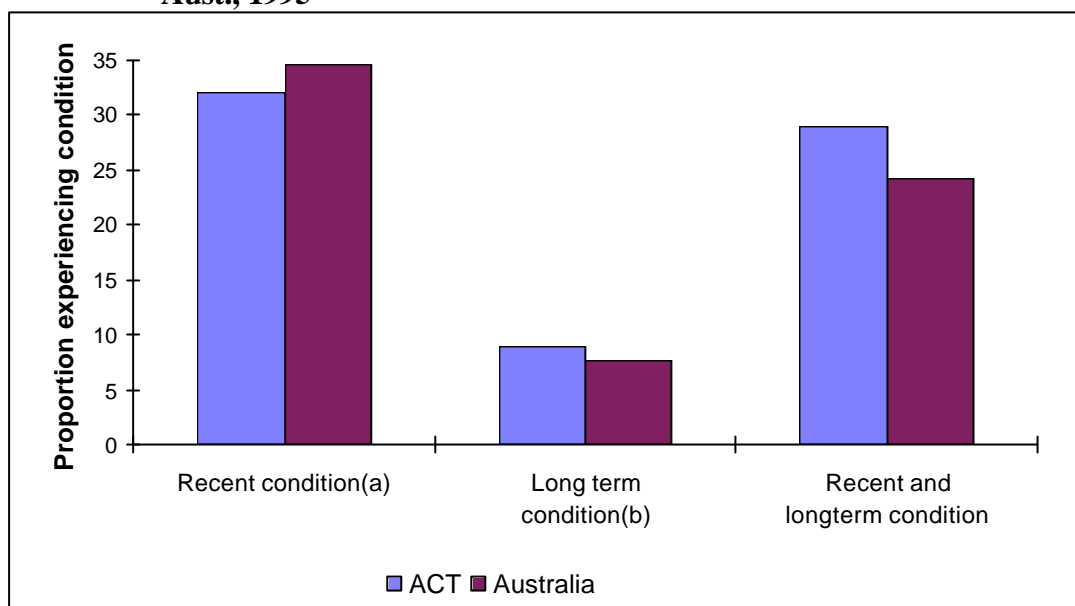
4.2 Morbidity

4.2.1 National health survey

Information collected from the 1995 National Health Survey (refer to Glossary for description) establishes estimates of the prevalence of those medical conditions more commonly experienced in the community. This information is “as reported” by respondents or their carers which does allow for subjectivity in the way that conditions are described and reported. Due to the nature of data collection by the survey, data is presented for the 0-4 year age group.

Three hundred and twenty two children in the 0-4 year age group were surveyed in the ACT. Health status for this group focused on the number of medical conditions recently experienced and the number of long term medical conditions experienced as measures of ill health.

Figure 16: Proportion of conditions experienced by 0-4 yr age group, ACT & Aust., 1995



(a) Condition experienced in the previous 2 weeks.
 (b) Condition lasting or will last for 6 months or more.

Source: National Health Survey, 1995, ABS

Overall 30 percent of children surveyed had experienced no recent or long term medical conditions²⁷. Five percent of children reported an accident or incident as being the cause of their condition. 52 percent of the accidents occurred within the home. 35 percent of accidents were the result of a fall, 18 percent as a result of a single or long term exposure to a harmful substance, and 18 percent as a result of hitting something. Types of conditions reported as arising from accidents were open wounds, bruising and crushing, entry of foreign objects and burns and scalds. The most common recent and long term conditions reported in the ACT and Australia were respiratory diseases (not including asthma), followed by dental problems (refer Table 24).

Table 24: Whether reported recent illness in 2 weeks prior to the interview by most commonly reported conditions, 0-4 years, ACT & Aust., 1995

| Type of recent condition | Males | | Females | |
|--|---------|----------|---------|----------|
| | ACT (%) | Aust (%) | ACT (%) | Aust (%) |
| Coughs, colds, influenza | 19.6 | 18.5 | 26.1 | 21.6 |
| Dental problems | 14.0 | 7.8 | 8.6 | 9.4 |
| Eczema, dermatitis | 6.1 | 5.8 | 11.5 | 5.0 |
| Other diseases of the skin and subcutaneous tissue | **1.2 | 1.7 | 2.4 | 2.2 |
| Asthma | 7.2 | 6.8 | 5.4 | 4.4 |
| Pyrexia | 8.0 | 3.9 | 4.3 | 3.5 |
| Injuries | 7.0 | 5.5 | 2.2 | 4.7 |
| Other diseases of the respiratory system | 3.8 | 4.3 | 4.4 | 3.8 |
| Other symptoms, signs and ill defined conditions | 3.5 | 2.7 | 4.6 | 1.5 |
| Diarrhoea, enteritis | 6.3 | 2.2 | **0.6 | 1.7 |
| Otitis media | **0.5 | 4.1 | 2.5 | 3.2 |
| Other infectious and parasitic diseases | 3.1 | 2.9 | 3.7 | 2.6 |

** Due to low numbers, data is likely to be unreliable

Note: Persons may have reported more than one recent illness, therefore components do not add to totals

Source: ABS, National Health Survey 1995, confidentialised unit record file (weighted estimates)

Asthma was the most common long term condition reported in this age group particularly in males, followed by eczema and dermatitis.

Table 25: Whether reported long-term condition by most commonly reported condition by sex, 0-4 yrs, ACT & Aust., 1995

| Type of long-term condition | Males | | Females | |
|--|---------|----------|---------|----------|
| | ACT (%) | Aust (%) | ACT (%) | Aust (%) |
| Asthma | 15.7 | 12.8 | 9.6 | 8.0 |
| Eczema, dermatitis | 6.2 | 5.3 | 14.7 | 3.6 |
| Ear/hearing problems | 4.5 | 4.0 | 6.8 | 3.3 |
| Allergies not elsewhere classified | 3.5 | 3.5 | 6.0 | 3.7 |
| Other diseases of the respiratory system | 4.6 | 3.0 | 1.2 | **1.4 |
| Eye/sight problems | 0.5 | **1.3 | 4.0 | 1.9 |

** Due to low numbers, data is likely to be unreliable

Note: Persons may have reported more than one long-term condition, therefore components do not add to totals

Source: ABS, National Health Survey 1995, confidentialised unit record file (weighted estimates)

Medications most commonly used for this age group generally reflected the pattern of illness (refer Table 26).

Table 26: Whether took any type of medication in the 2 weeks prior to interview (percent), by type of medication, by sex, 0-4 yrs, ACT & Aust., 1995

| Type of Medication (a) | Males | | Females | |
|--|--------------|--------------|--------------|--------------|
| | ACT (%) | Aust (%) | ACT (%) | Aust (%) |
| Used vitamin/mineral supplements | 13.9 | 13.0 | 17.4 | 12.9 |
| Used herbal or natural medications | 3.4 | 4.5 | 2.8 | 3.2 |
| Used other medication- | | | | |
| <i>Pain relievers</i> | 20.5 | 16.1 | 18.5 | 16.4 |
| <i>Medication for cough/colds</i> | 13.8 | 16.0 | 24.5 | 17.4 |
| <i>Skin ointments/creams</i> | 9.4 | 8.8 | 14.4 | 9.2 |
| <i>Asthma medications</i> | 7.2 | 7.0 | 4.8 | 3.9 |
| <i>Medications for allergies</i> | 0.5 | 1.1 | 0.7 | 1.0 |
| <i>Sleeping medications</i> | 0.6 | 0.4 | 0.6 | 0.4 |
| <i>Laxatives</i> | 0.0 | 0.4 | 1.1 | 0.4 |
| <i>Stomach medications</i> | 0.0 | 1.3 | 0.6 | 0.9 |
| <i>None of the above</i> | 11.9 | 12.6 | 9.5 | 11.5 |
| Total who used other medications | 45.1 | 46.8 | 54.0 | 46.6 |
| Total who used medications (b) | 52.7 | 54.0 | 62.7 | 53.6 |
| Total who did not use medications | 47.3 | 46.0 | 37.3 | 46.4 |
| TOTAL RESPONDENTS | 100.0 | 100.0 | 100.0 | 100.0 |

(a) Medication as reported by respondent

(b) Persons may have reported using more than one type of medication, therefore components do not add to totals

Source: ABS, National Health Survey 1995, confidentialised unit record file (weighted estimates)

4.2.1.1 Eye and sight conditions

Results from the National Health Survey 1995 for children 0-4 years showed that 96 percent of children reported having no problems with their sight. Two percent of children between the ages of 1-4 years reported having trouble with their sight. Two percent of answers indicated they didn't know. Two percent of children who reported having trouble with their sight indicated that the sight problems would be corrected by glasses. None of the children were currently wearing glasses.

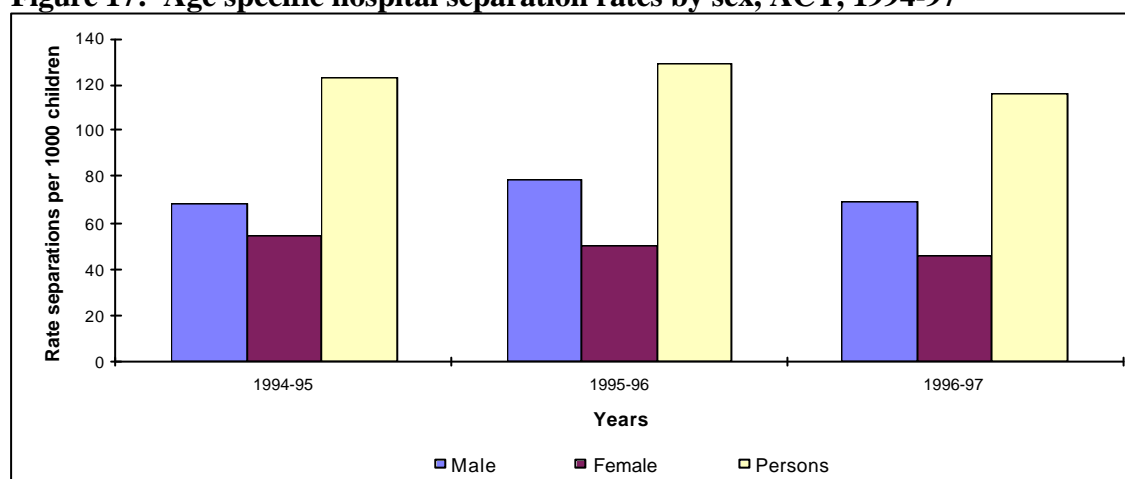
4.2.1.2 Dental conditions

Seventy seven percent of children in this group had never had a dental consultation. Only 4 percent of children visited the dentist as part of a routine check. Two percent had fillings at last appointment.

4.2.2 Hospital morbidity data

In Australia the main sources for morbidity information are from hospital inpatient records. Hospital separation data primarily describes those patients with acute or chronic disease. In 1996-97 there were 2,114 (60 % male, 40 % female) ACT hospital separations for children aged 1-4 years. Over the period 1994-97 males consistently had higher rates of hospital separations than females. The overall separation rate was fairly constant for all children for this period.

Figure 17: Age specific hospital separation rates by sex, ACT, 1994-97



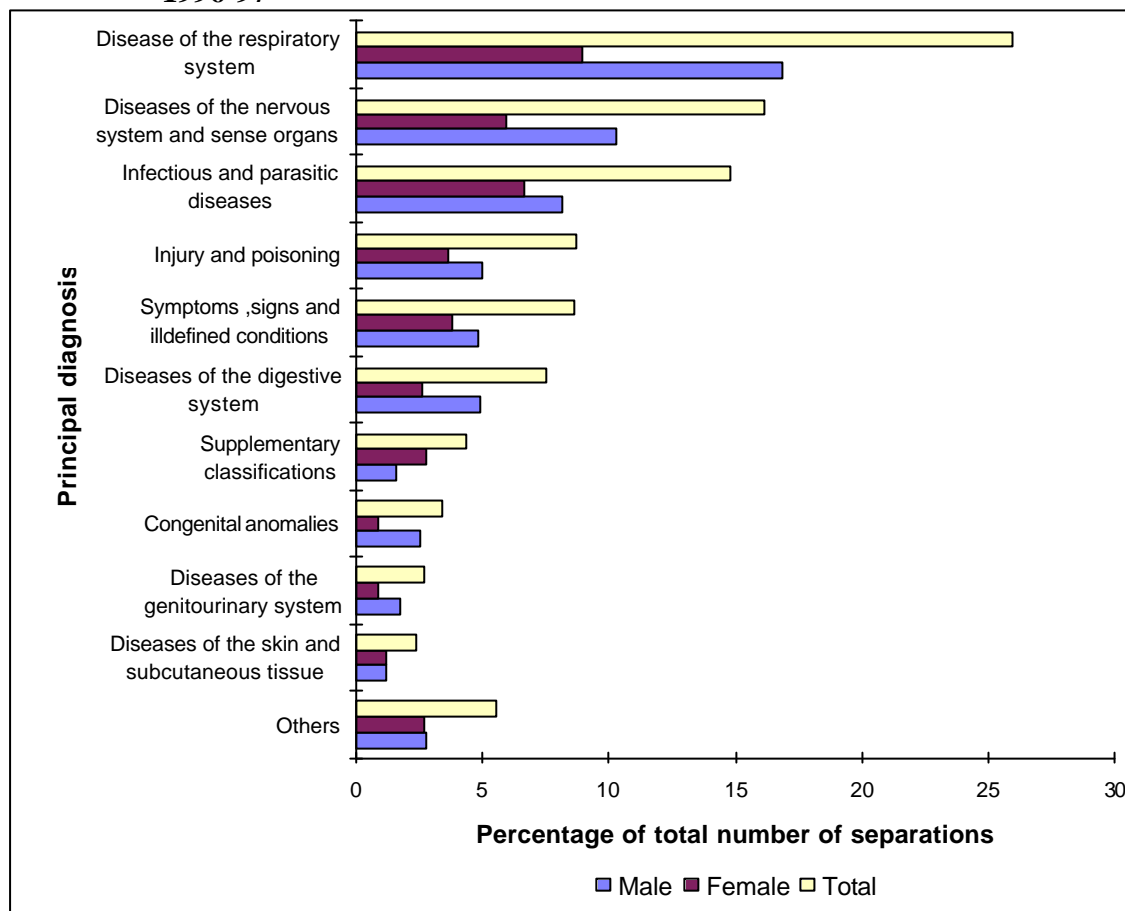
Note: rate per 1000 population

Source: ACT Hospital Morbidity data, 1994-97

ABS Estimated resident population at 30 June, 1991 to 1996

Diseases of the respiratory and the nervous systems and sense organs, infectious and parasitic diseases and accident, injury and poisoning were the 4 most common causes for hospitalisation.

Figure 18: Hospital separations of children 1-4 yrs by principal diagnosis, ACT, 1996-97



Source: ACT Hospital Morbidity data, 1996-97

4.2.2.1 Diseases of the respiratory system

Diseases of the respiratory system, in particular asthma, are the most common causes of chronic ill health in children.²⁸ Asthma has been estimated to affect one in five children in Australia. Hospital separation data and data from the National Health Survey 1995 both rank respiratory disease as the most common cause of admission into hospital and the most prevalent condition in the community for the 1-4 year age group. Females had fewer separations than males.

Table 27: Hospital separations, children 1-4 yrs, principal diagnosis of respiratory disease, ACT, 1996-97

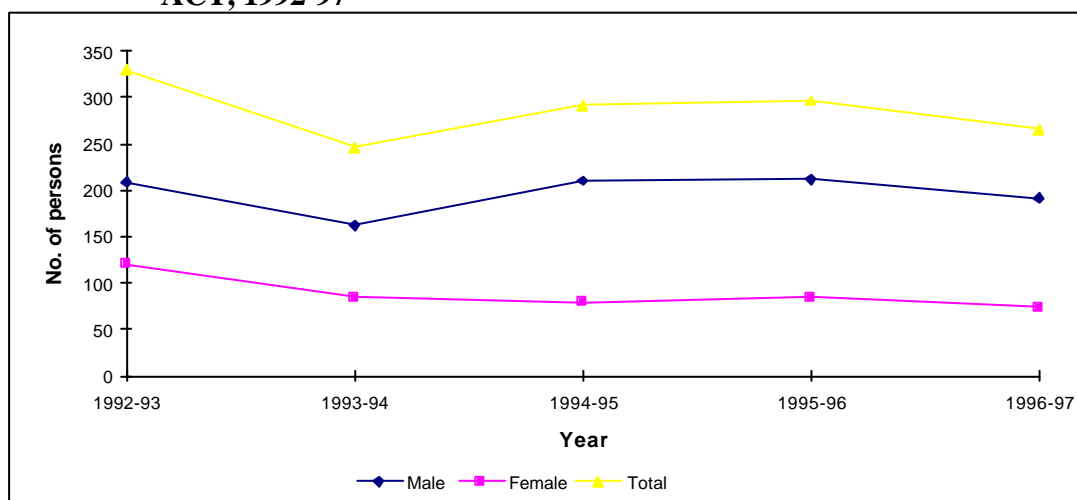
| | 1994-95 | | | 1995-96 | | | 1996-97 | | |
|--|----------|----------|----------|----------|---------|----------|----------|---------|----------|
| | Male no. | Fem. no. | Rate (a) | Male no. | Fem no. | Rate (b) | Male no. | Fem no. | Rate (c) |
| Chronic obstructive pulmonary disease & allied conditions- Asthma | 158 | 60 | 12.0 | 157 | 66 | 12.3 | 144 | 47 | 10.7 |
| Chronic disease of tonsils & adenoids | 57 | 45 | 5.6 | 67 | 38 | 5.8 | 56 | 40 | 5.4 |
| Pneumonia & influenza | 62 | 35 | 5.3 | 64 | 36 | 5.5 | 55 | 38 | 5.2 |
| Acute laryngitis & tracheitis | 57 | 22 | 4.3 | 64 | 37 | 5.6 | 37 | 21 | 3.2 |
| Acute upper respiratory infections | 14 | 11 | 1.4 | 21 | 12 | 1.8 | 16 | 16 | 1.8 |
| Acute pharyngitis/tonsillitis | 17 | 8 | 1.4 | 18 | 18 | 2.0 | 16 | 8 | 1.3 |
| Acute bronchitis & bronchiolitis | 16 | 15 | 1.7 | 28 | 15 | 2.4 | 14 | 7 | 1.2 |
| Other diseases of the URT | 6 | 1 | 0.4 | 13 | 3 | 0.9 | 10 | 5 | 0.8 |
| Other diseases of the respiratory system | 3 | 5 | 0.4 | 8 | 4 | 0.7 | 6 | 4 | 0.6 |
| Chronic obstructive pulmonary disease & allied conditions | 6 | 1 | 0.4 | 3 | 1 | 0.2 | 4 | 4 | 0.4 |
| Total | 396 | 203 | 32.9 | 443 | 230 | 37.2 | 358 | 190 | 30.7 |

(a) Age specific rate per 1000 of estimated population 30 June 1994, (b) Age specific rate per 1000 of estimated population 30 June 1995, (c) Age specific rate per 1000 of estimated population 30 June 1996

Source: ACT Hospital Morbidity data, 1994-97

A comparison of rates between 1994-97 shows a drop in admissions with principal diagnosis of respiratory diseases. This decrease was due to fewer admissions of patients with principal diagnosis of asthma. Age specific rates for hospital separations due to asthma as either primary or secondary diagnosis dropped slightly from 16.4 per 1,000 in 1995-96 to 14.9 in 1996-97.

Figure 19: Separations with primary and secondary diagnosis of asthma, 1-4 yrs, ACT, 1992-97



Source: ACT Hospital Morbidity data, 1992-97

4.2.2.2 Diseases of the nervous system and sense organs

Otitis media is the most common condition responsible for hospital admissions in this group of diseases. The combined rates of suppurative and non suppurative otitis media were higher than the hospital admission rates for asthma as a principal diagnosis in 1996-97. Otitis media is a common cause of conductive hearing loss in children which can affect speech development in children.

Table 28: Hospital separations with principal diagnosis of diseases of the nervous system & sense organs, 1-4 yrs, ACT, 1994-97

| | 1995-96 | | | | 1996-97 | | | |
|--|---------|------------|-------|-------------|---------|------------|-------|-------------|
| | Male | Femal e | Total | Rate (a) | Male | Femal e | Total | Rate (b) |
| Non suppurative otitis media | 70 | 39 | 109 | 6.0 | 94 | 56 | 150 | 8.4 |
| Suppurative and unspecified otitis media | 63 | 33 | 96 | 5.3 | 62 | 33 | 95 | 5.3 |
| Disorder of the lacrimal system | 10 | 5 | 15 | 0.8 | 13 | 14 | 27 | 1.5 |
| Epilepsy | 14 | 11 | 25 | 1.4 | 14 | 10 | 24 | 1.3 |
| Other diseases of the nervous system and sense organs | 16 | 18 | 34 | 1.9 | 17 | 8 | 25 | 1.4 |
| Perforation of tympanic membrane | 13 | 5 | 18 | 1.0 | 17 | 3 | 20 | 1.1 |
| Infantile cerebral palsy | 2 | 0 | 2 | 0.1 | 0 | 0 | 0 | 0 |
| | 188 | 111 | 299 | 16.5 | 217 | 124 | 341 | 19.1 |

Source: ACT Hospital Morbidity data, 1994-97

(a) Age specific rate per 1000 of estimated population 30 June 1995, (b) Age specific rate per 1000 of estimated population 30 June96

4.2.2.3 Infectious and parasitic disease

The rate of infectious and parasitic diseases as the principal diagnosis of all hospital separations was 17.5 per 1,000 separations of children 1-4 years in 1996-97. Intestinal infectious disease was the main cause of hospital admission with rotavirus infections being the most common.

Figure 20: Hospital separations, principal diagnosis of infectious & parasitic disease, children 1-4 yrs, ACT, 1995-97

| | 1995-96 | | | 1996-97 | | |
|--|---------|--------|-------|---------|--------|-------|
| | Male | Female | Total | Male | Female | Total |
| Intestinal infectious disease | 129 | 96 | 225 | 119 | 107 | 226 |
| <i>Rotavirus</i> | 52 | 44 | 96 | 42 | 44 | 86 |
| Bacterial disease | 7 | 11 | 18 | 14 | 4 | 18 |
| <i>Mycobacterial disease</i> | 0 | 1 | 1 | 2 | 0 | 2 |
| <i>Streptococcal sore throat</i> | 1 | 2 | 3 | 2 | 0 | 2 |
| <i>Meningococcal infection</i> | 2 | 1 | 3 | 6 | 0 | 6 |
| <i>Septicaemia</i> | 2 | 4 | 6 | 3 | 3 | 6 |
| <i>Other bacterial disease</i> | 2 | 3 | 5 | 1 | 1 | 2 |
| Other disease due to virus and chlamydia | 7 | 9 | 16 | 38 | 30 | 68 |
| Total | 142 | 117 | 261 | 171 | 141 | 312 |

Source: ACT Hospital Morbidity data, 1995-97.

