

Health Series  
Number 1

# **ACT's HEALTH**

## **A report on the health status of ACT residents**

Carol Gilbert  
Ursula White

Epidemiology & Population Health Section  
Public Health Division  
ACT Department of Health and Community Care

October 1995

# ACKNOWLEDGEMENTS

This publication has drawn on the expertise and knowledge of several individuals and sections within the Department of Health and Community Care, the Australian Bureau of Statistics, the National Centre of Epidemiology and Population Health and the Australian Institute of Health and Welfare.

The authors are particularly grateful to colleagues in the Department of Health and Community Care including Dr Doris Zonta, Dr Bruce Shadbolt, Norma Briscoe and the staff of the Epidemiology and Population Health Section for their support, advice and patience; the Performance Information Section for providing data and advice; Health Advancement Services, Cardiology Department (WVH), Women's Health Unit, Communicable Diseases and Immunisation sections, Services Policy and Planning section, Mental Health Services, Alcohol and Drug Service and Primary Health section for advice and support; and Public Affairs section for editorial assistance.

A special thank you to Kelli Mimis for her excellent cover design and enthusiasm.

©Australian Capital Territory, Canberra 1995  
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 Department of Health and Community Care's Epidemiology and Population Health Section and printed by the Authority of Peter Bell, ACT Government Printer.

400 - 10/95 A4 (96/1854)

# FOREWORD

Health is a vital issue for us all. If we are well, we are able to celebrate, contribute, participate and enjoy life for ourselves, our families and our friends. Being healthy helps us have the energy to undertake education, find satisfying employment, enjoy recreation and have fulfilling relationships and lives.

This document draws on all the information available about the health of ACT residents to give us the first comprehensive snapshot of the health of our community.

The report shows that, in most cases, we do compare well with other parts of Australia. This is partly due to our clean environment and high levels of education and employment, as well as the excellent health facilities that ACT residents enjoy. But improvement is always possible, and with innovation and reform, we can address the problem areas that this report identifies. Our health system will continue to improve as these changes are implemented.

This is the first of a series of publications on our health status. If we are to continue to improve the level of health services to the residents of the ACT and surrounding region, it is important that we have up to date information on our health and well-being. As a government we believe that improving the health of the community is just as important as balancing the budget and finding jobs for the unemployed.

Kate Carnell  
Minister for Health and Community Care  
October 1995

# TABLE OF CONTENTS

SUMMARY.....	1
1. INTRODUCTION.....	9
1.1 Purpose of the publication.....	9
1.2 Developing a profile of health status.....	9
2. ENVIRONMENTAL & SOCIO-DEMOGRAPHIC PROFILE OF THE ACT.....	11
2.1 Environment.....	11
2.2 Age and sex distribution of the ACT population.....	13
2.3 Aboriginal and Torres Strait Islander people.....	16
2.4 Birthplace.....	16
2.5 Births.....	16
2.6 Fertility.....	17
2.7 Living arrangements.....	18
2.8 Education.....	18
2.9 The ACT economy.....	18
Socio-economic disadvantage.....	19
3. MORBIDITY & HEALTH SERVICE USE.....	20
3.1 1989-90 National Health Survey and the ACT.....	20
3.2 Hospitals.....	22
General hospital profile.....	23
Age-specific hospital separations.....	28
3.3 Other public health services.....	31
4. ACT MORTALITY.....	32
4.1 General profile.....	32
4.2 Life expectancy.....	34
4.3 Causes of death.....	35
4.4 Years of potential life lost.....	38
5. ACT PROGRAMS TO IMPROVE HEALTH STATUS.....	40
Programs available for identified health issues.....	40
ACT initiatives.....	41
Intersectoral implications.....	43
6. SELECTED HEALTH PROBLEMS IN THE ACT.....	44
6.1 Cancer.....	44
Hospital inpatient separations.....	47
Total length of stay.....	48
Survival rates following cancer onset.....	48
Implications for the future.....	49
Strategies for addressing the problem.....	49
6.2 Diseases of the Circulatory System.....	52
Mortality.....	52
Morbidity.....	53
Risk factors for heart disease.....	55
Current activities in the ACT.....	57
6.3 Mental Health.....	59
The ageing population and dementia.....	60
Hospital inpatient separations.....	60

ACT facilities .....	61
Other ACT initiatives.....	63
Community attitudes .....	65
6.4 Injury.....	66
Mortality.....	66
Disability.....	68
Hospital inpatient separations .....	68
Length of stay.....	69
Falls.....	70
Developing an injury profile.....	70
ACT initiatives.....	71
6.5 Suicide.....	72
Strategies for addressing the problem.....	76
6.6 Communicable Diseases .....	77
Mortality.....	77
Morbidity.....	77
6.7 Asthma .....	86
Mortality.....	86
Morbidity.....	86
ACT initiatives.....	88
6.8 Diabetes Mellitus .....	89
Mortality.....	89
Morbidity.....	90
Strategies for addressing the problem.....	91
6.9 Alcohol and Other Drugs .....	92
ACT initiatives.....	93
7. GLOSSARY .....	97
APPENDIX 1.....	99
Methodologies .....	99
Years of potential life lost - ABS definition.....	99
Rates .....	99
APPENDIX 2.....	100
Explanatory Notes.....	100
Change in name of Health Department .....	100
Limitations in using hospital separation data .....	100
Calculations.....	101
Cardiovascular disease .....	101

## CHARTS & GRAPHS

Figure 1: Statistical divisions and subdivisions, Australian Capital Territory .....	12
Figure 2: Estimated age distribution of the ACT and Australian populations for males and females, 30 June 1993 .....	13
Figure 3: Comparison of 1987 and 1993 ACT populations by specific age groups .....	14
Figure 4: Age distributions of populations in ACT town centres, 1993.....	15
Figure 5: Age-specific birth rates, ACT and Australia, 1993 .....	17
Figure 6: Day only separations as a percentage of total separations, ACT, 1988-1994.....	23
Figure 7: Average length of stay, ACT hospitals, 1988-94.....	23
Figure 8: 1992-93 ACT hospital separations by most common principal diagnosis group.....	24
Figure 9: Age profile for separations for males and females, ACT, 1992-93.....	28
Figure 10: Age-standardised death rates, males and females, ACT and Australia for census years 1971 to 1991 and for 1992.....	32
Figure 11: Age-specific death rates, all causes by ACT and Australia, 1993, females .....	33
Figure 12: Age-specific death rates, all causes by ACT and Australia, 1993, males .....	33
Figure 13: Infant mortality rates, age 0 to 1, Australia and ACT, males, average for three years around census years 1971 to 1991 and for 1992 .....	34
Figure 14: Expectation of life from birth for males and females, ACT and Australia, around census years 1971 to 1991 and for 1992.....	34
Figure 15: Age-Standardised death rates for major causes of death, ACT and Australia, 1993.....	36
Figure 16: Age-standardised cause-specific