4.2.2.4 Accident and injury

The age specific rate for hospital separations with a principal diagnosis of accident and injury shows a decrease in 1996-97 to 10.3 per 1,000 persons from previous years. The change was primarily due to a decrease in the rate for males (refer Table 29). The decrease in rates for males over this period primarily occurred in surgical and medical procedures causing abnormal reaction or later complication, unspecified falls and adverse effects due to drugs, medicinals and biological substances in therapeutic use. Over the period 1994-97 males have shown a consistently higher rate of accident and injury than females.

Table 29: Hospital separation rates for principal diagnosis of accident & injury, children 1-4 years, by sex, ACT, 1994-97

| | 1994-95 | 1995-96 | 1996-97 |
|-------------------------------------|-------------|-------------|-------------|
| No. of males | 125 | 123 | 105 |
| No. of females | 82 | 87 | 79 |
| No. of persons | 207 | 210 | 184 |
| Rate male | 6.9(a) | 6.8(b) | 5.9(c) |
| Rate female | 4.5(a) | 4.8(b) | 4.4(c) |
| Total rate per 1,000 persons | 11.4 | 11.6 | 10.3 |

(a) Age specific rate per 1000 of estimated population 30 June 1994, (b) Age specific rate per 1000 of estimated population 30 June 95

(c) Age specific rate per 1000 of estimated population 30 June 96

Source: ACT Hospital Morbidity data, 1994-97.

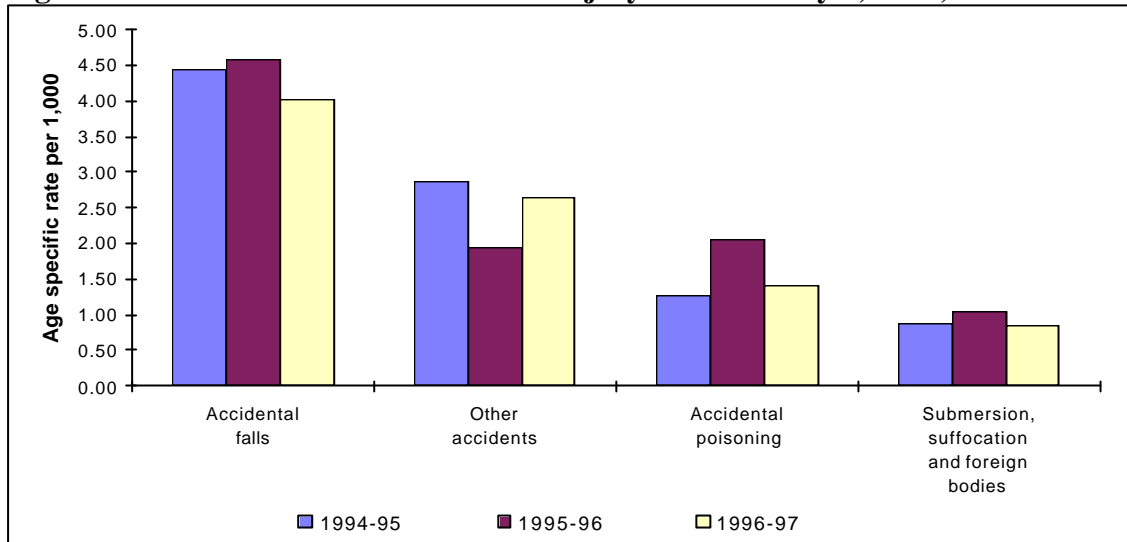
The percentage of children 1-4 years, hospitalised with a principal diagnosis of accident and injury for 1996-97 was 8.7 percent. Major reasons for hospitalisation were fractures and open wounds.

Table 30: Estimated no. of hospital separations for principal diagnosis of injury or poisoning, 1-4 years, by sex, ACT, 1996-97

| Principal diagnosis of injury or poisoning | Male no. | Female no. | Total no. | % |
|---|------------|------------|------------|-------------|
| Fractures | 29 | 24 | 53 | 28.8 |
| <i>Fracture of skull</i> | 2 | | 2 | |
| <i>Fracture of upper limb-humerus</i> | 5 | 8 | 13 | |
| <i>Fracture of upper limb-radius and ulna</i> | 17 | 16 | 33 | |
| <i>Fracture of upper limb-phalanges of hand</i> | 1 | | 1 | |
| <i>Fracture of lower limb</i> | 4 | | 4 | |
| Open wound | 30 | 22 | 52 | 28.3 |
| <i>Open wound of head, neck and trunk</i> | 14 | 17 | 31 | |
| <i>Open wound of upper limb</i> | 16 | 5 | 21 | |
| Poisoning by drugs medicinal and biological substances | 12 | 7 | 19 | 10.3 |
| Intracranial/internal injury | 6 | 9 | 15 | 8.2 |
| <i>Concussion</i> | 3 | 4 | 7 | |
| <i>Intracranial injury</i> | 2 | 5 | 7 | |
| <i>Internal injury of chest, abdomen and pelvis</i> | 1 | | 1 | |
| Effects of foreign bodies entering through orifice | 6 | 6 | 12 | 6.5 |
| Burns | 6 | 1 | 7 | 3.8 |
| Other unspecified effects of external causes | 6 | 1 | 7 | 3.8 |
| <i>-Drowning and non fatal submersion</i> | 2 | | 2 | |
| <i>-Asphyxiation and strangulation</i> | 1 | | 1 | |
| <i>-Electrocution and non fatal effects of electric current</i> | 1 | 1 | 2 | |
| <i>-Child maltreatment syndrome</i> | 1 | | 1 | |
| <i>-Anaphylactic shock due to adverse food reaction</i> | 1 | | 1 | |
| Toxic effects of substances non medical as to source | 2 | 3 | 5 | 2.7 |
| Complications of surgical and medical care | 2 | 2 | 4 | 2.2 |
| Crushing injury | 2 | 1 | 3 | 1.6 |
| Certain traumatic complications and unspecified injuries | 2 | 1 | 3 | 1.6 |
| Superficial injury | 1 | | 1 | 0.5 |
| Contusion with intact skin surface | | 1 | 1 | 0.5 |
| Injury to nerve and spinal cord | 1 | | 1 | 0.5 |
| Total | 105 | 79 | 184 | 100 |

Source: ACT Hospital Morbidity data, 1996-97.

Figure 21: External causes of accident & injury children 1-4 yrs, ACT, 1994-97



Source: ACT Hospital Morbidity data, 1994-97

Figure 21 shows that the hospital admission rates for the 1-4 age group were highest for falls over the 1994-97 period. During the 1996-97 period the major type of fall was unspecified, followed by falls from one level to another, particularly playground equipment, chairs and beds. Males were only slightly more likely to have an injury due to a fall (54 percent) than females (46 percent). Males were more likely to have an injury due to other causes (64 percent) than females (36 percent). The main types of accidents in this classification were due to being caught between two objects, injury due to blunt or piercing objects, burns and injuries due to electric currents.

Table 31: Estimated no. of hospital separations for selected external causes of injury or poisoning children 1-4 yrs, by sex, ACT, 1996-97

| | Male No. | Female No. | Total No. persons | Rate(a) |
|---|-------------|---------------|----------------------|-------------|
| Accidental falls | 39 | 33 | 72 | 4.03 |
| <i>Fall from stairs or steps</i> | 0 | 3 | 3 | 0.17 |
| <i>Fall from playground equipment</i> | 8 | 6 | 14 | 0.78 |
| <i>Fall from chair</i> | 7 | 5 | 12 | 0.67 |
| <i>Fall from bed</i> | 5 | 6 | 11 | 0.62 |
| <i>Fall from trampoline</i> | 1 | 0 | 1 | 0.06 |
| <i>Fall from one level to another</i> | 4 | 3 | 7 | 0.39 |
| <i>Other unspecified fall</i> | 11 | 9 | 20 | 1.12 |
| Other accidents | 30 | 17 | 47 | 2.63 |
| <i>Caught accidentally in or between objects</i> | 13 | 4 | 17 | 0.95 |
| <i>Cutting or piercing instruments</i> | 4 | 8 | 12 | 0.67 |
| <i>Hot liquid and vapour</i> | 5 | 1 | 6 | 0.34 |
| <i>Electric current</i> | 1 | 1 | 2 | 0.11 |
| Accidental poisoning | 14 | 11 | 25 | 1.40 |
| Accidental caused by submersion, suffocation and foreign bodies | 9 | 6 | 15 | 0.84 |
| <i>Drowning and submersion while in swimming pool</i> | 2 | 0 | 2 | 0.11 |
| <i>Inhalation, ingestion of object causing obstruction or suffocation</i> | 1 | 1 | 2 | 0.11 |
| <i>Accidental mechanical suffocation</i> | 1 | 0 | 1 | 0.06 |
| <i>Foreign body accidentally entering body</i> | 5 | 5 | 10 | 0.56 |
| Accidents due to natural and environmental factors | 3 | 3 | 6 | 0.34 |
| <i>Dog bites</i> | 2 | 3 | 5 | 0.28 |
| Motor vehicle accidents | 2 | 3 | 5 | 0.28 |
| Other vehicle accidents | 2 | 3 | 5 | 0.28 |
| <i>Pedal cycle accident</i> | 2 | 3 | 5 | 0.28 |
| Surgical and medical procedures | 3 | 2 | 5 | 0.28 |
| Adverse effects in therapeutic use drugs, medicinals, biologicals | 2 | 0 | 2 | 0.11 |
| Injury inflicted by self or other person | 1 | 1 | 2 | 0.11 |
| Accidents caused by fire and flames | 0 | 0 | 0 | 0.00 |

(a) Age specific rate per 1000 of estimated population 30 June 1996

Source: ACT Hospital Morbidity data, 1996-97

4.2.2.5 Diabetes

Hospital morbidity data is a poor indicator of the level of diabetes in the community. Most cases of hospital admissions were due to insulin dependant diabetes.

Table 32: Diabetes related hospital separations, 1-4 yrs, ACT, 1991-1997

| | 1991-93 | | | 1993-95 | | | 1995-97 | | |
|------------------------------|----------|----------|----------|-----------|----------|-----------|----------|----------|-----------|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| NIDDM | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 |
| IDDM | 5 | 4 | 9 | 15 | 7 | 22 | 6 | 7 | 13 |
| Total of all diabetes | 5 | 4 | 9 | 17 | 7 | 22 | 6 | 7 | 13 |

Source: ACT Hospital Morbidity data, 1996-97.

4.2.2.6 Mental disorders

Mental disorders as classified in the ICD-9 classification system become evident from about 18 months of age with delays in development and language disorders. Disorders of the preschool years tend to be related to the autism spectrum disorders and elimination disorders.²⁹

Table 33: Hospital separations (no.) with principal diagnosis of mental disorder, 1-4 yrs, ACT, 1993-97

| | 1993-94 | | 1994-95 | | 1995-96 | | 1996-97 | | Total |
|----------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| | Male | Female | Male | Female | Male | Female | Male | Female | |
| Infantile autism | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| Antisocial personality disorder | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Stereotyped repetitive movements | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| Encopresis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Disturbance of conduct | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| Specific delays in development | 1 | 2 | 0 | 1 | 4 | 0 | 0 | 0 | 8 |
| Unspecified mental retardation | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Total | 2 | 3 | 0 | 4 | 4 | 0 | 2 | 3 | 18 |

Source: ACT Hospital Morbidity data, 1993-97.

Specific delays in development were the most common disorders identified in this age group in the ACT in 1993-97.



5. Children aged 5 - 9 years

Children in these early primary school years undergo physical, cognitive and social development. They are becoming more independent and are subject to the peer pressures of school. Problems associated with the emotional and personality development of the child become evident. As children become more independent, adventurous and physical, the rate of accident and injury increases and the number of sports related injuries start to emerge.

5.1 Mortality

In the 4 year period 1993-96 there was a total of 11 deaths in the ACT in the 5-9 years group (73 % male, 27 % female). In 1996 the lowest age specific death rates in the Australian population were experienced in the 5-14 year males (2 deaths /10,000 population) and females (1 / 10,000).³⁰

The ACT experienced age specific death rates of 2 per 10,000 population for males and females respectively in 1996. The ACT recorded the highest age specific death rate for females in this age group compared to national rates, however due to the very low numbers of deaths the accuracy of this figure needs to be questioned.

Table 34: Causes of death of children 5-9 yrs, ACT, 1993-96

| | Male No. | Female No. | Total No. | Percent % |
|--|-------------|---------------|--------------|--------------|
| Accident and Injury | 2 | 2 | 4 | 36 |
| <i>Motor vehicle traffic accident</i> | 0 | 2 | 2 | |
| <i>Accidents caused by fire and flames</i> | 1 | 0 | 1 | |
| <i>Accidental drowning and submersion in swimming pool or quenching tank</i> | 1 | 0 | 1 | |
| Neoplasms | 3 | 1 | 4 | 36 |
| <i>Malignant neoplasm of the kidney</i> | 0 | 1 | 1 | |
| <i>Acute lymphoid leukaemia</i> | 1 | 0 | 1 | |
| <i>Malignant neoplasm of connective and other soft tissue</i> | 1 | 0 | 1 | |
| <i>Malignant neoplasm of the brain</i> | 1 | 0 | 1 | |
| Endocrine,nutritional, metabolic, immunity | 1 | | 1 | 9 |
| Nervous system and sense organs | 1 | | 1 | 9 |
| Blood and blood- forming organs | 1 | | 1 | 9 |
| TOTAL | 8 | 3 | 11 | 100 |

Source:ABS unpublished data, *Causes of Death ACT, 1993-1996*

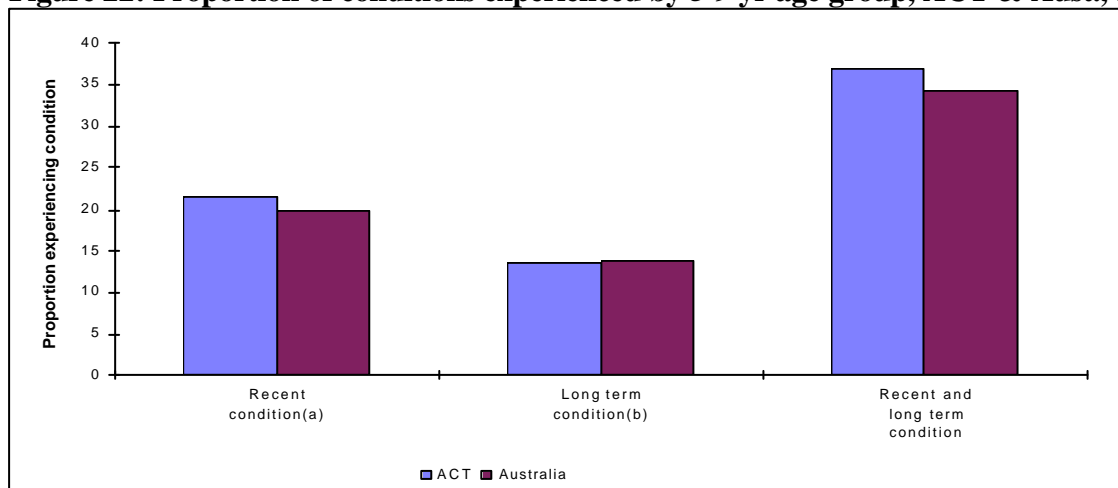
Owing to the very small number of child deaths in the 5-9 year age group for the ACT, a detailed analysis of the levels and trends in cause specific child death rates has not been attempted. Accident and injury and neoplasms were the main causes of death for 5-9 year olds in the ACT.

5.2 Morbidity

5.2.1 National health survey

328 children in the 5-9 year group were surveyed in the ACT. Overall 28 percent of them had experienced no recent or long term medical conditions. 22 percent had experienced a recent condition and 37 percent both recent and long term conditions³¹.

Ten percent of children were reported as having an accident or incident as the cause of their condition. 37 percent of the accidents occurred within the home and 33 percent outside of the home. 30 percent of accidents were as a result of a fall and 18 percent as a result of hitting something. The main injuries which were the result of an accident were bruising and crushing, fractures, dislocations and open wounds.

Figure 22: Proportion of conditions experienced by 5-9 yr age group, ACT & Aust., 1995

(a) Condition experienced in the previous 2 weeks, (b) Condition lasting or will last for 6 months or more.

Source: *National Health Survey, 1995*, ABS

Table 35: Whether reported recent illness in 2 weeks prior to interview by most commonly reported condition, 5-9 yrs, ACT & Aust., 1995

| Type of recent condition | Males | | Females | |
|--|---------|----------|---------|----------|
| | ACT (%) | Aust (%) | ACT (%) | Aust (%) |
| Cough, cold, influenza | 14.6 | 14.6 | 17.6 | 16.3 |
| Asthma | 11.2 | 11.0 | 8.4 | 9.5 |
| Injuries | 8.6 | 6.6 | 7.1 | 6.0 |
| Headache | 7.7 | 3.2 | 4.2 | 4.3 |
| Other diseases of the respiratory system | 3.4 | 3.2 | 4.6 | 2.8 |
| Other infectious and parasitic diseases | 3.1 | 2.5 | 3.9 | 2.9 |
| Otitis media | 2.2 | 2.2 | 4.3 | 2.0 |
| Diarrhoea, enteritis | 3.1 | 1.1 | 2.9 | 0.9 |
| Other symptoms, signs and ill defined conditions | 2.3 | 1.8 | 3.7 | 1.8 |
| Eczema, dermatitis | **0.6 | 2.0 | 4.5 | 3.1 |
| Dental problems | 2.9 | 3.4 | 2.7 | 4.4 |
| Other mental disorders | 3.8 | 1.8 | **0.0 | 0.4 |

** Due to low numbers, data may be unreliable Note: Persons may report more than one long-term condition, therefore components do not add to totals

Source: ABS, National Health Survey 1995, confidentialised unit record file (weighted estimates)

Respiratory disease including asthma is the principal cause of recent and long term conditions reported, in the ACT and Australia. Children in the ACT reported more recent eyesight problems and diarrhoea/enteritis than Australians in general, but fewer dental problems.

Table 36: Whether reported long term condition by most commonly reported conditions by sex, 5-9 yrs, ACT & Aust., 1995

| Type of long-term condition | Males | | Females | |
|--|---------|----------|---------|----------|
| | ACT (%) | Aust (%) | ACT (%) | Aust (%) |
| Asthma | 20.5 | 21.3 | 13.8 | 17.0 |
| Eye/sight problems | 17.2 | 8.2 | 12.2 | 8.8 |
| Hayfever | 9.0 | 7.4 | 7.7 | 5.9 |
| Allergies not elsewhere classified | 6.8 | 6.2 | 7.9 | 6.7 |
| Ear/hearing problems | 6.0 | 5.5 | 6.8 | 3.5 |
| Sinusitis | 7.9 | 3.9 | 3.2 | 3.4 |
| Eczema, dermatitis | **1.2 | 3.2 | 6.7 | 4.4 |
| Speech impediment not elsewhere classified | 5.2 | 3.2 | **0.0 | 1.1 |
| Other mental disorders | 4.4 | 2.3 | **0.0 | 0.4 |
| Mental retardation, specific delays in development | 3.7 | 3.2 | **0.4 | 1.6 |
| Emotional problems not elsewhere classified | 3.3 | 2.4 | **0.0 | 1.0 |

** Due to low numbers, data may be unreliable Note: Persons may report more than one long-term condition, therefore components do not add to totals

Source: ABS, National Health Survey 1995, confidentialised unit record file (weighted estimates)

ACT children in the 5-9 age group reported more long term eye/sight problems and hayfever and ACT males were reported to have more mental disorders and speech impediments (not elsewhere classified) than their Australian counterparts. Indications of mental disorders begin to emerge in this age group.

Once again medications used generally reflect the pattern of illness. Children between 5-9 years appear to take more medications than the national average for this age group. Comparisons should be treated with caution due to the low sample size.

Table 37: Whether took any type of medication in the 2 weeks prior to interview (%) by type of medication by sex, 5-9 yrs, ACT & Aust., 1995

| Type of medication | Males | | Females | |
|---|--------------|--------------|--------------|--------------|
| | ACT (%) | Aust (%) | ACT (%) | Aust (%) |
| Used vitamin/mineral supplements | 21.7 | 19.1 | 16.7 | 19.5 |
| Used herbal or natural medications | 5.2 | 4.7 | 5.5 | 4.0 |
| Used other medication- | | | | |
| <i>Pain relievers</i> | 13.7 | 8.8 | 17.4 | 9.7 |
| <i>Medication for cough/colds</i> | 10.3 | 10.4 | 13.7 | 10.9 |
| <i>Asthma medications</i> | 9.8 | 10.3 | 8.4 | 8.7 |
| <i>Skin ointments/creams</i> | 7.3 | 6.9 | 9.7 | 8.5 |
| <i>Medications for allergies</i> | 2.8 | 1.9 | 2.1 | 2.1 |
| <i>Stomach medications</i> | 1.7 | 0.3 | 2.4 | 0.6 |
| <i>Tranquillisers or sedatives not included above</i> | 0.8 | 0.2 | 0.6 | 0.0 |
| <i>Laxatives</i> | 0.4 | 0.7 | 0.0 | 0.3 |
| <i>None of the above</i> | 14.5 | 9.1 | 9.9 | 8.9 |
| Total who used other medications | 43.5 | 37.8 | 43.8 | 39.4 |
| Total who used medications (b) | 52.2 | 48.9 | 52.0 | 50.1 |
| Total who did not use medications | 47.8 | 51.1 | 48.0 | 49.9 |
| TOTAL RESPONDENTS | 100.0 | 100.0 | 100.0 | 100.0 |

(a) Medication as reported by respondent

(b) Persons may have reported using more than one type of medication, therefore components do not add to totals

Source: ABS, *National Health Survey 1995*, confidentialised unit record file (weighted estimates)

As for the 0-4 year age group the survey shows that children in the ACT tend to take more medications than the national average, in particular pain relievers.

5.2.1.1 Eye and sight conditions

Children aged 5-9 years who were reported as having no problems with their sight represented 84 percent of those surveyed. Ten percent of children between the ages of 5-9 years reported wearing glasses (6% male and 4% female), another 4 percent had trouble with their sight. Two percent of answers indicated they didn't know. One percent of males were reported as being colourblind.

5.2.1.2 Dental conditions

Twenty two percent of children in this group had never had a dental consultation and 67 percent had had a consultation within 6 months of the survey.

Table 38: Type of dental service at last consultation, 5-9 yrs, ACT, 1995

| Type of service at last consult | Number of children | Percentage of total |
|---------------------------------|--------------------|---------------------|
| X ray | 3 | 1% |
| Fillings | 6 | 1.8% |
| Checkup | 24 | 7.3% |
| Other dental treatment | 3 | 1% |

Source: *National Health Survey, 1995*, ABS

5.2.2 Hospital morbidity data

In 1996-97 there were 1,405 (60% male and 40% female) ACT hospital separations for children in the 5-9 year age group. The hospital separation rate for 5-9 year olds in 1996-97 was 63.3 which is approximately half the rate of 116.2 for 1-4 year olds. This represented an overall decrease in rate of all conditions with the exception of accident and injury and diseases of the digestive system.

Table 39: Age specific hospital separation rates, 1-9 yrs, ACT, 1996-97

| | 1-4 years | 5-9 years |
|--|-----------|-----------|
| Diseases of the respiratory system | 30.7 | 14.0 |
| Diseases of the nervous system and sense | 19.1 | 10.8 |
| Infectious and parasitic diseases | 17.5 | 3.6 |
| Accident, injury and poisoning | 10.3 | 10.8 |
| Diseases of the digestive system | 8.8 | 7.1 |

Rates expressed as per 1,000 population

Source: ACT Hospital Morbidity data, 1996-97.

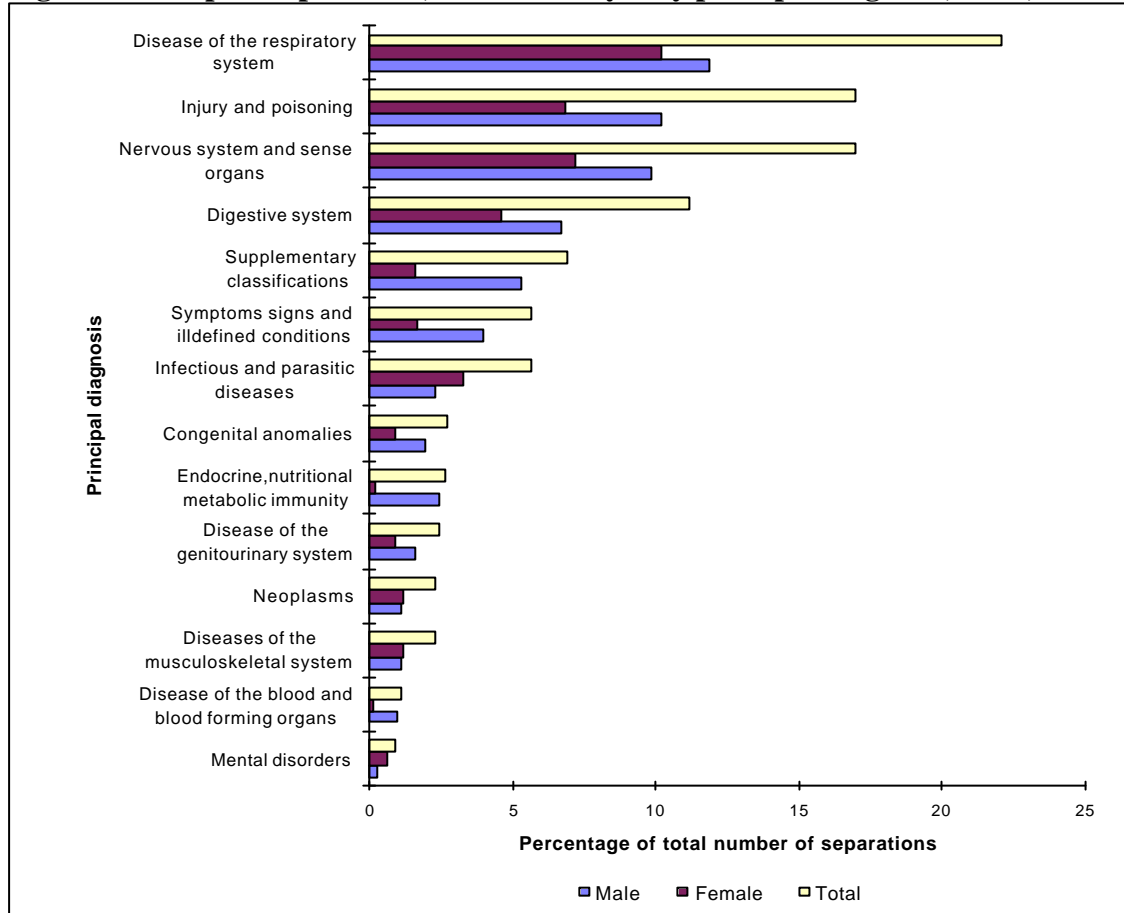
Figure 23: Age specific hospital separation rates by sex, 5-9 yrs, ACT, 1994-97



Rates expressed as per 1,000 population

Source: ACT Hospital Morbidity data, 1994-97

Figure 24: Hospital separations, children 5-9 yrs by principal diagnosis, ACT, 1996-97



Source: ACT Hospital Morbidity data, 1996-97

Disease of the respiratory system was the most common principal diagnosis of hospital separations in the 5-9 year age group, followed by injury and poisoning, nervous system and sense organs and diseases of the digestive system (refer Figure 24).

5.2.2.1 Diseases of the respiratory system

Hospital morbidity data indicate that chronic disease of tonsils and adenoids is the main cause for hospitalisation in the 5-9 age group, followed by asthma. The reverse is true for 1-4 year olds. Table 40 breaks down the major causes of respiratory disease.

Table 40: Hospital separations for children with principal diagnosis of respiratory disease, 5-9 years, ACT, 1994-97

| | 1995-96 | | | | 1996-97 | | | |
|--|-------------|------------|--------------|-------------|-------------|------------|--------------|-------------|
| | Male no. | Fem no. | Total no. | Rate (a) | Male no. | Fem no. | Total no. | Rate (b) |
| Chronic disease of tonsils and adenoids | 64 | 53 | 117 | 5.3 | 79 | 81 | 160 | 7.2 |
| Chronic obstructive pulmonary disease-Asthma | 45 | 38 | 83 | 3.8 | 40 | 22 | 62 | 2.8 |
| Acute respiratory infections | 18 | 12 | 30 | 1.4 | 23 | 19 | 42 | 1.9 |
| Pneumonia and influenza | 16 | 6 | 22 | 1.0 | 18 | 14 | 32 | 1.4 |
| Sinusitis | | | 0 | 0.0 | | 2 | 2 | 0.1 |
| Other disease of upper respiratory tract | 8 | 3 | 11 | 0.5 | 1 | 2 | 3 | 0.1 |
| Other respiratory disease | 4 | 8 | 12 | 0.5 | 4 | 3 | 7 | 0.3 |
| Total | 155 | 120 | 275 | 12.5 | 165 | 143 | 308 | 13.9 |

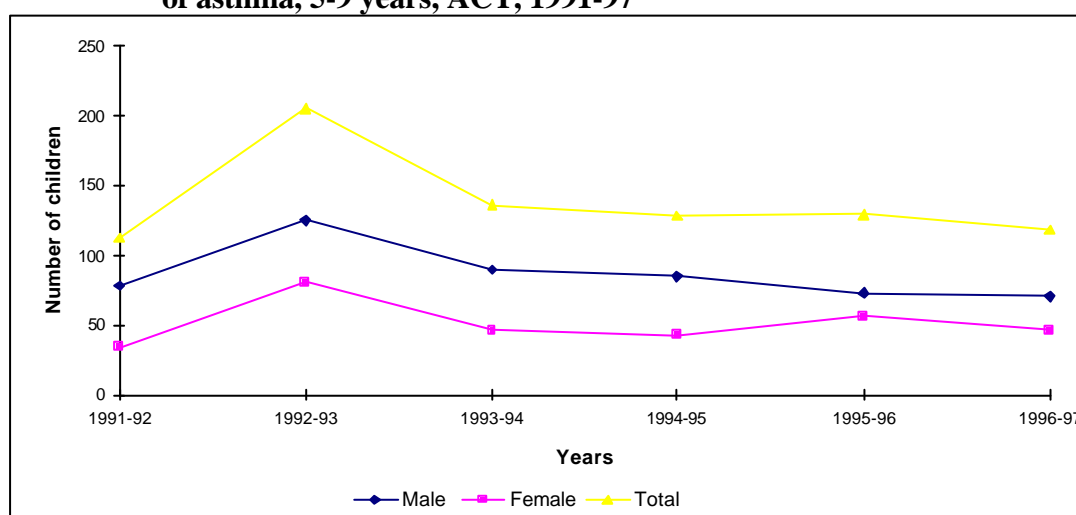
(a) Age specific rate per 1,000 of ABS estimated population 30th June 1995

(b) Age specific rate per 1,000 of ABS estimated population 30th June 1996

Source: ACT Hospital Morbidity data, 1994-97

In 1996-97, asthma has declined to the lowest number recorded since 1992-93. Males have consistently shown larger numbers for respiratory disease than females over the 1991-97 period.

Figure 25: Hospital separations of children with primary and secondary diagnosis of asthma, 5-9 years, ACT, 1991-97



Source: ACT Hospital Morbidity data, 1991-97

5.2.2.2 Diseases of the nervous system and sense organs

Otitis media has lower rates in this age group than in the 1-4 year age group, however still represents a significant cause of morbidity. Lower rates of epilepsy are evident in the 5-9 year olds.

Table 41: Hospital separations for children with principal diagnosis of disease of nervous system & sense organs, 5-9 years, ACT, 1995-97

| | 1995-96 | | | | 1996-97 | | | |
|---|------------|-----------|------------|------------|------------|------------|------------|-------------|
| | Male | F/m | Total | Rate(a) | Male | F/m | Total | Rate(b) |
| Non suppurative otitis media and eustachian tube disorder | 46 | 29 | 75 | 3.4 | 66 | 40 | 106 | 4.8 |
| Suppurative and unspecified otitis media | 16 | 15 | 31 | 1.4 | 30 | 26 | 56 | 2.5 |
| Disorder of tympanic membrane | 17 | 13 | 30 | 1.4 | 22 | 12 | 34 | 1.5 |
| Epilepsy | 10 | 9 | 19 | 0.9 | 3 | 12 | 15 | 0.7 |
| Other diseases of ear and mastoid process | 4 | 0 | 4 | 0.2 | 7 | 2 | 9 | 0.4 |
| Other diseases, nervous system & sense rgans | 13 | 6 | 19 | 0.9 | 10 | 8 | 18 | 0.8 |
| Totals | 106 | 72 | 178 | 8.1 | 138 | 100 | 238 | 10.7 |

(a)Age specific rate per 1,000 of ABS estimated population 30th June 1995

(b)Age specific rate per 1,000 of ABS estimated population 30th June 1996

Source: ACT Hospital Morbidity data, 1995-97

5.2.2.3 Accident and injury

Rates for accident and injury show little difference between the 1-4 year and 5-9 year age groups. Males consistently show higher rates than females.

Table 42: Hospital separation data for principal diagnosis of accident & injury, by sex, 5-9 years, ACT, 1994-97

| | 1994-95 | 1995-96 | 1996-97 |
|-------------------------------------|------------|-------------|-------------|
| No. of males | 116 | 137 | 144 |
| No. of females | 93 | 102 | 95 |
| No. of persons | 209 | 239 | 239 |
| Rate male | 5.3(a) | 6.2(b) | 6.5(c) |
| Rate female | 4.2(a) | 4.7(b) | 4.3(c) |
| Total rate per 1,000 persons | 9.5 | 10.9 | 10.8 |

(a)Age specific rate per 1,000 of ABS estimated population 30th June 1994

(b)Age specific rate per 1,000 of ABS estimated population 30th June 1995

(c)Age specific rate per 1,000 of ABS estimated population 30th June 1996

Source: ACT Hospital Morbidity data, 1994-97

Seventeen percent of children hospitalised in this age group had a principal diagnosis of accident and injury for 1996-97. Table 43 shows that the major reason for hospitalisation was fractures, in particular fractures of the radius and ulna. Intracranial and internal injury was the second most common condition for hospitalisation.

Table 43: Estimated no. of hospital separations for principal diagnosis of injury or poisoning by sex, 5-9 yrs, ACT, 1996-97

| | Male | Female | Total | % of total |
|---|-------------|---------------|--------------|-------------------|
| Fractures | 96 | 51 | 147 | 61.5 |
| <i>Fracture of skull</i> | 5 | 1 | 6 | |
| <i>Fracture of upper limb-</i> | 88 | 45 | 133 | |
| <i>Fracture of lower limb</i> | 3 | 5 | 8 | |
| Intracranial/internal injury | 16 | 9 | 25 | 10.5 |
| <i>Concussion</i> | 7 | 4 | 11 | |
| <i>Intracranial injury</i> | 6 | 5 | 11 | |
| <i>Internal injury of chest, abdomen and pelvis</i> | 3 | 0 | 3 | |
| Open wound | 11 | 10 | 21 | 8.8 |
| <i>Open wound of head, neck and trunk</i> | 5 | 3 | 8 | |
| <i>Open wound of upper & lower limbs</i> | 6 | 7 | 13 | |
| Complications of surgical and medical care | 6 | 6 | 12 | 5.0 |
| Contusion with intact skin surface | 2 | 6 | 8 | 3.3 |
| Superficial injury | 5 | 2 | 7 | 2.9 |
| Poisoning by drugs medicinal and biological substances | 3 | 4 | 7 | 2.9 |
| Effects of foreign bodies entering through orifice | 2 | 5 | 7 | 2.9 |
| Certain traumatic complications and unspecified injuries | 3 | 1 | 4 | 1.7 |
| Burns | 1 | 0 | 1 | 0.4 |
| Dislocation | 1 | 0 | 1 | 0.4 |
| Total | 144 | 95 | 239 | 100 |

Source: ACT Hospital Morbidity data, 1996-97

Rates for accidental falls as external cause of accident and injury are approximately three times higher than any other cause between 1994-97. Falls from playground equipment occurred at a rate of 2.2 per 1,000 children aged 5-9 in 1996-97, and this represented a drop from the 1995-96 rate of 2.8. Children in this age group are beginning to participate in sport and this is reflected in the number of sport related falls emerging, in particular falls due to skateboarding and rollerblading. Accidents involving other vehicles, in particular pedal cycle accidents, had consistently higher rates over 1994-97 than other external causes of accident and injury.

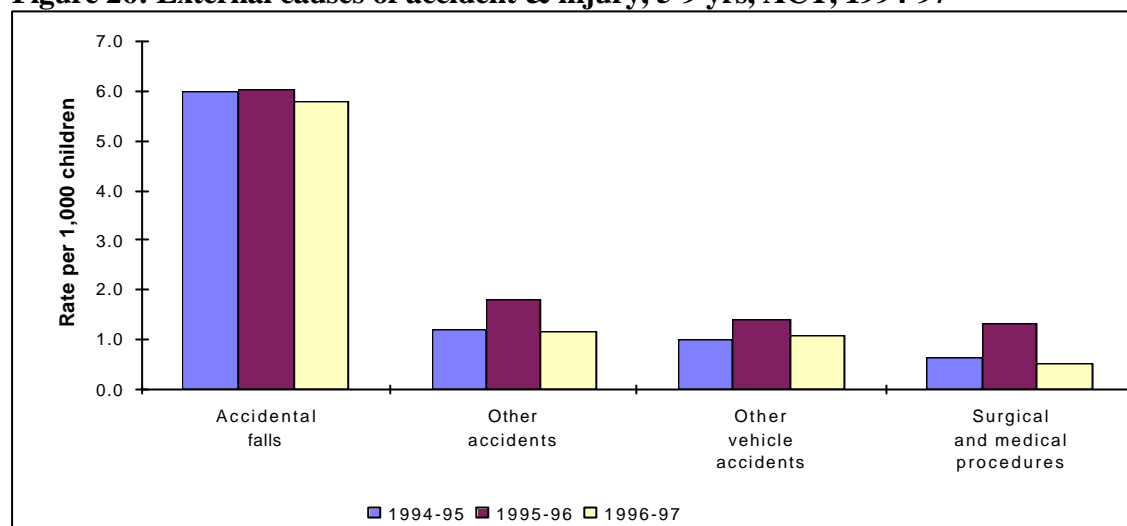
Table 44: Estimated no. of hospital separations, external causes of injury or poisoning, 5-9 yrs, ACT, 1996-97

| | No. Male | No. Female | Total no. | Rate(a) |
|---|-----------|------------|------------|------------|
| Accidental falls | 85 | 43 | 128 | 5.8 |
| <i>Fall from stairs or steps</i> | 1 | 1 | 2 | 0.1 |
| <i>Fall from playground equipment</i> | 28 | 21 | 49 | 2.2 |
| <i>Fall from chair</i> | 3 | 2 | 5 | 0.2 |
| <i>Fall from tree</i> | 9 | 0 | 9 | 0.4 |
| <i>Fall from bed</i> | 3 | 1 | 4 | 0.2 |
| <i>Fall from trampoline</i> | 3 | 2 | 5 | 0.2 |
| <i>Fall from one level to another</i> | 8 | 6 | 14 | 0.6 |
| <i>Fall on same level from tripping, slipping, stumbling</i> | 12 | 4 | 16 | 0.7 |
| <i>Other unspecified fall</i> | 11 | 0 | 11 | 0.5 |
| <i>Falls from sport:</i> | 7 | 6 | 13 | 0.6 |
| <i>Football rugby</i> | 1 | 0 | | |
| <i>Basketball</i> | 1 | 0 | | |
| <i>Netball</i> | 0 | 1 | | |
| <i>Rollerblading/skateboarding</i> | 4 | 5 | | |
| <i>other</i> | 1 | 0 | | |
| Other vehicle accidents | 16 | 8 | 24 | 1.1 |
| <i>Pedal cycle accident</i> | 12 | 6 | 18 | 0.8 |
| Motor vehicle accidents | 6 | 7 | 13 | 0.6 |
| Surgical and medical procedures | 6 | 6 | 12 | 0.5 |
| Accidental caused by submersion, suffocation and foreign bodies | 3 | 5 | 8 | 0.4 |
| <i>Accidental drowning and submersion</i> | 0 | 0 | 0 | 0 |
| <i>Inhalation and ingestion of object causing obstruction of respiratory tract or suffocation</i> | 0 | 0 | 0 | 0 |
| <i>Foreign body accidentally entering body</i> | 3 | 5 | 8 | 0.4 |
| Accidents due to natural and environmental factors | 4 | 3 | 7 | 0.3 |
| <i>Dog bites</i> | 2 | 1 | 3 | 0.1 |
| Accidental poisoning | 2 | 3 | 5 | 0.2 |
| Injury inflicted by self or other person | 1 | 1 | 2 | 0.1 |
| Accidents caused by fire and flames | 0 | 0 | 0 | 0 |
| Other accidents | 14 | 12 | 26 | 1.2 |
| <i>Caught accidentally in or between objects</i> | 1 | 4 | 5 | 0.2 |
| <i>Caused by cutting or piercing instruments</i> | 3 | 4 | 7 | 0.3 |
| <i>Striking against or struck accidentally by object or person</i> | 5 | 2 | 7 | 0.3 |
| <i>Overexertion and strenuous movements</i> | 1 | 0 | 1 | 0.05 |
| <i>Other accidents</i> | 4 | 2 | 6 | 0.3 |

(a) Age specific rate per 1,000 of ABS estimated population 30th June 1996

Source: ACT Hospital Morbidity data, 1994-97

Figure 26: External causes of accident & injury, 5-9 yrs, ACT, 1994-97



Age specific rate per 1,000 of ABS estimated population 30th June 1994,95,96
Source: ACT Hospital Morbidity data, 1994-97

5.2.2.4 Diseases of the digestive system

Diseases of the digestive system have become more apparent with this age group and were responsible for 11.2 percent of all hospital separations in 1996-97. Diseases of the oral cavity, salivary glands and jaws were a major cause of digestive system problems and showed an increase over the 1994-97 period. Diseases of the hard tissues of the teeth and dental caries were the main reason for these high rates. Constipation was a major factor attributing to the rates of other diseases of the intestine and peritoneum.

Table 45: Diseases of the digestive system, 5-9 yrs, ACT, 1994-97

| | 1994-95 | | | | 1995-96 | | | | 1996-97 | | | |
|---|-----------|-----------|------------|------------|-----------|-----------|------------|------------|-----------|-----------|------------|------------|
| | Male no. | Fem no. | Total no. | Rate (a) | Male no. | Fem no. | Total no. | Rate (b) | Male no. | Fem no. | Total no. | Rate (c) |
| Diseases of the oral cavity, salivary glands and jaws | 29 | 22 | 51 | 2.3 | 30 | 30 | 60 | 2.7 | 44 | 32 | 76 | 3.4 |
| Hernia of abdominal cavity | 13 | 12 | 25 | 1.1 | 14 | 8 | 22 | 1.0 | 19 | 12 | 31 | 1.4 |
| Appendicitis | 12 | 7 | 19 | 0.9 | 12 | 3 | 15 | 0.7 | 12 | 9 | 21 | 0.9 |
| Other disease of intestine and peritoneum | 13 | 5 | 18 | 0.8 | 5 | 6 | 11 | 0.5 | 14 | 6 | 20 | 0.9 |
| Disease of esophagus stomach and duodenum | 5 | 2 | 7 | 0.3 | 1 | 9 | 10 | 0.5 | 3 | 5 | 8 | 0.4 |
| Noninfectious enteritis and colitis | 16 | 11 | 27 | 1.2 | 6 | 2 | 8 | 0.4 | 2 | 0 | 2 | 0.1 |
| Total | 88 | 59 | 147 | 6.7 | 68 | 58 | 126 | 5.7 | 94 | 64 | 158 | 7.1 |

(a) Age specific rate per 1,000 of ABS estimated population 1994

(b) Age specific rate per 1,000 of ABS estimated population 1995

(c) Age specific rate per 1,000 of ABS estimated population 1996

Source: ACT Hospital Morbidity data, 1994-97

5.2.2.5 Diabetes

Table 46 shows hospital separations with diabetes as primary or secondary diagnosis. Note that most cases were insulin dependant diabetes indicating only the more severe cases are reflected.

Table 46: Diabetes related hospital separations, 5-9 yrs, ACT, 1991-97

| | 1991-93 | | | 1993-95 | | | 1995-97 | | |
|------------------------------|----------|----------|----------|-----------|----------|-----------|----------|----------|-----------|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| NIDDM | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 |
| IDDM | 5 | 4 | 9 | 15 | 7 | 22 | 6 | 7 | 13 |
| Total of all diabetes | 5 | 4 | 9 | 17 | 7 | 24 | 6 | 7 | 13 |

Source: Hospital morbidity data 1991-97

5.2.2.6 Mental health

Children in the 5-9 year age group showed a higher age specific rate of mental illness (0.58 per 1,000 children) than children in the 1-4 year age group (0.28 per 1,000 children) for 1996-97 with male and female equally affected. These rates are based on hospital separation data with principal diagnosis of mental illness and should be interpreted with caution due to low numbers. A number of mental illnesses will manifest in these early primary school years and include attention deficit hyperactivity disorder, opposition defiant disorder, Tourette disorder, anxiety disorders and conduct disorders. Disorders that begin during these early years can continue on to adult life.

Table 47: Hospital separations with principal diagnosis of mental illness, 5-9 yrs, ACT, 1993-97

| | 1993-94 | | 1994-95 | | 1995-96 | | 1996-97 | | Total |
|--------------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|
| | Male | Fem | Male | Fem | Male | Fem | Male | Fem | |
| Total | 3 | 1 | 9 | 9 | 8 | 3 | 3 | 10 | 46 |

Source: ACT Hospital Morbidity data, 1993-97.

5.2.3 The Child Dental Health Survey, 1995

This survey is part of an annual series providing descriptive data on child dental health in the ACT. Data was collected during the 1995 calendar year from patients of the ACT School Dental Service. Untreated caries in the combined deciduous and permanent dentitions existed for between 31 and 24 percent of children in the range 5 to 9 years. The greatest likelihood of untreated decay existed for 7 year olds. The most extensive levels of decay occurred in the younger groups, suggesting the greatest contribution of decay comes from the deciduous teeth. More than 99 percent of children had no deciduous or permanent teeth missing due to caries. Smaller percentages avoided fillings and this declined among older ages. The pattern of caries reflects a decrease in the percentage of caries in 1995 from 1994.³²



6. Ten to fourteen year olds

The following chapter has been broken into 3 components. The first is an overview of the health of 10-14 year olds using National Health Survey data. The second examines hospital morbidity and mortality data of 10-11 year olds and the third is similar to the second except it is for 12-14 year olds. It was not possible to break down the data from the Survey into smaller age groups.

6.1 National health survey

From Table 48 it can be seen that a larger proportion of 10-14 year old girls (57.5%) than boys (55.1%) had taken medication in the two weeks prior to interview. This pattern is true for Australia in general also. However, a lesser percentage of Australian males and females of this age group had used medication in the previous two weeks (45.7% males, 51.0% females). Approximately 1.4 times as many ACT girls than boys of this age group had taken pain relieving medication while about 1.8 times as many ACT boys than girls had used asthma medications. Over half of the respondents had taken some kind of medication in the two weeks prior to interview.

Table 48: Whether took any type of medication in the 2 weeks prior to interview (%) by type of medication by sex, 10-14 yrs, ACT & Australia, 1995

| Type of Medication (a) | Males | | Females | |
|---|--------------|--------------|--------------|--------------|
| | ACT (%) | Aust (%) | ACT (%) | Aust (%) |
| Used vitamin/mineral supplements | 16.4 | 16.0 | 14.4 | 17.0 |
| Used herbal or natural medications | 3.9 | 3.5 | 4.3 | 4.1 |
| Used other medication- | | | | |
| <i>Pain relievers</i> | 18.6 | 13.6 | 25.9 | 19.0 |
| <i>Asthma medications</i> | 13.9 | 10.3 | 7.6 | 8.9 |
| <i>Skin ointments/creams</i> | 11.4 | 6.0 | 12.0 | 8.5 |
| <i>Medication for cough/colds</i> | 6.6 | 6.9 | 11.0 | 6.6 |
| <i>Medications for allergies</i> | 2.3 | 2.6 | 1.9 | 2.1 |
| <i>Tranquillisers or sedatives not included above</i> | **1.2 | 0.4 | **0.0 | **0.0 |
| <i>Stomach medications</i> | **1.0 | 0.6 | **0.6 | 0.4 |
| <i>Medication for diabetes</i> | **0.4 | **0.1 | **0.0 | 0.2 |
| <i>Medications for anxiety/nervous tension/depression</i> | **0.0 | 0.2 | **1.0 | **0.0 |
| <i>None of the above</i> | 7.3 | 7.2 | 8.3 | 7.1 |
| Total who used other medications | 46.1 | 36.9 | 51.4 | 42.0 |
| Total who used medications (b) | 55.1 | 45.7 | 57.5 | 51.0 |
| Total who did not use medications | 44.9 | 54.3 | 42.5 | 49.0 |
| TOTAL RESPONDENTS | 100.0 | 100.0 | 100.0 | 100.0 |

** Due to low numbers, data may be unreliable (a) Medication as reported by respondent

(b) Persons may have reported using more than one type of medication, therefore components do not add to totals

Source: ABS, National Health Survey 1995, confidentialised unit record file (weighted estimates)

The most common recent illness recorded for ACT females was cough, cold or influenza (16.4%) followed by headache (16.2%). This compared with 11.7 percent and 10.7 percent respectively for Australian females of this age group. For ACT males, the most common recent illness was headache (14.5%) followed by asthma (13.4%). Australian males of this age group were less likely to report these conditions, with 8.0 percent reporting a headache and 10.8 percent reporting asthma in the two weeks prior to interview. Adolescent girls at this age are beginning to have period pain and other disorders of menstruation with approximately 4.0 percent of ACT females and 2.2 percent of Australian females reporting this condition.

Table 49: Reported recent illness in the 2 weeks prior to interview by most commonly reported conditions by sex, 10-14 yrs, ACT & Australia, 1995

| Type of recent condition | Males | | Females | |
|--|---------|----------|---------|----------|
| | ACT (%) | Aust (%) | ACT (%) | Aust (%) |
| Headache | 14.5 | 8.0 | 16.2 | 10.7 |
| Cough, cold, influenza | 10.9 | 10.9 | 16.4 | 11.7 |
| Asthma | 13.4 | 10.8 | 8.5 | 9.1 |
| Injuries | 11.0 | 7.5 | 5.7 | 6.2 |
| Dental problems | 6.3 | 5.8 | 10.3 | 8.0 |
| Hayfever | 5.9 | 2.5 | 4.5 | 2.1 |
| Other musculoskeletal system and connective tissue | 2.9 | 2.2 | 5.1 | 2.2 |
| Disorders of menstruation | - | - | 4.0 | 2.2 |
| Other diseases of the skin and subcutaneous tissue | 3.3 | 2.0 | 3.3 | 2.8 |

Note: Persons may have reported more than one long-term condition, therefore components do not add to totals

Source: ABS, National Health Survey 1995, confidentialised unit record file (weighted estimates)

Table 50 shows a considerable proportion of ACT 10-14 year olds have eye or sight problems (21.1% of males, 23.5% of females). Again, there were less Australian 10-14 year olds who reported eye or sight problems as a long term condition (16.1% males, 20.8% females). Although most sight problems can be treated effectively with glasses, left untreated, such problems could have obvious consequences for learning difficulties. It is important that sight problems are identified in early childhood. Asthma also is quite a significant ailment for this age group, especially for boys.

Table 50: Whether reported long-term condition by most commonly reported conditions by sex, 10 to 14 yrs, ACT & Australia, 1995

| Type of long-term condition | Males | | Females | |
|----------------------------------|---------|----------|---------|----------|
| | ACT (%) | Aust (%) | ACT (%) | Aust (%) |
| Eye/sight problems | 21.3 | 16.1 | 23.5 | 20.8 |
| Asthma | 24.3 | 20.3 | 15.9 | 17.0 |
| Hayfever | 21.1 | 11.6 | 12.7 | 10.0 |
| Allergy not elsewhere classified | 13.2 | 5.6 | 7.6 | 6.3 |
| Sinusitis | 11.5 | 6.4 | 6.3 | 5.2 |
| Ear/hearing problems | 3.6 | 2.3 | 3.9 | 2.9 |
| Eczema, dermatitis | **1.5 | 1.6 | 4.2 | 2.6 |
| Bronchitis/emphysema | 3.9 | 2.2 | **1.0 | 2.2 |

** Due to low numbers, data is likely to be unreliable

Note: Persons may have reported more than one long-term condition, therefore components do not add to totals

Source: ABS, National Health Survey 1995, confidentialised unit record file (weighted estimates)

6.2 The last years of primary school: 10 and 11 year olds

Children of this age are generally in years 5 and 6 at primary school. This age is generally recognised as being the final years of childhood before moving into adolescence as most children would not yet have begun the physical transitions of puberty.

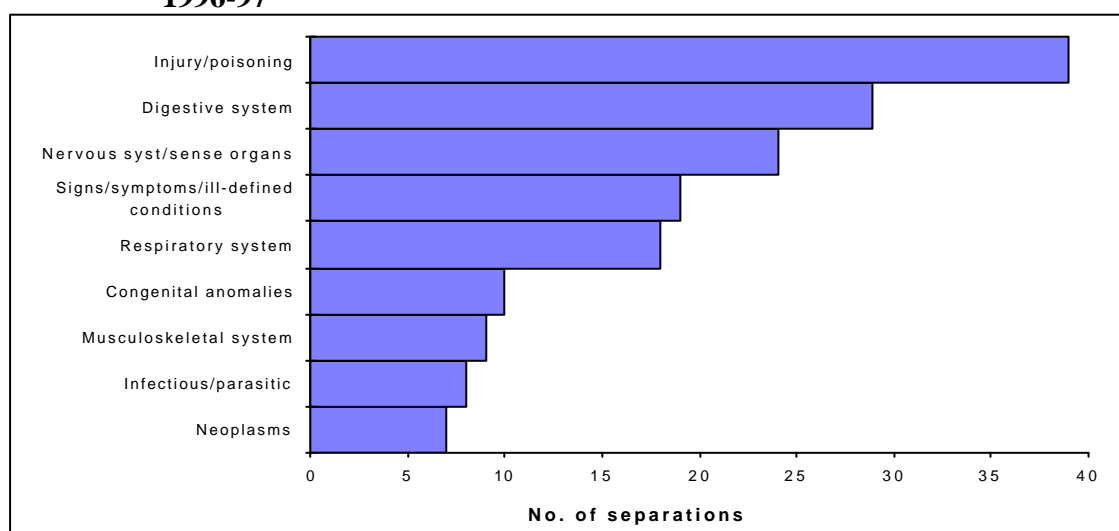
6.2.1 Mortality

The patterns of mortality for 10 and 11 year olds are quite similar to those of 5 to 9 year olds in both the causes and the number of deaths. During the four years from 1993 to 1996 there have been very few deaths of 10 and 11 year olds in the ACT. There were 2 female and 2 male deaths during this time. Of these, 2 were of passengers in motor vehicle accidents and 2 were from malignant neoplasms (leukemia and malignant neoplasm of the brain stem). This age group is generally too young for the types of causes of death for the older age groups in this publication, such as suicide, drug overdoses, and motor vehicle traffic accidents. Additionally, most children who have lived to this age have largely survived through the types of childhood illnesses which could cause death.

6.2.2 Morbidity

Between July 1996 and June 1997 there were 382 persons (197 males, 185 females) aged 10 to 11 who were separated from hospital. The following figures show the major categories of medical conditions causing hospital separations for both males and females in this age group.

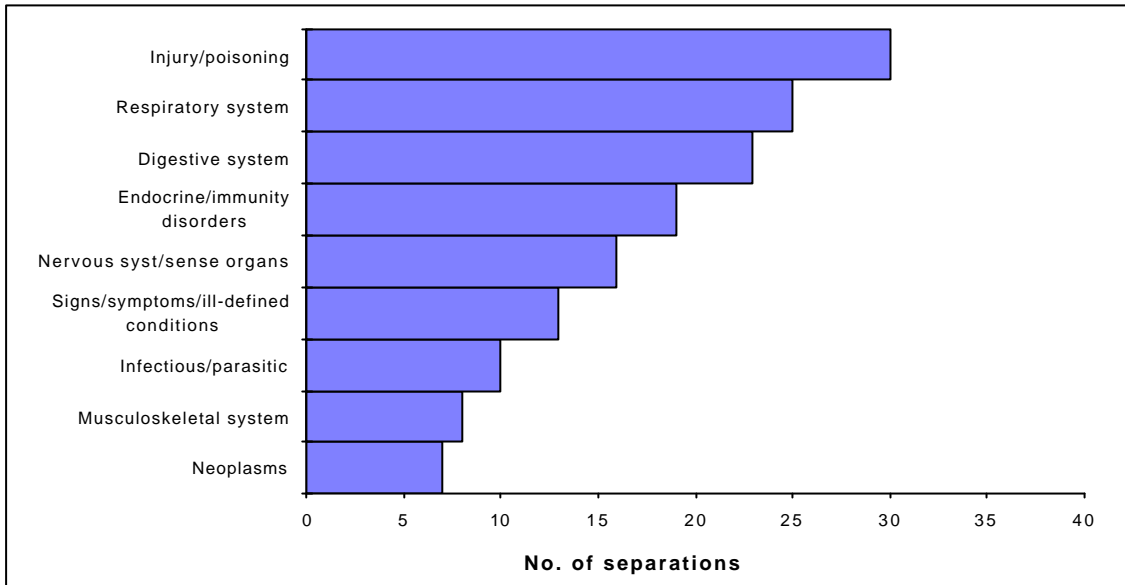
Figure 27: Major causes of hospital separations, males, 10-11 yrs, ACT residents, 1996-97



Source: ACT Hospital Morbidity Data, 1996-97

By this age group, reasons for hospital separations have changed from those of the 5-9 year group. For instance, injury and poisoning is only the second major cause of hospital separations for males and the third for females in the 5-9 year group while by the age of 10 and 11, injury and poisoning is the major cause of hospital separations for both males and females (refer Figure 24, Figure 27 and Figure 28).

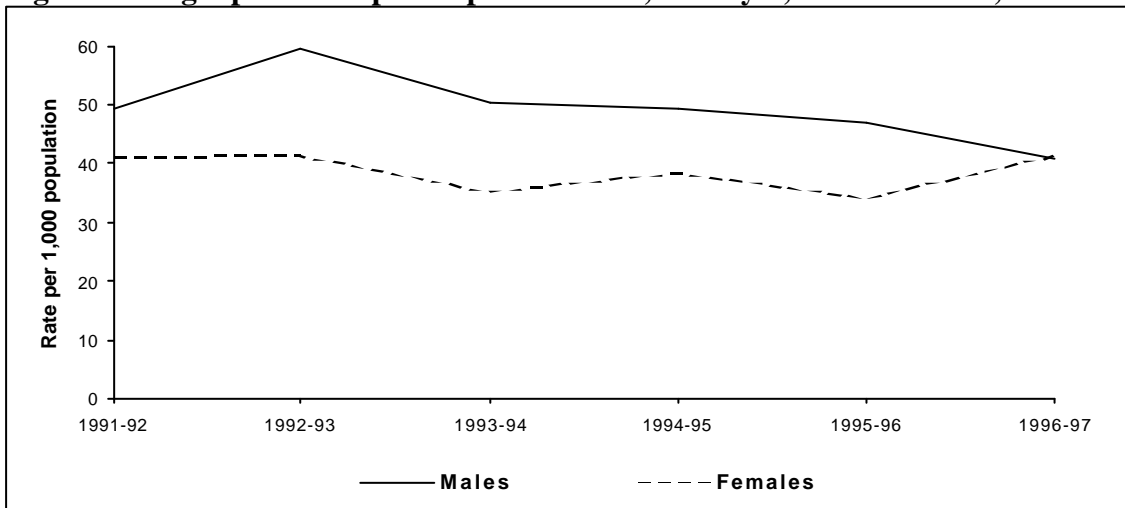
Figure 28: Major causes of hospital separations, females, 10-11 yrs, ACT residents, 1996-97



Source: ACT Hospital Morbidity Data, 1996-97

Hospital separation rates for 10 and 11 year olds have been declining for males since 1992-93. Female rates however have fluctuated over the years from 1991-92 to 1996-97. Of concern is that from 1995-96 to 1996-97, female separation rates increased from 34.3 per 1,000 to 41.4 per 1,000. Male separation rates have been consistently higher than females except for 1996-97 where female separations were approximately the same as males (40.8 separations per 1,000 population).

Figure 29: Age specific hospital separation rate, 10-11 yrs, ACT residents, 1991-97



*Age specific hospital separation rates per 1,000 population.

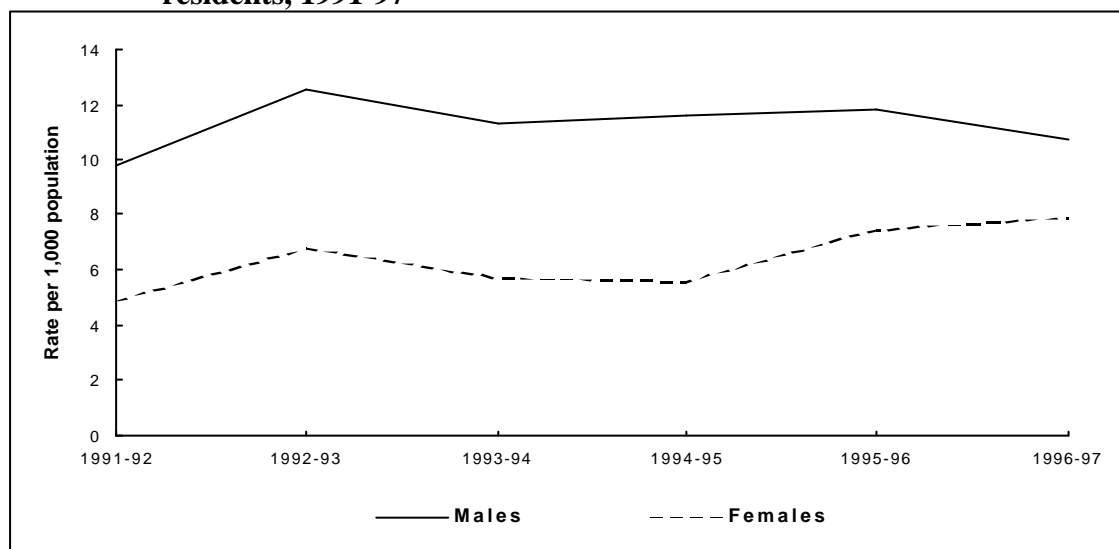
Note: Excludes supplementary classifications.

Source: ACT Hospital Morbidity Data, 1991-92 to 1996-97, ABS Estimated resident population at 30 June, 1991 to 1996

6.2.2.1 External cause of injury and poisoning

External causes of injury and poisoning were the major cause of hospital separations for both males (48) and females (33) in 1996-97. Male separations for external causes have remained stable over the years 1991-92 to 1996-97. Although female rates are lower than males, hospital separations due to external causes of injury are increasing to meet male rates (see Figure 30). For example, in 1991-92, males were hospitalised at twice the rate of females, but by 1996-97, they were hospitalised at 1.4 times the rate of females. On average, males were hospitalised approximately 1.8 times the rate of females between the years 1991-92 and 1996-97.

Figure 30: Hospital separations due to injury & poisoning by sex, 10-11 yrs, ACT residents, 1991-97



Note: Age specific hospital separation rates per 1,000 population.

Source: ACT Hospital Morbidity Data, 1991-92 to 1996-97

ABS Estimated resident population at 30 June, 1991 to 1996

The major cause within this category in 1996-97 was accidental falls (16 male, 10 female separations). These consisted of falls from playground equipment (7 male, 4 female), falls from trampolines (2 male, 2 female) and other falls including a fall from a tree, building or slipping or tripping on the same level. Sporting injuries also rated high with 10 male and 5 female separations. Roller blading, skating or skateboarding caused the most separations (5 male, 3 female). Other sports causing these separations included rugby league or union, soccer and other unspecified sporting activities.

As can be seen in Table 51, cyclists have been the main victims of traffic and non-traffic accidents between 1991-92 and 1996-97. This is followed by skateboarders and rollerbladers. It is interesting to note that the number of such accidents for females have been steadily increasing over these years while the number of hospital separations of males has fluctuated with no such discernible trend.

Other injuries and poisonings were due to abnormal reactions or complications of surgical operations and procedures (6 male, 3 female), accidents caused by suffocation and foreign bodies (1 male, 2 female) and other accidents.

Table 51: Traffic and non-traffic accidents profile by sex, 10 & 11 years, ACT residents 1991-97

| | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | Total |
|-----------------------------|----------|----------|-----------|-----------|-----------|-----------|-----------|
| Males | | | | | | | |
| Pedal cyclist | 4 | 1 | 8 | 7 | 4 | 5 | 29 |
| Pedestrian | 0 | 1 | 1 | 0 | 1 | 1 | 4 |
| Rollerblader / skateboarder | 4 | 2 | 1 | 7 | 4 | 5 | 23 |
| Passenger | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| Other | 1 | 1 | 4 | 1 | 4 | 0 | 11 |
| Total | 9 | 6 | 15 | 15 | 13 | 11 | 69 |
| Females | | | | | | | |
| Pedal cyclist | 0 | 2 | 3 | 5 | 3 | 5 | 18 |
| Pedestrian | 1 | 0 | 0 | 1 | 2 | 1 | 5 |
| Rollerblader / skateboarder | 1 | 2 | 2 | 1 | 3 | 3 | 12 |
| Passenger | 1 | 1 | 0 | 0 | 0 | 2 | 4 |
| Other | 3 | 1 | 4 | 1 | 2 | 1 | 12 |
| Total | 6 | 6 | 9 | 8 | 10 | 12 | 51 |

Source: ACT Hospital Morbidity Data, 1991-92 to 1996-97

6.2.2.2 Respiratory system

Diseases of the respiratory system were the second major cause of hospital separations for females (25 separations) and the fifth for males (18 separations). Among these separations, diseases of the upper respiratory tract rated quite high (8 males, 13 females). Such disorders included chronic tonsillitis (5 male, 9 female), hypertrophy of the tonsils and/or adenoids, and sinusitis.

Asthma caused 5 male and 8 female separations of 10 and 11 year olds in 1996-97.

Figure 31 shows that hospital separation rates for a primary and secondary diagnosis of asthma have remained fairly steady between 1991-92 and 1996-97 for males and have increased since 1994-95 for females. The rate of hospitalisation for males has been consistently higher since 1991-92. This is consistent with the overall hospitalisation rate for this age group where males are generally hospitalised at a greater rate than females.

Figure 31: Primary & secondary diagnosis of asthma, 10-11 yrs, by sex, ACT residents, 1991-97



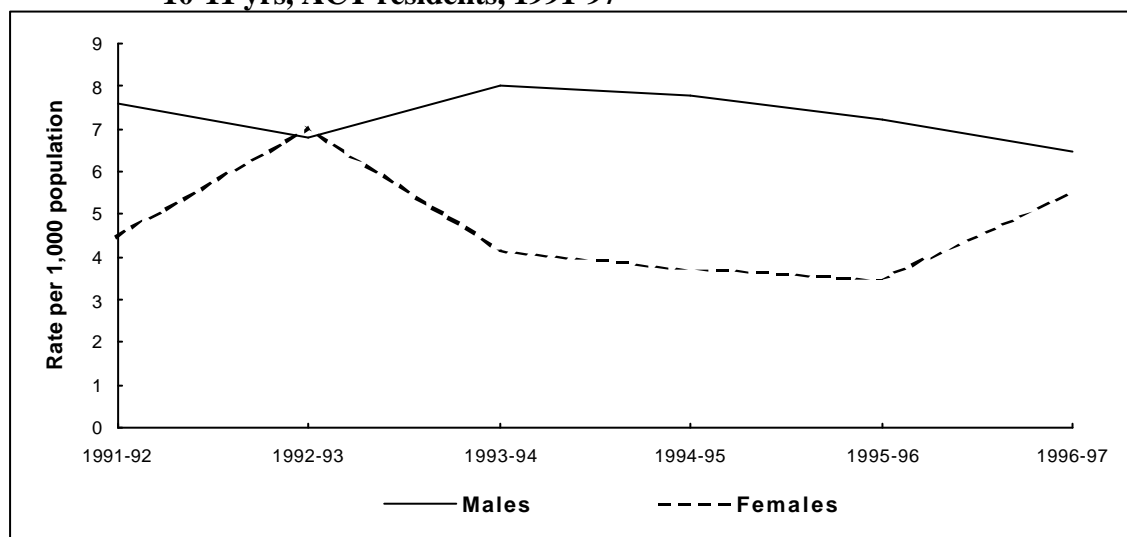
Note: Age specific hospital separation rates per 1,000 population.

Source: ACT Hospital Morbidity Data, 1991-92 to 1996-97, ABS Estimated resident population at 30 June, 1991 to 1996

6.2.2.3 Digestive system

In 1996-97, diseases of the digestive system were the second major cause of hospital separations for males (29) and the third for females (23). Although some of the problems would be quite serious if left untreated (such as appendicitis), most of the hospital visits of 10 and 11 year olds who were there for diseases of the digestive system were not serious, or once treated did not cause ongoing health problems. Appendicitis was the reason behind 15 of these separations (6 males, 9 females). Diseases of the oral cavity, salivary glands and jaws also rated quite high as causes of separations. Such diseases included disorders of tooth development and eruption (2 males, 6 females), cysts of the soft tissues, and dental caries. Inguinal hernias were the cause of 6 male and 1 female separation. Other problems relating to the digestive system included constipation, gastritis and gastroduodenitis, colostomy and enterostomy malfunction, gastro and colitis, and persistent vomiting.

Figure 32: Hospital separation rate for diseases of the digestive system by sex, 10-11 yrs, ACT residents, 1991-97



Note: Age specific hospital separation rates per 1,000 population.

Source: ACT Hospital Morbidity Data, 1991-92 to 1996-97

ABS Estimated resident population at 30 June, 1991 to 1996

6.2.2.4 Nervous system and sense organs

Diseases of the nervous system and sense organs were the third major cause of hospital separations for males (24 separations) and the fifth for females (16 separations) in 1996-97. Disorders and diseases of the ears were the major problems within this category (15 male, 8 female separations). Such problems included middle ear infections (10 males, 6 females) and perforation of the eardrum (3 males, 3 females). Epilepsy was the second major reason behind hospital separations (5 males, 3 females). Those hospitalised for this reason stayed an average of 1.7 days. Finally, problems with the eyes including pterygiums, chalazions, and esotropia (cross-eyes) caused 4 male and 3 female separations. Other problems included reflex sympathetic dystrophy and migraine.

6.2.2.5 Symptoms, signs and ill-defined conditions

This was the fourth major cause of hospital separations for males and the sixth for females. There were 19 male and 13 female hospital separations during the year 1996-97 for this cause. Most of these hospital separations were due to abdominal pain (12 male, 6 female).

6.3 The Junior High School years: 12 to 14 year olds

Young people of this age group have moved from primary into high school, bringing with them the stress that such a change brings. Many will also have begun the physical changes into adulthood.

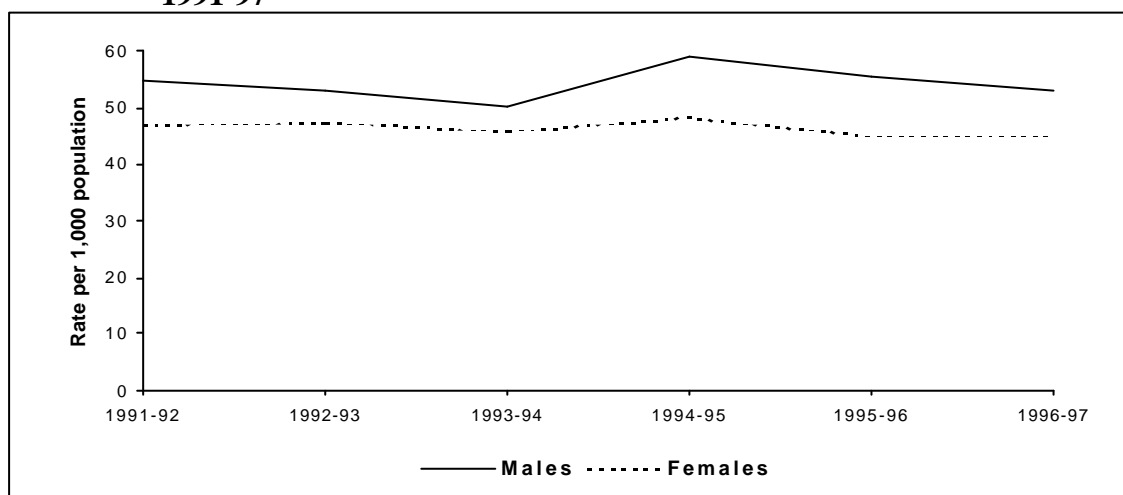
6.3.1 Mortality

Like the 5-11 year olds, there were very few deaths of 12-14 year olds between 1993 and 1996. There were 5 male and 1 female death during this time. No discernible pattern emerged from the causes of death. Causes included cancer of connective and other soft tissue, diffuse cancer of the lymph node, intestinal obstruction, cerebral degeneration, congenital anomaly of the heart, and accidental suffocation. As for younger age groups, preventative initiatives for those causes are difficult to develop.

6.3.2 Morbidity

Apart from a rise in 1994-95 for both sexes, separation rates have remained fairly stable since 1991-92 (see Figure 33). Similar to the 10 and 11 year olds, male separation rates are generally higher than for females. Hospital separation rates for 12-14 year olds are consistently higher than those of 10-11 year olds. Between 1991-92 and 1996-97, separation rates were approximately 5 per 1,000 higher for males and 8 per 1,000 for females.

Figure 33: Hospital separation rate for all causes by sex, 12-14 yrs, ACT residents, 1991-97



Rates: Age specific hospital separation rates per 1,000 population.

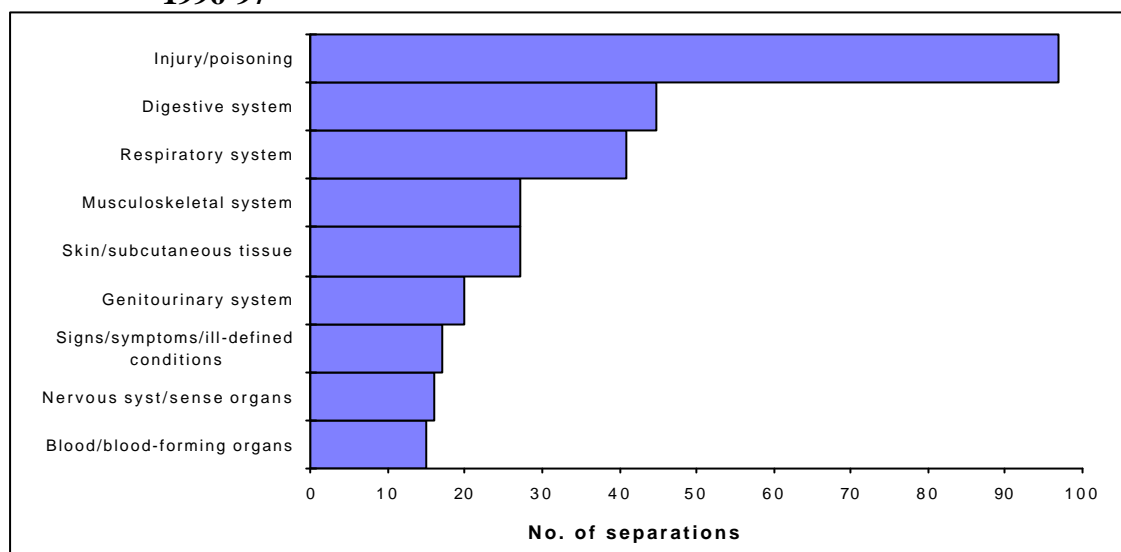
Note: Excludes supplementary classifications.

Source: ACT Hospital Morbidity Data, 1991-92 to 1996-97

In 1996-97 there were 682 hospital separations of 12 to 14 year olds (383 males, 299 females). The pattern of hospital separations is somewhat different for this age group than for the 10 and 11 year olds. For example, injury and poisoning is a far more significant cause of hospital separations for males in the 12 to 14 year age group than for the younger group of males (see, Figure 27,

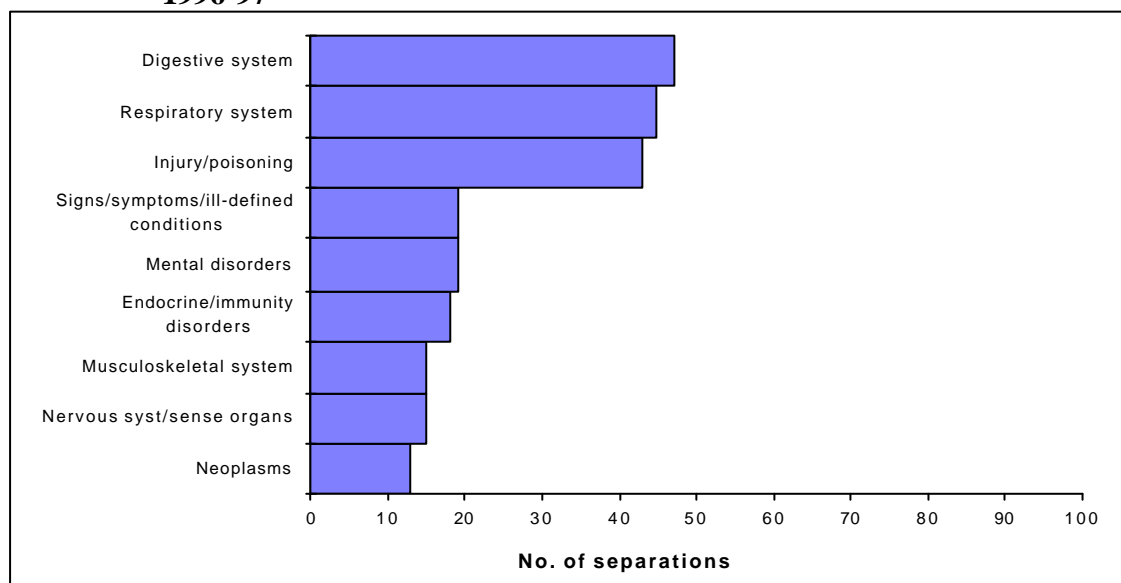
Figure 28, Figure 34 and Figure 35 for comparison).

Figure 34: Major causes of hospital separations, males, 12-14 yrs, ACT residents, 1996-97



Source: ACT Hospital Morbidity Data, 1996-97

Figure 35: Major causes of hospital separations, females, 12-14 yrs, ACT residents, 1996-97

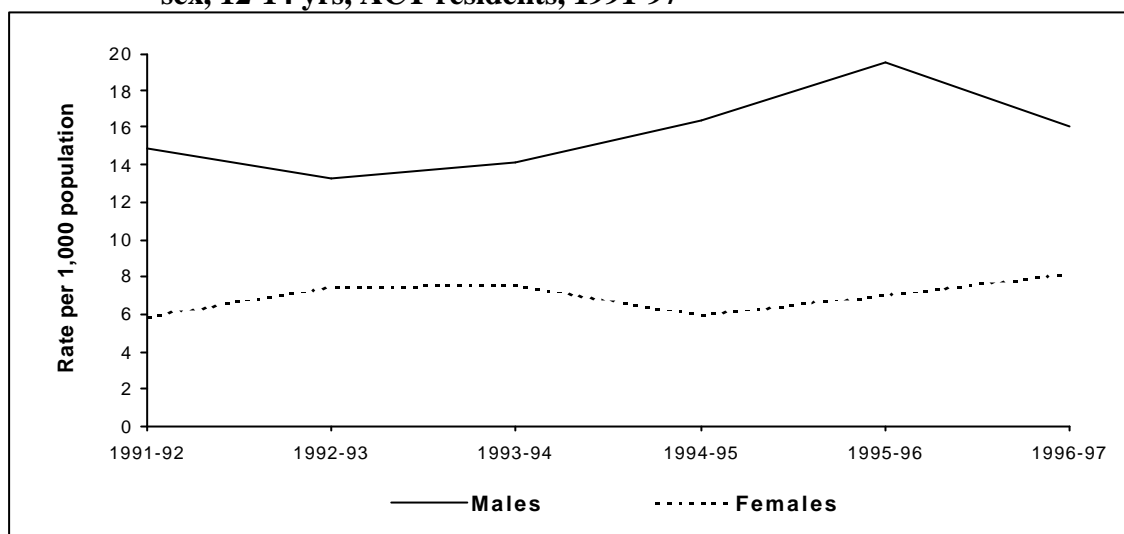


Source: ACT Hospital Morbidity Data, 1996-97

6.3.2.1 Injury and poisoning

Injury and poisoning was the major cause for males and the third major cause of hospital separations for females. In total there were 159 hospital separations caused by an external injury - twice as many boys as girls (107 males, 52 females). From July 1991 to June 1997, hospital separation rates due to external causes of injury and poisoning have been fairly stable for females although there has been a gradual increase since 1994-95. Male rates had been increasing since 1992-93 until the decline from 1995-96 to 1996-97 (see Figure 36).

Figure 36: Hospital separation rate for external cause of injury & poisoning, by sex, 12-14 yrs, ACT residents, 1991-97



Rate: Age specific hospital separation rates per 1,000 population.

Source: ACT Hospital Morbidity Data, 1991-92 to 1996-97

In 1996-97, the major cause of hospital separations within the external cause of injury category was accidental falls, with 38 hospital separations (26 males, 12 females). Sporting injuries caused 27 separations (22 males, 5 females,) and other accidents accounted for 26 separations (21 males, 5 females). Other road vehicle accidents were the fourth major cause of separations for males. Pedal cycle accidents accounted for 11 of the 15 accidents for males. In comparison, there was only one female separation caused by a pedal cycle accident. Of concern is that self inflicted injuries were the second major cause of hospital separations of females (11 females, 0 males being admitted).

6.3.2.2 Digestive system

Diseases of the digestive system were the second major cause for males and the major cause of hospital separations for females between July 1996 and June 1997 (45 males, 47 females). For 89 percent of females and 94 percent of males, these hospital separations involved a procedure of some kind. Within this category, disorders of tooth development and eruption (see glossary) were the major cause of hospital separations overall and for females (20) and the second major cause of hospital separations for males (9). Disturbances in tooth eruption accounted for most of these separations (7 males, 19 females) and all of these hospital visits involved an operation with 6 males and 17 females having one or more teeth extracted while the remainder (1 male, 2 females) simply had an erupting tooth exposed. Disturbance in tooth eruption for this age group - although not stated specifically in the ICD 9 codes - is most likely to be the eruption of wisdom teeth.

There were 14 male and 6 female hospital separations due to acute appendicitis with the majority of these being for acute appendicitis without mention of peritonitis (13 males, 5 females). Dentofacial anomalies, including malocclusion was the second major cause of hospital separation of females with 8 separations. This compared to 2 separations of males for the same ailment. The majority of the female separations (6) were due to major anomalies of jaw size.

6.3.2.3 Respiratory system

Diseases of the respiratory system were the second major cause of hospital separations of females (41) and the third for males (45 separations). The major problems within this category were chronic diseases of the tonsils and adenoids (12 males, 22 females), and asthma (13 males, 14 females).

6.3.2.4 Symptoms, signs, and ill-defined conditions

Symptoms, signs and ill-defined conditions were the fourth major cause of hospital separations for females and the seventh for males. There were 17 males and 19 females who were hospitalised for this cause, of whom 12 males and 16 females were hospitalised for abdominal pain. On average, those who were hospitalised with abdominal pain stayed 1.6 days.

6.3.2.5 Diabetes

In 1996-97, there were 12 hospital separations of 12-14 year olds due to diabetes and related conditions. These included both primary and secondary diagnosis. There were 11 male and one female separation. Not surprisingly, the majority of hospital separations of children in this age group were for insulin dependent diabetes mellitus. Of those with a primary diagnosis of a diabetes related condition, there were 1.75 per 10,000 population¹ (7 separations) males and 2.06 per 10,000 population (8 separations) females between July 1991 and June 1997, for uncontrolled insulin dependent diabetes mellitus.



7. The Senior High School and College years: 15 to 19 year olds

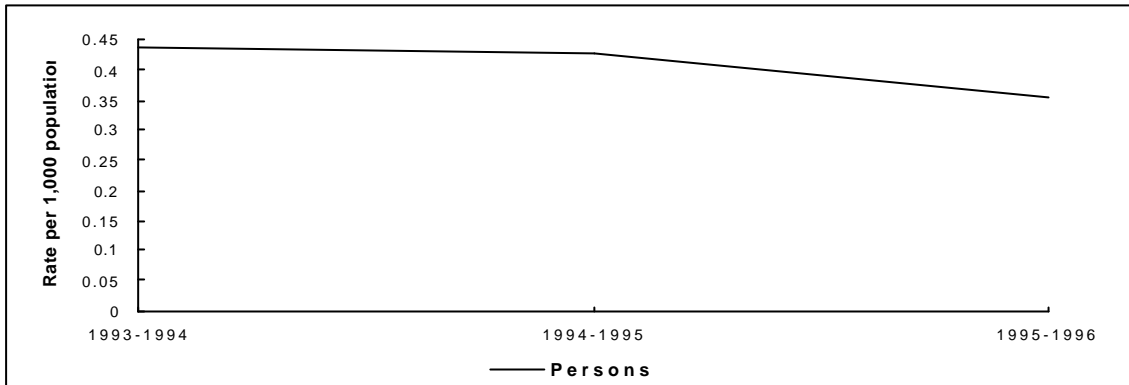
At ages 15-19 years, many young people will learn to drive and many will be successful at obtaining their driver's licence. Many will also start drinking alcohol and using other drugs. Such activities bring with them obvious risks such as drink driving, added risks of violence after drinking alcohol as well as being affected by the physical and psychological outcomes alcohol and other drugs can have. A number of young people will also become sexually active during these years exposing them to risks of sexually transmitted diseases and pregnancy.

7.1 Mortality

Between 1993 and 1996, the main cause of death for males in this age group was motor vehicle traffic accidents (9 deaths). This was followed by suicide with 5 deaths of young men. In all there were 28 deaths of young men. There were 11 deaths of young women of this age group between 1993 and 1996. The main cause of death were diseases of the nervous system and sense organs (3 deaths) followed by cancer (2 deaths) and accidental falls (2 deaths). However, because these numbers are small, it is difficult to draw conclusions as to the true major cause of death for females in this age group. Other causes of death for this age group included asthma, accidental falls, heroin poisoning, diabetes, cystic fibrosis. When two year running averages were used, it can be seen that there is small overall decline in the death rate of 15 to 19 year olds (see Figure 37).

¹ Calculated using average separation number between 1991-92 and 1996-97, then using 1994 12-14 year old population. Pop = 6662 males and 6471 females

Figure 37: Age specific mortality rate, 15-19 yrs, 2 year running averages, 1993-96, ACT residents.



Note: Calculations were made by using population and mortality averages between the specified years.

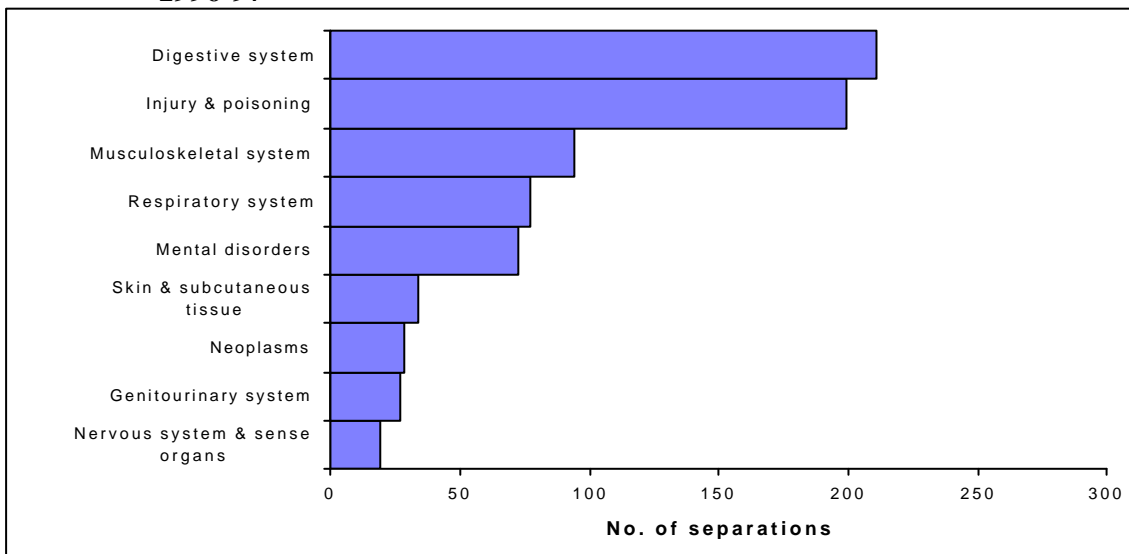
Source: *ABS Causes of death*, unpublished data, 1993 to 1996.

7.2 Morbidity

7.2.1 Hospital separations

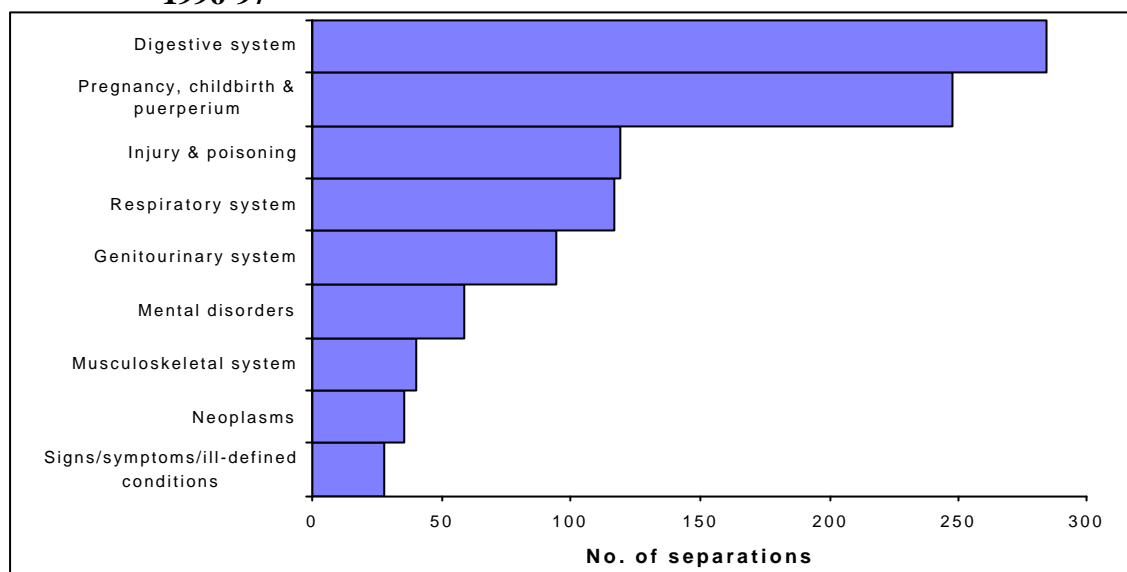
There were 2,386 hospital separations of ACT residents between the ages of 15 and 19 in 1996-97 (1090 males, 1278 females). At this age, the patterns of morbidity are quite different when comparing the primary diagnosis of males and females. For instance, the third major cause of hospital separations for males is diseases of the musculoskeletal system and subcutaneous tissue while for females this cause is only the seventh major cause (see Figure 38 and Figure 39).

Figure 38: Major causes of hospital separations, males, 15-19 yrs, ACT residents, 1996-97



Source: *ACT Hospital Morbidity Data*, 1996-97

Figure 39: Major causes of hospital separations, females, 15-19 yrs, ACT residents, 1996-97

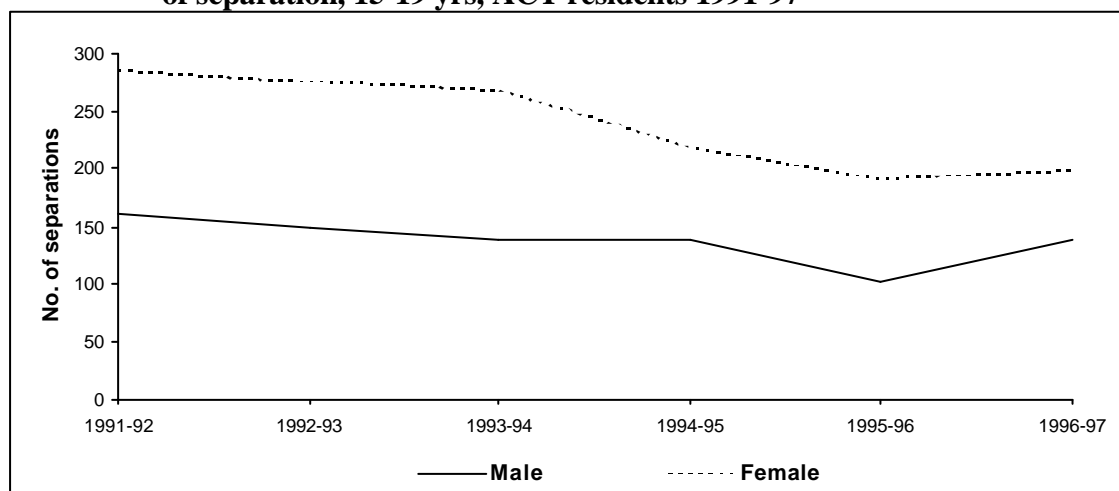


Source: ACT Hospital Morbidity Data, 1996-97

7.2.1.1 Diseases of the Digestive System

Diseases of the digestive system were the major cause of hospital separations for both males and females. Within this category, the main cause of separations was disturbances in tooth eruption. In fact, these disturbances accounted for over 15 percent of hospital separations of 15-19 year olds between July 1991 and June 1997. As can be seen by Figure 40, there has been a steady decline in the number of separations due to this cause with a more rapid decline for females since July 1994. More females than males were hospitalised because of disturbances in tooth eruption. For just over 90 percent of people hospitalised for this reason, their hospital visit involved the surgical removal of a tooth. Over 93 percent of those who had a tooth extracted were in hospital for less than one day. Within the diseases of the digestive system category, acute appendicitis was the second major cause of hospital separations with approximately 8 percent of separations attributed to this cause.

Figure 40: Hospital separations due to disturbances in tooth eruption, by sex, by year of separation, 15-19 yrs, ACT residents 1991-97

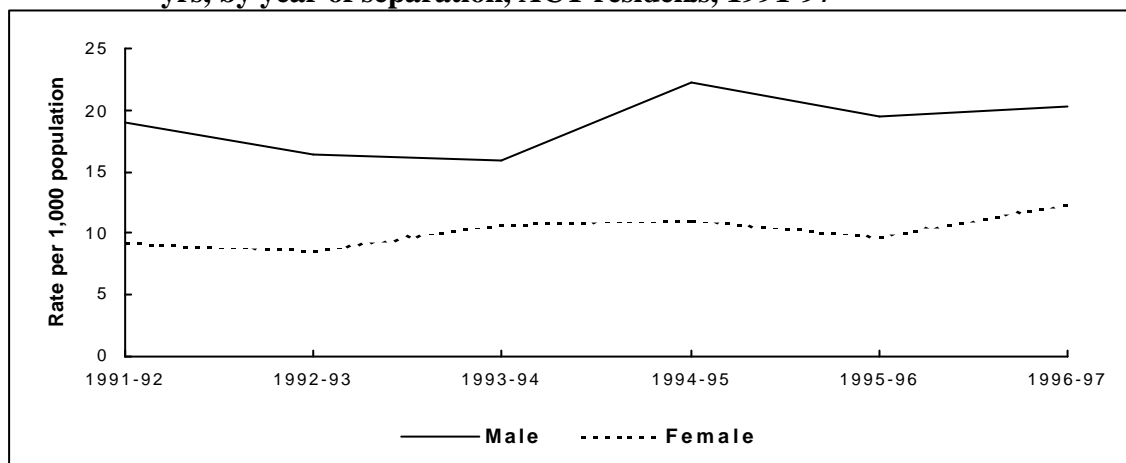


Source: ACT Hospital Morbidity data, 1991-92 to 1996-97.

7.2.1.2 Injury and poisoning

There was a gradual, but fluctuating increase of females being hospitalised because of external cause of injury and poisoning between July 1991 and June 1997 (Figure 41). In 1991-92, the female separation rate was 9.2 per 1,000 while in 1996-97 it was 12.3. For males the trend is more difficult to discern. However, the hospital separation rate in 1996-97 (20.4 per 1,000) is higher than was the average yearly separation rate calculated over the 6 years ending June 1997 (18.9 per 1,000).

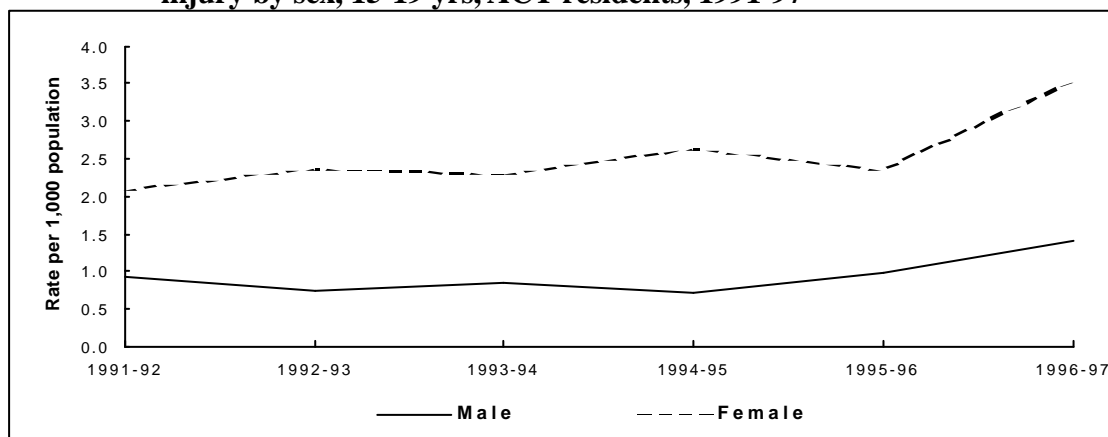
Figure 41: Hospital separation rate due to external injury & poisoning by sex, 15-19 yrs, by year of separation, ACT residents, 1991-97



Source: ACT Hospital Morbidity data, 1991-92 to 1996-97.
ABS Estimated resident population at 30 June, 1991 to 1996

In 1996-97, injury and poisoning was the second major cause of hospital separations for males and the third for females. Within the category, the major cause of injury for males was sporting injuries (44 separations) followed by accidental falls (40) and motor vehicle traffic accidents (35). For females it was purposeful self inflicted injuries (42 separations) followed by other accidents (23) then surgical and medical procedures as the cause of abnormal reaction of patient or later complication, without mention of misadventure at the time of procedure (21). Of concern is that self inflicted injury is increasing for both sexes in this age group. From 1995-97 there was quite a rapid increase for females from 2.3 to 3.6 separations per 1,000.

Figure 42: Age specific hospital separations rate due to purposeful self-inflicted injury by sex, 15-19 yrs, ACT residents, 1991-97



Source: ACT Hospital Morbidity data, 1991-92 to 1996-97.
ABS Estimated resident population at 30 June, 1991 to 1996

Although there is fluctuation from year to year, there is a general decline in the number of male and female separations due to vehicle traffic and non-traffic accidents. Between July 1991 and June 1997 there were just over twice as many male separations as female. This can be explained by the

over-representation of male motorcyclist and pedal cyclist accident separations. There were more male drivers (39) than female drivers (28) hospitalised and more female riders of animals (21) hospitalised than males (5). Over this time, the majority of male accidents of this type were of pedal cyclists (58) followed by motorcyclists (54) and drivers (39). It must be noted that the vast majority of male pedal cyclist accidents were non-traffic accidents. For females it was passengers (30) followed by drivers (28) and riders of animals (21).

Table 52: Vehicle traffic & non-traffic accident profile by sex, 15-19 yrs, ACT residents 1991-97

| | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 |
|-------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Males | | | | | | |
| Driver | 8 | 6 | 6 | 7 | 5 | 7 |
| Passenger | 11 | 6 | 2 | 6 | 5 | 6 |
| Motorcyclist | 12 | 10 | 8 | 7 | 9 | 8 |
| Pedestrian | 3 | 1 | 2 | 2 | 1 | 1 |
| Pedal cyclist | 11 | 9 | 5 | 16 | 10 | 7 |
| Rider of animal | 1 | 1 | 0 | 2 | 0 | 1 |
| Passenger on motorcycle | 0 | 0 | 1 | 1 | 0 | 0 |
| Other | 2 | 3 | 2 | 0 | 1 | 2 |
| Total | 48 | 36 | 26 | 41 | 31 | 32 |
| Females | | | | | | |
| Driver | 5 | 6 | 4 | 4 | 4 | 5 |
| Passenger | 8 | 4 | 5 | 5 | 3 | 5 |
| Motorcyclist | 0 | 0 | 0 | 0 | 0 | 0 |
| Pedestrian | 1 | 1 | 2 | 1 | 0 | 1 |
| Pedal cyclist | 1 | 3 | 2 | 1 | 0 | 5 |
| Rider of animal | 9 | 4 | 5 | 2 | 0 | 1 |
| Passenger on motorcycle | 0 | 0 | 0 | 1 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 3 | 1 |
| Total | 24 | 18 | 18 | 14 | 10 | 18 |

Source: ACT Hospital Morbidity data, 1991-92 to 1996-97.

7.2.1.3 Pregnancy, childbirth and the puerperium

The second major cause of hospital separations for females was complications of pregnancy, childbirth and the puerperium. There has been a slight decline in the number of separations of 15-19 year old girls due to this cause since 1994-95. Around 28 percent of females who gave birth between July 1991 and June 1997 had a completely normal birth.

Taken from a 4 year average of 1993-94 to 1996-97, the number of stillbirths was 9.0 per 1,000 livebirths for women aged 15-19 years. By comparison, stillbirths for all mothers were much lower at 6.8 per 1,000 live births.

Of females 15-19 years in 1996-97, 158 were hospitalised for giving birth. As can be seen by Table 53, 15-19 year olds who were pregnant had a higher percentage of miscarriage than all pregnant women. Ectopic and molar pregnancies for this group, although fluctuating from year to year, were generally more common than for all pregnant women.

Table 53: Outcomes of pregnancy & childbirth, 15-19 yrs & all women, ACT residents, 1991-97

| Births (percent) | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 |
|-------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| WOMEN 15-19 years | | | | | | |
| Single liveborn | 82.4 | 83.9 | 82.7 | 78.2 | 80.6 | 84.3 |
| Single stillborn | 0.5 | 0.0 | 0.5 | 1.5 | 1.0 | 1.1 |
| Multiple births all liveborn | 0.5 | 0.5 | 0.0 | 0.0 | 0.5 | 0.0 |
| Miscarriage | 9.0 | 10.0 | 12.1 | 15.8 | 9.9 | 8.6 |
| Unspecified abortion | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.5 |
| Ectopic and molar pregnancy | 7.6 | 5.7 | 4.7 | 4.5 | 7.3 | 5.4 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| ALL WOMEN | | | | | | |
| Single liveborn | 84.5 | 85.4 | 85.4 | 86.5 | 84.7 | 86.7 |
| Single stillborn | 0.5 | 0.5 | 0.5 | 0.7 | 0.7 | 0.6 |
| Multiple births all liveborn | 1.1 | 1.0 | 1.0 | 0.8 | 1.0 | 1.3 |
| Multiple births all stillborn | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Multiple births some liveborn | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 |
| Miscarriage | 8.1 | 8.0 | 8.1 | 6.7 | 7.3 | 5.6 |
| Illegally induced abortion | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Unspecified abortion | 0.1 | 0.1 | 0.1 | 0.5 | 0.3 | 0.1 |
| Failed attempted abortion | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Ectopic and molar pregnancy | 5.6 | 4.9 | 4.9 | 4.7 | 5.9 | 5.8 |
| Total outcome of pregnancies | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Note: excludes legally induced abortion as available data is not complete and therefore misleading.

Source: ACT Hospital Morbidity data, 1991-92 to 1996-97.

However, although a larger proportion of 15-19 year old women had miscarriages, a larger percentage of them giving birth had a normal birth with little intervention (see Figure 43). It is also interesting to note that there has been a decline in the proportion of such births since 1995-96 for 15-19 year olds and since 1994-95 for all women giving birth.

Figure 43: Normal births as a percentage of all births of 15-19 yrs & all women, ACT residents, 1991-97



Source: ACT Hospital Morbidity data, 1991-92 to 1996-97.

7.2.1.4 Diseases of the Respiratory System

Diseases of the respiratory system were the fourth major cause of hospital separations for both males and females in 1996-97. Overall, there were 175 hospital separations of 15-19 year olds for this cause with 71 males and 104 females.

Within this category, the major cause of hospital separations for both sexes was chronic tonsillitis (22 males, 63 females). For all of these, hospitalisation involved a tonsillectomy and or adenoidectomy. A further 11 males and 9 females were hospitalised due to acute tonsillitis. None of these patients had their tonsils removed. Males and females hospitalised for acute tonsillitis stayed in hospital an average length of approximately 3 days.

The second major cause of hospital separations for females was asthma with 21 hospital separations counted. There were only 7 hospital separations for the same cause for males in 1996-97. The average length of stay in hospital for females was 3 days and for males it was approximately 2 days.

For males on the other hand, the second major cause of hospital separations was a deviated nasal septum. There were 14 male separations and 6 female separations for this cause, all involving surgery. All except one of these operations was for plastic surgery. For 3 of the male separations, an external cause of injury was stated. For all of these male cases the cause was stated as being late effects of an injury - either an unspecified injury or an assault.

7.2.1.5 Diseases of the Musculoskeletal System and Connective Tissue

In 1996-97, this was the third major cause of hospital separations for males and the seventh for females. There were 94 males and 40 females aged 15-19 years hospitalised for diseases of the musculoskeletal system and connective tissue in the year from July 1996 to June 1997. Within this category, the major reason for hospitalisation for both males and females was derangement of the knee (34 males, 11 females). For all of these cases except for one young woman, a surgical operation was performed, with approximately 58 percent of these operations being conducted at a private hospital. However, the actual cause of injury was only stated in male hospital separations in about 21.3 percent of cases and in females around 17.5 percent of cases. For those where an external cause of injury was specified, 80 percent of males and 57 percent of females stated the cause was the late effects of an accident, either an accidental fall or some other type of accident.

7.2.1.6 Diseases of the Genitourinary System

Diseases of the genitourinary system were the fifth major cause of hospital separations for females and the eighth for males. In 1996-97, there were 94 female separations of whom 78 required a medical procedure and 27 male separations of whom 25 required a medical procedure. Within this category, the major cause of hospital separations overall was pain and other symptoms associated with female genital organs (17 separations). Other major reasons for females included noninflammatory disorders of the cervix (14), noninflammatory disorders of the ovary, fallopian tube and broad ligament (13) relating mainly to cysts and haematomas, and endometriosis (12).

For males, the main cause of hospital separations was torsion or twisting of the testis. There were 8 separations due to this cause. All of these separations required a surgical operation.

7.2.1.7 Mental Disorders

Mental disorders were the fifth major cause of hospital separations for males and the sixth for females. There were 73 separations of males and 58 separations of females for mental disorders in the ACT during 1996-97. For males, the main cause within this category was schizophrenic disorders. There were 24 males and 9 females hospitalised for these conditions. For females, the main cause of separations were adjustment reactions (16 females and 7 males).

7.2.2 National Health Survey

There was a much larger proportion of ACT 15-19 year olds than 10-14 year olds who had used any kind of medication in the two weeks prior to interview (62.2 % males, 74.4 % females) (see Table 54). In this age group, there are 12.2 percent more ACT females than ACT males who used

medication in the two weeks prior to interview. This figure is similar for Australian 15-19 year olds where 12.4 percent more females than males used medication in the two weeks prior to interview. However, less Australians of this age group used medication in the previous two weeks than those in the ACT (see Table 54). This difference is even higher than that between females and males of the 10-14 year age group. The use of pain killers for this group was especially high compared to the 10-14 year olds. For example, 25.9 percent of ACT 10-14 year old females had used pain relievers in the two weeks prior to interview while for the 15-19 year old ACT females, this proportion was 36.3 percent - an increase of over 10 percent. For ACT males the increase was similar with 18.6 percent of 10-14 year olds and 26.1 percent of 15-19 year olds using pain relievers. These patterns were similar for Australian 15-19 year olds. It must be noted here however, that children were surveyed under different conditions depending on their age (see National health surveys section) which may affect the survey results. The use of vitamins and mineral supplements is higher for this age group. It is interesting to note however that the use of asthma medications by males is lower while the female usage rate is higher. This is true for both ACT and Australian 15-19 year olds.

Table 54: Whether took any type of medication in the 2 weeks prior to interview by type of medication by sex, 15-19 yrs, ACT & Australia, 1995

| Type of medication (a) | Males | | Females | |
|---|--------------|--------------|--------------|--------------|
| | ACT (%) | Aust (%) | ACT (%) | Aust (%) |
| Used vitamin/mineral supplements | 23.7 | 18.4 | 33.3 | 26.4 |
| Used herbal or natural medications | 8.5 | 4.8 | 8.3 | 7.5 |
| Used other medication- | | | | |
| <i>Pain relievers</i> | 26.1 | 18.6 | 36.3 | 29.7 |
| <i>Skin ointments/creams</i> | 16.5 | 10.6 | 16.0 | 14.1 |
| <i>Medication for cough/colds</i> | 7.4 | 7.3 | 7.9 | 9.6 |
| <i>Asthma medications</i> | 6.8 | 7.7 | 11.3 | 9.3 |
| <i>Medications for allergies</i> | 4.8 | 2.8 | 5.1 | 3.1 |
| <i>Medications for anxiety/nervous tension/depression</i> | **1.2 | 0.4 | **0.0 | 0.4 |
| <i>Medication for diabetes</i> | **0.5 | 0.6 | **0.4 | 0.3 |
| <i>Stomach medications</i> | **0.0 | 0.8 | **1.5 | 1.5 |
| <i>None of the above</i> | 9.7 | 10.7 | 19.2 | 14.1 |
| Total who used other medications | 52.2 | 44.6 | 65.6 | 56.8 |
| Total who used medications (b) | 62.2 | 54.2 | 74.4 | 66.6 |
| Total who did not use medications | 37.8 | 45.8 | 25.6 | 33.4 |
| TOTAL RESPONDENTS | 100.0 | 100.0 | 100.0 | 100.0 |

** Due to low numbers, data is likely to be unreliable (a) Medication as reported by respondent

(b) Persons may have reported using more than one type of medication, therefore components do not add to totals

Source: ABS, *National Health Survey 1995*, confidentialised unit record file (weighted estimates)

The most commonly reported recent illness for this age group was headache for both ACT and Australian young men and women, followed by cough, cold and influenza. The third most commonly stated recent condition was asthma for young women and for young men it was injury. It is interesting to note that asthma is a more commonly reported recent condition for females than for males (see Table 55). Acne is also fairly commonly reported for both sexes and although this condition does not have serious health consequences, its effects on self esteem are quite notable. A greater proportion of ACT 15-19 year olds reported acne than Australian 15-19 year olds. The proportion of 15-19 year old women (8.5% for ACT, 6.1% for Aust.) reporting disorders of menstruation is substantially more than that of the 10-14 year olds (4.0% for ACT, 2.2% for Aust.).

Table 55: Reported recent condition in 2 weeks prior to interview by most commonly reported conditions by sex, 15-19 yrs, ACT & Australia, 1995

| Type of recent condition | Males | | Females | |
|--|---------|----------|---------|----------|
| | ACT (%) | Aust (%) | ACT (%) | Aust (%) |
| Headache | 17.1 | 13.2 | 21.5 | 18.9 |
| Coughs, colds, influenza | 11.9 | 11.5 | 15.1 | 15.6 |
| Asthma | 6.8 | 7.6 | 11.2 | 9.3 |
| Injuries | 10.4 | 9.3 | 5.7 | 7.2 |
| Dental problems | 6.7 | 4.4 | 8.6 | 5.3 |
| Acne | 8.1 | 4.7 | 6.3 | 4.5 |
| Other diseases of skin and subcutaneous tissue | 7.3 | 4.5 | 5.8 | 3.6 |
| Other musculoskeletal system and connective tissue | 5.7 | 4.3 | 5.0 | 3.7 |
| Hayfever | 4.3 | 3.3 | 6.1 | 3.2 |
| Disorders of menstruation | - | - | 8.5 | 6.1 |

Note: Persons may have reported more than one recent illness, therefore components do not add to totals

Source: ABS, *National Health Survey 1995*, confidentialised unit record file (weighted estimates)

Reported long-term problems reflect a different pattern of illness to the short-term conditions. The most commonly reported long-term condition for both sexes in both the ACT and Australia in general was eye and sight problems with approximately 8.2 percent more ACT females and 13.2 percent more Australian females reporting this condition. The overall proportion of ACT and Australian young people who have eye or sight problems is quite similar (see Table 56). The next major medical conditions reported were hayfever and asthma. While asthma is suffered by ACT and Australian young people at quite similar rates, ACT 15-19 year olds suffer from hayfever at higher percentages than Australian young people. Compared to the 10-14 year old males, asthma was less of a problem for males in this age group, however, it became more problematic for young ACT women (but not for young Australian women). Hayfever for females is reported by more 15-19 year olds than 10-14 year olds (10.3% more for ACT, 7.6% more for Australia).

Diseases of blood and blood-forming organs were long-term problems for young women. Such conditions can include iron deficiencies and other anaemic disorders sometimes caused by the loss of blood products during menstruation. ACT young women tended to report such disorders at a higher rate than Australian 15-19 year old women.

Table 56: Whether reported long-term condition by most commonly reported conditions by sex, 15-19 yrs, ACT & Australia, 1995

| Type of long-term condition | Males | | Females | |
|---|---------|----------|---------|----------|
| | ACT (%) | Aust (%) | ACT (%) | Aust (%) |
| Eye/sight problems | 26.5 | 21.0 | 34.7 | 34.2 |
| Hayfever | 24.9 | 15.4 | 23.0 | 17.6 |
| Asthma | 15.6 | 15.3 | 19.0 | 16.4 |
| Sinusitis | 9.5 | 6.8 | 12.9 | 8.9 |
| Allergies not elsewhere classified | 9.1 | 5.2 | 7.5 | 6.4 |
| Ear/hearing problems | 5.6 | 3.0 | 5.0 | 2.3 |
| Other musculoskeletal system and connective tissues | 5.3 | 3.6 | 5.1 | 4.7 |
| Back problems | 3.1 | 1.7 | 1.9 | 0.9 |
| Diseases of the blood and blood forming organs | **0.7 | 0.3 | 3.9 | 2.4 |

** Due to low numbers, data is likely to be unreliable

Note: Persons may have reported more than one long-term condition, therefore components do not add to totals

Source: ABS, *National Health Survey 1995*, confidentialised unit record file (weighted estimates)

7.3 Education and employment

By age 15, young people are usually in year 9 or 10 at high school. In the ACT, between the ages 15 and 19, young people, if going on to further education, will finish high school and move into the college system. Such a system affords more freedom than the high school system and students are expected to take responsibility for their own academic achievements and attendance at school. Some young people will finish school at year 10 and usually by aged 19, young people will either

have left school and joined the workforce, will be looking for work or will be going on to further education.

Such employment and study patterns are quite different from those of older people. This age group has higher levels of job mobility, lower incomes and attract different types of jobs to other people³³. Evidence shows that a person's mental health is affected differently by unemployment depending on whether they are skilled or unskilled workers or school leavers. For example, skilled workers tend to have lowered self esteem whereas for school leavers - who are generally in the 15 to 19 year age bracket - this is not necessarily the case³⁴. Job security may have a positive effect on young people's mental health. For example, young people on specific work projects and temporary work placements have been shown to have feelings of a lack of control over their future work and a sense of fatalism to the unemployed group whereas those young people employed in apprenticeships did not exhibit such feelings³⁵. Physical health as well as mental health is effected by unemployment. Young people's health is affected indirectly by unemployment through the increase in risk factors practiced by unemployed young people. For example, a Norwegian study showed that unemployed young people between the ages of 17 and 20 years old had higher rates of cannabis use³⁶.



8. Early Adulthood: 20 to 24 year olds

At this stage of life, young people would have finished school, either moved on to further education, joined the workforce or be looking for work. At this age, more young people begin to commit themselves to a longer term relationship and some have children.

8.1 Mortality

Although there is no discernible trend in death rates between 1993-96, in 1996, the death rate of males aged 20-24 years was the highest in 4 years (see Table 57). Female death rates fluctuated due to low numbers. For example, in 1996 there were 17 male and 3 female deaths. In fact, over the years 1993-96, female death rates remained consistently below males with young men dying at 3.5 times that of young women. This is explained by the much greater number of male deaths due to injury and poisoning. Over the 4 years, injuries and poisoning have accounted for the deaths of 46 young men compared to 11 young women.

Table 57: Mortality rate by sex, 20-24 yrs, 1993-96

| | 1993 | 1994 | 1995 | 1996 |
|----------------|------|------|------|------|
| Males | 8.9 | 4.9 | 8.4 | 10.3 |
| Females | 4.0 | 2.6 | 1.3 | 2.0 |
| Persons | 6.5 | 3.9 | 4.9 | 6.3 |

Rate: per 10,000 population

Source: ABS *Cause of death unpublished data* 1993 to 1996 using age and sex and year specific population.

Motor vehicle traffic accidents and suicide remain significant causes of death for both sexes of this age group (see Table 58). Of the deaths caused by motor vehicle traffic accidents, 43 percent (9) were drivers, 19 percent (4) were motorcyclists, 5 percent (1) was a pedal cyclist, 14 percent (3) were passengers and 19 percent (4) were unspecified persons.

Table 58: Cause of death by sex, 20-24 yrs, ACT residents, 1993-96

| | TOTAL | |
|---------------------------------|-----------|-----------|
| | Males | Females |
| Motor vehicle traffic accidents | 17 | 4 |
| Suicide | 14 | 4 |
| Heroin poisoning | 7 | 3 |
| Opioid type dependence | 2 | 0 |
| Other injuries or poisoning | 8 | 0 |
| Neoplasms | 4 | 0 |
| Other | 3 | 4 |
| Total | 53 | 15 |

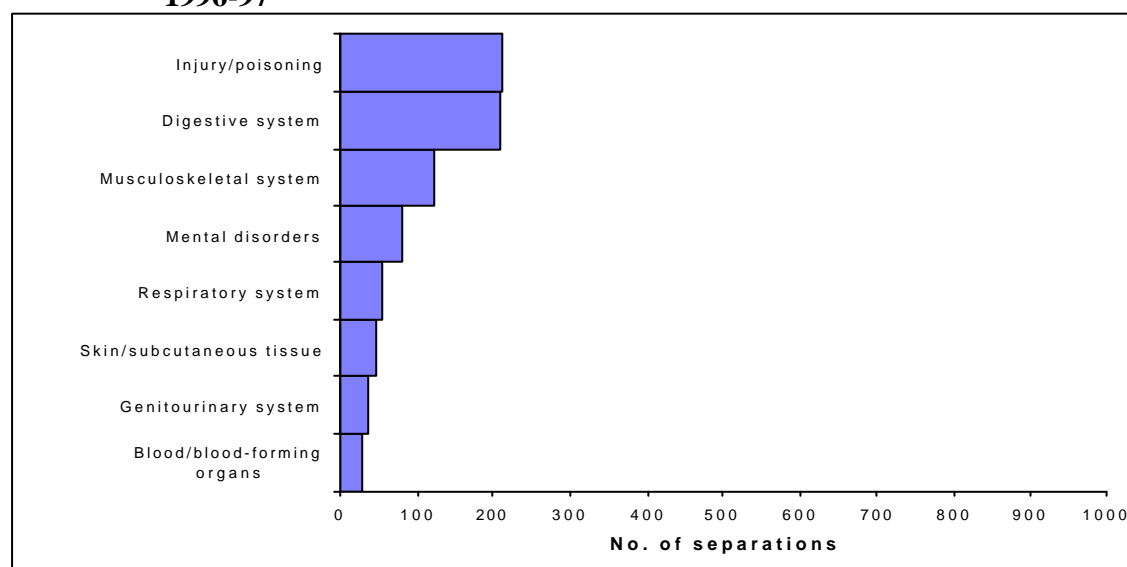
Source: ABS Cause of death unpublished data 1993 to 1996

8.2 Morbidity

8.2.1 Hospital separations

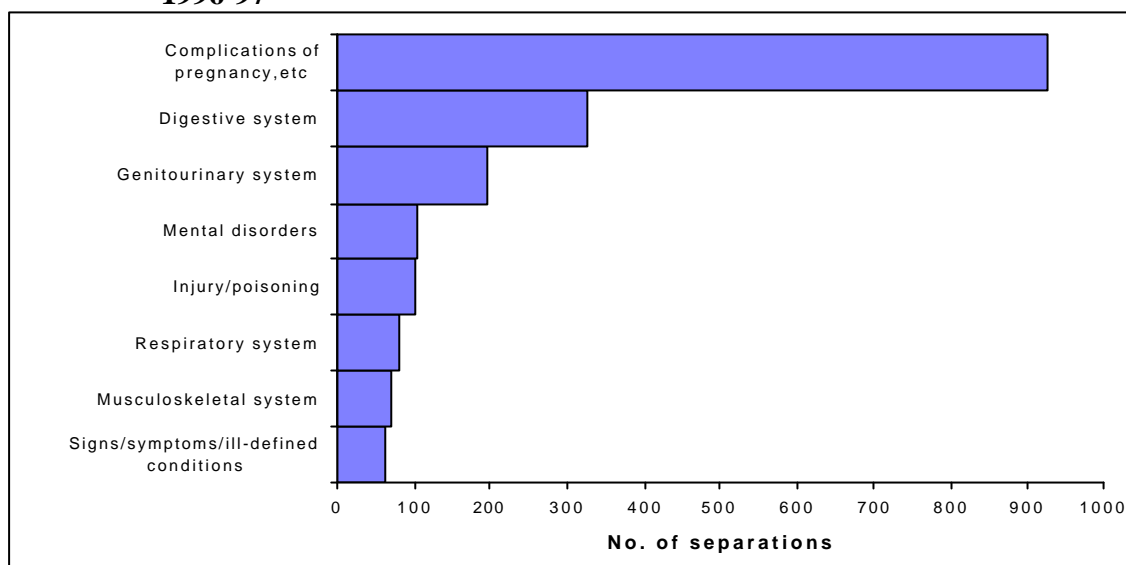
There were over 60 percent more females than males hospitalised in the year beginning July 1996 and ending June 1997. However, this disparity in hospital separations can be explained by the large number of women hospitalised for reasons involving pregnancy, childbirth and the puerperium.

Figure 44: Major causes of hospital separations, males, 20-24 yrs, ACT residents, 1996-97



Source: ACT Hospital Morbidity data, 1996-97.

Figure 45: Major causes of hospital separations, females, 20-24 yrs, ACT residents, 1996-97



Source: ACT Hospital Morbidity data, 1996-97.

8.2.1.1 Pregnancy, childbirth and the puerperium

There were 931 hospital separations of 20-24 year old women for this cause in 1996-97. During this year, 609 women gave birth and of these, 108 women had completely normal births. This accounted for approximately 17.6 percent of women who gave birth during 1996-97. Problems included second-degree perineal lacerations (67 separations), prolonged labour (63 separations), and prolonged pregnancy (53 separations).

Table 59: Separations due to complications of pregnancy, childbirth & the puerperium, 20-24 yrs, ACT residents, 1991-97

| Births | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97 |
|---|-------------|-------------|-------------|-------------|-------------|------------|
| Single liveborn | 738 | 760 | 730 | 748 | 649 | 599 |
| Single stillborn | 4 | 4 | 4 | 6 | 3 | 5 |
| Multiple births all liveborn | 7 | 10 | 10 | 5 | 1 | 5 |
| Abortion | 114 | 120 | 137 | 115 | 78 | 59 |
| Compl. of abortion, ectopic and molar pregnancy | 18 | 15 | 18 | 15 | 8 | 7 |
| Ectopic and or molar pregnancy | 46 | 29 | 32 | 34 | 32 | 36 |
| other | 273 | 255 | 303 | 304 | 258 | 220 |
| Total | 1200 | 1193 | 1234 | 1227 | 1029 | 931 |

Source: ACT Hospital Morbidity Data, 1991-92 to 1996-97

By this age group, still births have declined. Taken from a 4 year average from 1993-97, the number of still births was 6.6 per 1,000 live births. This compares favourably with all births (7.6).

8.2.1.2 Injury and poisonings

Injury and poisoning was the major cause of hospital separations for males 20-24 years in the year beginning July 1996. There were 271 hospital separations of males and 152 of females for this cause. The causes of separations within this category were quite different for males and females.

For example, the leading cause of separations within this category for males was accidental falls (42 males compared to 13 females). The second major cause for males was accidents caused by cutting and piercing instruments (36 males, 4 females). Next was sporting injuries (35 males, 3 females).

For females, the major cause of hospital separations within the category was self inflicted injury (attempted suicide) with 38 females and 15 males being hospitalised. This was followed by abnormal reactions to surgical and medical procedures (without mention of misadventure at time of procedure) with 34 females and 33 males hospitalised.

Drugs, medicinal and biological substances causing adverse effects in therapeutic use were the third major cause of separations for females and the fifth major cause for males (17 females, 30 males).

8.2.1.3 Digestive System

Diseases of the digestive system are the second major cause of hospital separations for both sexes in the 20-24 year age group. In the year beginning July 1996, there were 209 separations of males and 325 separations of females for this cause. Approximately 48 percent (100) of male and 57 percent (185) of female separations were due to disturbances in tooth eruption. The next major cause in this category was disease of the oesophagus, stomach and duodenum with 30 males and 29 females being hospitalised. The third major cause for both sexes was appendicitis (18 males, 27 females). The fourth major cause of hospital separations was different for males and females. For instance, 17 males were hospitalised for hernia of abdominal cavity with 17 separations all up. These separations were largely for inguinal hernias (10). For females, noninfectious enteritis and colitis was the fourth major cause of hospital separations (22). Such hospital separations were mainly for unspecified illnesses.

8.2.1.4 Musculoskeletal system and connective tissue

In 1996-97, there were 122 males and 70 females hospitalised for disease of the musculoskeletal system and connective tissue. This was the third major cause of hospital separations for males and the seventh for females. Within this category, internal derangement of the knee was the leading cause of separations for males (45) and females (20). Other derangement of joints followed this (25 males, 13 females). Of those who were hospitalised for these causes, 120 males and 66 females had a surgical or medical procedure performed.

8.2.1.5 Genitourinary system

Diseases of the genitourinary system are the third major cause of hospital separations for females and the sixth for males. There were 35 male and 196 female hospital separations due to this cause in 1996-97. Within this category, the leading causes of hospital separations for females were non-inflammatory disorders of the cervix (45 separations) and primarily dysplasia of cervix (40). These were followed by pain and other symptoms associated with female genital organs (32), endometriosis (20) and noninflammatory disorders of ovary, fallopian tube, and broad ligament (20). Disorders of menstruation and other abnormal bleeding from female genital tract were the primary cause of 19 hospital separations of females.

8.2.1.6 Mental health

Mental disorders were the fourth major cause of hospital separations for both sexes aged 20-24 years in 1996-97. During that year there were 81 males and 103 females of this age group who were admitted to hospital for mental disorders. Patients who were admitted for mental disorders on average, had the longest stay in hospital of all patients. As can be seen in Figure 46, there has been

an overall decline in the average length of stay for both sexes. This decline has been more rapid for females than for males.

Figure 46: Ave. length of stay, patients for mental disorders, by sex, 20-24 yrs, ACT residents, 1991-97



Source: ACT Hospital Morbidity Data, 1991-92 to 1996-97

The type of mental disorders experienced by those hospitalised varies between males and females. The leading type of mental disorder for which males were hospitalised was schizophrenic disorders (33 males, 13 females). For females, the main type of mental disorder was personality disorders (40 females, only 4 males). The majority of females who were hospitalised for personality disorders were hospitalised specifically for borderline personality (38 females, 0 males) (see glossary). Other significant reasons for hospital separations included affective psychoses (10 males, 15 females); adjustment reaction (10 males, 8 females); and neurotic disorders (11 females, 4 males).

8.2.2 National Health Survey

Similarly to the other age groups, a higher proportion of ACT 20-24 year olds used medications in the 2 weeks prior to interview than 20-24 year olds in Australia in general (see Table 60). The proportion of 20-24 year olds who had used medication in the 2 weeks before interview is only slightly higher than the proportion of 15-19 year olds. This is true for both the ACT and Australia. However, it is interesting to note that a higher proportion of young women use medications than men. The use of vitamin and mineral supplements was 5 percent higher for ACT males and 5.1 percent higher for Australian males in the 20-24 year group than for males in the 15-19 year group.

Table 60: Whether took any type of medication in the 2 weeks prior to interview by type of medication by sex, 20-24 yrs, ACT & Australia, 1995

| Type of medication (a) | Males | | Females | |
|---|--------------|--------------|--------------|--------------|
| | ACT (%) | Aust (%) | ACT (%) | Aust (%) |
| Used vitamin/mineral supplements | 28.7 | 23.5 | 33.9 | 30.9 |
| Used herbal or natural medications | 11.2 | 5.1 | 9.7 | 9.7 |
| Used other medication- | | | | |
| <i>Pain relievers</i> | 25.4 | 19.0 | 37.4 | 32.5 |
| <i>Skin ointments/creams</i> | 11.1 | 19.7 | 16.9 | 14.7 |
| <i>Medication for coughs/colds</i> | 6.4 | 6.2 | 8.6 | 8.3 |
| <i>Medications for allergies</i> | 6.2 | 3.4 | 4.1 | 4.3 |
| <i>Asthma medications</i> | 5.7 | 7.9 | 10.4 | 7.5 |
| <i>Stomach medications</i> | 2.4 | 1.5 | 1.8 | 2.3 |
| <i>Medications for anxiety/nervous tension/depression</i> | **0.5 | 1.2 | **1.4 | 1.1 |
| <i>Medications for heart problems/ blood pressure</i> | **0.0 | 0.2 | **0.4 | 0.3 |
| <i>Sleeping medications</i> | **0.0 | 0.3 | **0.8 | 0.5 |
| <i>None of the above</i> | 8.2 | 9.2 | 17.2 | 18.4 |
| Total who used other medications | 54.6 | 45.4 | 66.0 | 60.6 |
| Total who used medications (b) | 66.1 | 56.6 | 75.1 | 71.6 |
| Total who did not use medications | 33.9 | 43.4 | 24.9 | 28.4 |
| TOTAL RESPONDENTS | 100.0 | 100.0 | 100.0 | 100.0 |

**Due to low numbers, data is likely to be unreliable (a) Medication as reported by respondent

(b) Persons may have reported using more than one type of medication, therefore components do not add to totals

Source: ABS, *National Health Survey 1995*, confidentialised unit record file (weighted estimates)

Again headaches were the most commonly reported recent condition for the 20-24 year olds in both the ACT and Australia wide. The proportion of 20-24 year olds reporting a recent headache is quite similar to that of the 15-19 year olds. Like the 15-19 year old ACT residents, the next most commonly reported recent condition were coughs, colds and influenza for both sexes. For Australian 20-24 year old males however, the next most commonly reported recent condition was injuries. For ACT males, injury was the third most common recent condition. For ACT and Australian females of this age group it was asthma (see Table 61). Although only half as many males reported asthma as being a recent condition, almost 4 times as many ACT males as females reported hayfever as a recent illness. The proportions of Australian male and female 20-24 year olds suffering from hayfever however, were quite similar. For young women, disorders of menstruation are less of a problem than for the 15-19 year olds. However, hangover emerges as a problem in this age group, especially for young men.

Table 61: Reported recent condition in 2 weeks prior to interview by most commonly reported conditions by sex, 20-24 yrs, ACT & Australia, 1995

| Type of recent condition | Males | | Females | |
|--|---------|----------|---------|----------|
| | ACT (%) | Aust (%) | ACT (%) | Aust (%) |
| Headache | 17.2 | 12.9 | 22.6 | 21.4 |
| Coughs, cold, influenza | 14.2 | 8.8 | 12.4 | 11.4 |
| Injuries | 11.6 | 10.0 | 7.7 | 7.7 |
| Asthma | 5.2 | 7.8 | 10.4 | 7.9 |
| Hayfever | 10.8 | 4.3 | 2.9 | 4.1 |
| Other musculoskeletal system and connective tissue | 4.7 | 4.8 | 4.1 | 4.6 |
| Other diseases of the skin and subcutaneous tissue | 3.6 | 3.4 | 4.5 | 3.8 |
| Dental problems | 4.1 | 3.2 | 3.9 | 5.3 |
| Eczema/dermatitis | **0.8 | 1.3 | 5.5 | 4.5 |
| Other diseases of the respiratory system | 1.9 | 1.3 | 3.8 | 1.8 |
| Hangover | 3.7 | 2.2 | 1.7 | 0.9 |
| Disorders of menstruation | - | - | 3.8 | 5.0 |

**Due to low numbers, data is likely to be unreliable

Note: Persons may have reported more than one recent illness, therefore components do not add to totals

Source: ABS, *National Health Survey 1995*, confidentialised unit record file (weighted estimates)

Eye and sight problems were the most commonly reported long-term condition for both sexes in the ACT and Australia, although a higher proportion of young people in the ACT reported the condition (see Table 62). Such problems appear to be growing with age with 9.6 percent more young men and 13.4 percent more young women in the ACT reporting this condition than the 15-19 year olds. Hayfever is the second most commonly reported long-term condition for both sexes. The proportion of 20-24 year olds reporting hayfever is quite similar to that of the 15-19 year olds. However, a higher percentage of ACT young people report hayfever than all Australian 20-24 year olds. Slightly more 20-24 year old ACT women reported asthma as a long-term condition than the 15-19 year olds. Over twice as many young women in the ACT report asthma as being a long term condition than the males. Sinusitis was the third most commonly reported long-term condition for young men in the ACT. Problems of the musculoskeletal system and connective tissue were reported by twice as many 20-24 year old males in the ACT and Australia as among the 15-19 year olds. Such disorders would mainly relate to muscular and other aches and pains caused through over exertion. A larger proportion of young women suffer from eczema and dermatitis than young men. This pattern is common to all age groups studied in this publication except for 0-4 year old ACT residents.

Table 62: Reported long-term condition in 2 weeks prior to interview by most commonly reported conditions by sex, 20-24 yrs, ACT & Australia, 1995

| Type of long-term condition | Males | | Females | |
|---|---------|----------|---------|----------|
| | ACT (%) | Aust (%) | ACT (%) | Aust (%) |
| Eye/sight problems | 36.1 | 26.4 | 48.1 | 41.8 |
| Hayfever | 26.4 | 18.5 | 24.4 | 21.5 |
| Asthma | 10.2 | 12.5 | 21.6 | 15.3 |
| Sinusitis | 11.5 | 8.1 | 11.5 | 11.7 |
| Allergy not elsewhere classified | 6.6 | 5.5 | 11.8 | 9.1 |
| Other dis. of the musculoskeletal syst. & connect. tissue | 11.4 | 7.7 | 6.2 | 4.8 |
| Ear/hearing problems | 7.3 | 5.0 | 6.6 | 5.0 |
| Eczema/dermatitis | **0.5 | 1.8 | 7.1 | 3.5 |
| Back problems (unspecified) | 4.2 | 2.2 | 3.3 | 2.7 |
| Bronchitis/emphysema | 2.8 | 2.3 | 4.6 | 5.1 |
| Diseases of blood and blood forming organs | **0.4 | 0.3 | 6.0 | 3.7 |

**Due to low numbers, data is likely to be unreliable

Note: Persons may have reported more than one long-term condition, therefore components do not add to totals

Source: ABS, *National Health Survey 1995*, confidentialised unit record file (weighted estimates)



9. Disability and handicap

The information in this section is based on findings from the Survey of Disability, Ageing and Carers conducted in early 1993. Data from a more recent survey is expected to become available in 1999.

Handicap and disability rates for young males appear to be higher in the ACT than in the rest of Australia while the female rates for the ACT and Australia are fairly similar (see Table 63). It is interesting to note also that males aged 5-14 years have higher rates of handicap than the 15-24 year olds whereas for females this is not the case. In Australia generally, boys aged 0-14 years have a mental retardation and developmental delay rate of more than twice that of girls in the same group. Overall, they have 40 per cent higher rates of disability, handicap, and severe handicap than girls^{37 38}.

Table 63: Handicap & disability rates by age by sex, ACT & Australia, 1993

| | 0 - 4 | | 5 - 14 | | 15 - 24 | |
|----------------|-------------|-----------|------------|------------|-----------|-----------|
| | ACT | Aust | ACT | Aust | ACT | Aust |
| Males | | | | | | |
| Handicap | *56 | 48 | 120 | 79 | 47 | 50 |
| No handicap | - | - | **8 | 21 | *32 | 23 |
| Total | *56 | 48 | 128 | 101 | 80 | 73 |
| Females | | | | | | |
| Handicap | **20 | 39 | 50 | 51 | 64 | 54 |
| No handicap | - | - | **10 | 13 | *14 | 22 |
| Total | **20 | 39 | 60 | 65 | 78 | 75 |

Rate: Age specific rate per 1,000 population

* Subject to sampling variability between 25% and 50%

** Data subject to high relative standard error

Source: ABS, Disability, Ageing and Carers, Australia 1993, Cat. No. 4430.0, ACT unpublished data

Based on population projections, Table 64 shows that the number of persons with a disability who need assistance in the age groups 0-4 and 15-24 years will decrease with time. However, it must be noted that these figures assume that the mix of activities for which help was needed will remain constant (see Table 64 notes for more details). A more accurate projection can be made once the data from the next survey is released in 1999.

Table 64: Projections of persons with a disability, in households, who need assistance, ACT 1993 estimates projected to 1998, 2000 and 2005

| Age Groups | 1993 | 1998 | 2000 | 2005 |
|----------------|------|------------|------------|-------------|
| 0 - 14 | 2100 | (0%) 2100 | (-1%) 2080 | (-3%) 2040 |
| 15 - 24 | 1500 | (-7%) 1400 | (-8%) 1380 | (-20%) 1200 |

Note 1: These figures should be used with caution because their reliability depends on the assumptions that the mix of activities for which help was needed will remain constant for each 10 year age group from 1993 to 2005; the original 1993 ABS estimates are correct; and the median population projections are accurate

Note 2: Estimates and projections are rounded

Source: ABS, *Disability, Ageing & Carers, 1993, Summary of Findings, ACT*, unpublished data
Dept of Urban Services, *ACT Population forecasts 1998 to 2013*



10. Data sources and limitations

Generally, data sets contain small numbers of occurrences of particular events. The smaller the numbers, the more likely there are to be inexplicable fluctuations in results. One extra death may alter mortality and morbidity statistics dramatically in a small area like the ACT. Where changes in pattern from year to year are noted, time series and moving averages are utilised to ensure a more reliable analysis.

There is no supplementary morbidity collection for diseases that can be treated outside the hospital system (eg by a GP, specialist, outpatient clinic or Emergency Department). Therefore there is a heavy reliance on survey data.

Relying on available survey data means that some information is updated only after a number of years. Disease profiles may not be static with an everchanging ACT population and important information may be lost during the period where data are not collected.

10.1 ACT hospital morbidity data

The majority of hospital services in the ACT are provided by The Canberra Hospital (TCH) and Calvary Public Hospital. In addition, there are two private hospitals - Calvary Private Hospital and John James Memorial Hospital. The morbidity data collected from all of these hospitals provide information on sex, age, usual place of residence, medical conditions/procedures and length of stay in hospital.

Hospital morbidity data are generally expressed in terms of hospital separations, that is, those who have left the hospital in the given time period. This ensures diagnosis data are as accurate as possible.

There are some limitations to the hospital morbidity data. First, there are inconsistencies in coding hospital admissions (eg. a person may be coded as attempting suicide as the principal diagnosis, but that condition could have been caused by mental illness - a different coder may have coded principal diagnosis as "mental illness" with the suicide attempt as the secondary diagnosis). Second, hospital separations data only focus on acute or chronic conditions which require patients to be admitted to hospital and therefore should not be extended to theorise about the health of a population in general. Third, as there is quite a high proportion of non-ACT residents ($\approx 20\%$) separated from ACT hospitals and vice-versa it is difficult to look at hospital separations rates, as we cannot use the ACT population to calculate rates. Fourth, inpatients and re-admissions can only be identified within a hospital, not between hospitals and finally it should be noted that ACT hospital data include newborns in the separations data.

10.2 Mortality data

The registration of deaths is the responsibility of the individual State and Territory Registrars of Births, Deaths and Marriages. This information is then collated by the Australian Bureau of Statistics. The causes of death codes correlate with the ICD-9 CM codes (see Glossary).

There are inconsistencies in recording of cause of death (eg. a person may be recorded as dying from suicide rather than from the severe mental illness which caused the suicide).

Because of small numbers of deaths in each of the age groups, it is sometimes difficult to draw inferences from the data. Therefore, in most cases four years worth of data have been grouped together.

10.3 National health surveys

The Australian Bureau of Statistics (ABS) conducts a five yearly National Health Survey which collects data from approximately 54,000 people living throughout Australia. It is designed to obtain national benchmark information on a range of health-related issues and to enable the monitoring of trends in health, over time. The sample is designed so that the states and territories can be separately analysed.

To allow for more relevant analysis, for the 1995 survey the ACT sample size was increased to some 2,156 dwellings. It should be noted however, that some sections of the survey were only administered to half of the sample.

When responses were broken down into sub-groups (eg people aged under 18), the sample became quite small resulting in inaccuracies and caution needs to be taken when interpreting such information.

It should be noted that the Survey utilises a self-reporting format. Results represent respondents' perceptions, not necessarily health professionals' findings. It also depends in part, on the literacy of the respondents and their ability to understand English. People aged 18 years and over were interviewed for this survey. The consent of parents or guardians was sought in order to interview children aged between 15 and 17. Parents or guardians were asked to answer questions relating to their children under the age of 15. Such reporting methods should be carefully considered when comparing the results for children in different age groups³⁹.

The 1995 Survey was conducted in the twelve months from January 1995 to January 1996. Preliminary results were released in late December 1996.

10.4 Survey of disability, ageing and carers 1993

This survey was the third in a series conducted by the ABS. It provides estimates of the numbers and main characteristics of persons with disabilities and/or handicaps, persons aged 60 years or more and carers. It was conducted in private and special dwellings, and establishments such as hospitals, hostels, retirement villages and nursing homes. The ACT sample of respondents numbered 3,777, which is a large enough sample on which to base valid analyses.

A person was identified as having a disability if they had one or more of a group of selected limitations, restrictions or impairments which had lasted, or would be likely to last, for six months or more. A person was identified as having a handicap if they had limitations in performing one or more selected tasks of daily living. Children aged less than 5 years with a disability were deemed to all have a handicap, but the area and severity of that handicap was not determined.

The ABS conducts regular surveys which give a reasonably sound basis for analysis, although the size of the ACT sub-sample has been smaller than would be desired. In 1991 the ABS conducted a Survey of Handicapped Persons, followed by a Survey of Disabled and Aged Persons in 1988 which had comparable questions to the 1981 survey. The most recent survey, titled the Survey of Disability, Ageing and Carers was conducted in 1993. It contained a larger sample of ACT respondents than previous samples, on which to base analysis (3,777 people). The surveys are based on self-reported answers to questionnaires. It should therefore be noted that the results represent respondents' perceptions, not necessarily health professionals' findings. They also depend in part, on the literacy of the respondents and their ability to understand English. This may be particularly relevant to people with intellectual disabilities.

The information in this publication uses 'rounded' numbers, so totals may not be accurate. There may also be many asterisks highlighting the fact that numbers are so small as to result in high sampling variation or high relative standard error. Survey results should therefore be treated with caution.



11. Glossary

ABS - Australian Bureau of Statistics

Age-sex standardisation - demographic technique for adjusting for the effects of age and sex between populations which allows comparisons between populations (ABS definition).

Age-sex standardised death rate - the overall death rate that would have prevailed in a standard population (eg the 1991 Australian population) if it had experienced at each stage the death rates of the population being studied (ABS definition).

Age-specific birth rates - the number of births per thousand women of a specific age group in the population (ABS definition).

AIHW - Australian Institute of Health and Welfare

Anxiety disorders - feelings of tension, distress or nervousness. Includes agoraphobia, panic disorder, obsessive-compulsive disorder, post-traumatic stress.

Borderline personality - Borderline personality was originally so named because sufferers were thought to be bordering between neurosis and psychosis. The indicators of such a personality include instability, impulsiveness, intense or poorly controlled anger, inability to tolerate being alone, and chronic feelings of emptiness⁴⁰.

Cardiovascular diseases (CVD) can be described as diseases relating to the heart and blood vessels. They are diseases of the circulatory system.

Child care refers to arrangements (other than parental care) made for the care of children under 12 years of age. Formal childcare is regulated care which takes place away from the child's home and includes attendance at preschool, a childcare centre, family day care and occasional care. Informal care is care which is non regulated and can take place in the child's home or elsewhere. It may include care by family members, friends, neighbours and paid baby sitters.

Crude birth rate is the number of live births per 1,000 population in a given year (ABS definition).

Crude death rate is the number of deaths per 1,000 population (unless otherwise stipulated) in a given year (ABS definition).

Endometriosis - A condition where the mucous membrane which lines the uterus forms outside the uterus - usually in the pelvic cavity⁴¹.

Fertility rate refers to the number of children one woman would expect to bear if the age-specific rates of the year shown continued during her child-bearing lifetime (ABS definition).

Handicap is defined as a limitation in performing certain tasks associated with daily living. The limitation must be due to a disability and in relation to self-care, mobility, verbal communication, ability to attend schooling, or ability to work. Persons aged less than 5 years with one or more disabilities are all regarded as having a handicap (from ABS definition).

ICD-9-CM refers to the International Classification of Diseases, ninth revision as developed by the World Health Organisation.

Incidence refers to the number of instances of illness commencing, or of persons falling ill, during a given period in a specified population⁴².

Ischaemic heart disease is coronary heart disease.

Labour force in employment refers to those persons employed and those unemployed seeking employment.

Median is a measure of central tendency. It refers to the point between the upper and lower halves of the set of measurements.

Morbidity is the proportion of sickness in a locality.

Mortality is the relative number of deaths, or death rate, as in a district or community.

Neoplasm is a diverse group of diseases characterised by the proliferation and spread of abnormal cells. They may be malignant or benign. Malignant neoplasms are called cancers.

Pertussis (whooping cough) is a childhood communicable disease.

Prevalence refers to the number of instances of a given disease or other condition in a given population at a designated time.

Pyrexia - Fever or febrile condition⁴³.

Separation (from hospital) refers to when a patient is discharged from hospital, transferred to another hospital or other health care accommodation, or dies in hospital following formal admission (ABS definition).

Three year moving averages are calculated by taking the rate over 3 years. There are often small numbers, particularly for morbidity or mortality due to rarer conditions in the ACT. Rates therefore fluctuate from year to year. The changes in the rates are not meaningful, they reflect the difference due to small numbers. The use of 3 or 5 years of combined data provides a larger number of cases and a more accurate estimate of the true rate.

Tooth eruption - This refers to a tooth becoming visible or growing up through the gum. For example, wisdom teeth are the last of the permanent teeth to erupt⁴⁴.

12. End notes

- ¹ Adamson P (ed), *The Progress of Nations* UNICEF 1993; 43-45.
- ² AHMC, *The Health of Young Australians: a national health policy for children and young people*, DSHS 1995.
- ³ Department of Health and Family Services, *The national health plan for young Australians* Australian Government Publishing Service 1997
- ⁴ Child, Adolescent and Family Health Services, *Health goals and targets for Australian children and youth* Australian Government Publishing Service 1992
- ⁵ Mathers, Fogarty, *Meeting the National Needs for Public Health Information* 1996
- ⁶ ACT Department of Health and Community Care, *Health for young people in the Australian Capital Territory - ACT Youth Health Policy 1997-2000* ACT Government Printer 1997
- ⁷ ACT Department of Health, *ACT Health Goals and Targets for the Year 2000* ACT Government Printer 1994
- ⁸ Boss, Edwards and Pitman. *Profile of Young Australians*, 1995
- ⁹ Australian Bureau of Statistics, *Household Estimates Australia*, Catalogue No. 3229.0 Australian Government Publishing Service 1997
- ¹⁰ Australian Bureau of Statistics, *Australian Capital Territory in Focus 1997*, Catalogue No. 1307.8 Australian Government Publishing Service 1997
- ¹¹ Australian Institute of Health and Welfare *Australia's welfare 1997: services and assistance* Australian Government Publishing Service 1997: 66
- ¹² Australian Institute of Health and Welfare *Australia's welfare 1997: services and assistance* Australian Government Publishing Service 1997: 68
- ¹³ Houghugh M, "The importance of parenting in child health" *British Medical Journal* May 1998; 316; 7144
- ¹⁴ Australian Bureau of Statistics, *Family Characteristics* Catalogue no. 4442.0 Australian Government Publishing Service 1997
- ¹⁵ Australian Bureau of Statistics, *Australian Social trends* Catalogue No. 4102.0 Australian Government Publishing Service 1997
- ¹⁶ Morrell, Taylor, Kerr., *Unemployment and young people's health*, 1998, MJA, Vol 168.
- ¹⁷ Australian Bureau of Statistics, *Australian Capital Territory in Focus 1997*, Australian Government Publishing Service 1997 Catalogue No. 1307.8
- ¹⁸ Australian Institute of Health and Welfare, *Child abuse and neglect Australia 1995-96* Catalogue No. CWS 1 Australian Government Publishing Service 1997
- ¹⁹ Australian Bureau of Statistics, *Children's Health Screening, April 1995*, Catalogue No. 4337.0 Australian Government Publishing Service 1995
- ²⁰ Bourne M, Kee C, *Maternal and perinatal status ACT 1994-96* ACT Government Printer 1998
- ²¹ Australian Bureau of Statistics, *Children's immunisation Australia, April 1995*, Australian Government Publishing Service Catalogue No. 4352.0
- ²² Ochiltree, G 1994 *The Effects of Childcare on Younger Children*.
- ²³ ACT Department of Education and Training, Children's Youth and Family Services, *Safe schools policy framework*,
- ²⁴ Australian Bureau of Statistics, *Australian Social Trends 1997*, Catalogue no. 4102.0 Australian Government Publishing Service 1998
- ²⁵ United Nations, *Mortality of children under 5: world estimates and projections, 1950-2025* Population Studies Series, No 105, 1988

-
- ²⁶ Ozanne-Smith J, *Injury research and prevention* Monash University Accident Research Centre: 1995.
- ²⁷ Australian Bureau of Statistics, *National health survey users' guide 1995* Catalogue No. 4363.0 Australian Government Publishing Service 1996
- ²⁸ Australian Bureau of Statistics, *Australia's Young People: as statistical profile 1993*, Catalogue No. 4123.0 Australian Government Publishing Service 1993
- ²⁹ *Mental Health*, MJA, Vol 168 March 1998
- ³⁰ Australian Bureau of Statistics, *Deaths 1996*, Catalogue No. 3302.0, Australian Government Publishing Service 1997
- ³¹ Australian Bureau of Statistics, *National health survey users' guide 1995* Catalogue No. 4363.0 Australian Government Publishing Service 1996
- ³² Australian Institute of Health and Welfare, *The Child Dental Health Survey*, catalogue no. DEN5 Australian Government Publishing Service 1995
- ³³ Australian Bureau of Statistics, *Labour force Australia* Australian Government Publishing Service June 1996 Catalogue No. 6203.0: 1
- ³⁴ Pernice R, Long N, "Long-term unemployment, employment attitudes and mental health" *Australian Journal of Social Sciences* August 1996; 31 (3)
- ³⁵ Morrell SL, Taylor RJ, Kerr CB "Unemployment and young people's health" *Medical Journal of Australia* 1998; 168: 236-240, 238
- ³⁶ Pernice R, Long N, "Long-term unemployment, employment attitudes and mental health" *Australian Journal of Social Sciences* August 1996; 31 (3)
- ³⁷ Australian Institute of Health and Welfare *Health differentials among Australian children* 1995; Health Monitoring Series No. 3
- ³⁸ Gilbert C, *Disability and ageing in the ACT: an epidemiological review*, Epidemiology Unit, ACT Dept of Health and Community Care: Health Series No 10, ACT Government Printer, ACT 1997
- ³⁹ Australian Bureau of Statistics, *National health survey users' guide 1995* Catalogue No. 4363.0 Australian Government Publishing Service 1996
- ⁴⁰ O'Toole MT (ed), *Miller-Keane encyclopedia and dictionary of medicine, nursing and allied health sixth edition* W.B. Saunders Company: Philadelphia 1997: 226
- ⁴¹ O'Toole MT (ed), *Miller-Keane encyclopedia and dictionary of medicine, nursing and allied health sixth edition* W.B. Saunders Company: Philadelphia 1997: 530-1
- ⁴² Last J, *A Dictionary of Epidemiology*, IEA, 1988
- ⁴³ O'Toole MT (ed), *Miller-Keane encyclopedia and dictionary of medicine, nursing and allied health sixth edition* W.B. Saunders Company: Philadelphia 1997: 1352
- ⁴⁴ O'Toole MT (ed), *Miller-Keane encyclopedia and dictionary of medicine, nursing and allied health sixth edition* W.B. Saunders Company: Philadelphia 1997: 1628



1. 1. 1. Health Series Publications

The Epidemiology Unit of the Department of Health and Community Care has developed an on-going health series of publications to inform health professionals, policy developers and the community on health status in the Territory. Information contained therein will assist in the development of appropriate policy and service delivery models, the evaluation of programs, and an understanding of how the ACT compares with Australia as a whole with regard health status.

- Number 1: *ACT's Health: A report on the health status of ACT residents*
Carol Gilbert, Ursula White, October 1995
- Number 2: *The Epidemiology of Injury in the ACT*
Carol Gilbert, Chris Gordon, February 1996
- Number 3: *Cancer in the Australian Capital Territory 1983-1992*
Norma Briscoe, April 1996
- Number 4: *The Epidemiology of Asthma in the ACT*
Carol Gilbert, April 1996
- Number 5: *The Epidemiology of Diabetes Mellitus in the ACT*
Carol Gilbert, Chris Gordon, July 1996
- Number 6: *Developing a Strategic Plan for Cancer Services in the ACT*
Kate Burns, June 1996 (Out of print)
- Number 7: *The First Year of The Care Continuum and Health Outcomes Project*
Bruce Shadbolt, June 1996
- Number 8: *The Epidemiology of Cardiovascular Disease in the ACT*
Carol Gilbert, Ursula White, January 1997
- Number 9: *Health Related Quality of Life in the ACT: 1994-95*
Darren Gannon, Chris Gordon, Brian Egloff, Bruce Shadbolt, February 1997
- Number 10: *Disability and Ageing in the ACT: An Epidemiological Review*
Carol Gilbert, April 1997
- Number 11: *Mental Health in the ACT*
Ursula White, Carol Gilbert, May 1997
- Number 12: *Aboriginal and Torres Strait Islander Health in the ACT*
Norma Briscoe, Josie McConnell, Michelle Petersen, July 1997
- Number 13: *Health Indicators in the ACT: Measures of health status and health services in the ACT*
Carol Kee (Gilbert), George Johansen, Ursula White, Josie McConnell, January 1998
- Number 14: *Health status of the ACT by statistical sub-divisions*
April 1998
- Number 15: *Results from the 1996 ACT Secondary School Students' Survey*
Hai Phung, George Bodilsen, Allison Webb, Norma Briscoe, June 1998
- Number 16: *Childhood Immunisation & Preventable Diseases in the ACT 1993-97*
Hai Phung, Michelle Petersen, June 1998
- Number 17: *Health Related Quality of Life in the ACT 1994-97*
Hai Phung, Ursula White, Brian Egloff, June 1998
- Number 18: *Maternal and Perinatal Status in the ACT*
Maureen Bourne, Carol Kee, September 1998
- Number 19: *Health risk factors in the ACT*
Carol Kee, Michelle Petersen, Kate Rockpool, October 1998
- Number 20: *Communicable Diseases in the ACT*
Linda Halliday, Michelle Petersen, November 1998
- Number 21: *Illicit Drug Samples Seized in the ACT 1980-97*
Dennis Pianca, November 1998
- Number 22: *Health status of young people in the ACT*
Linda Halliday, Josie McConnell, October 1998

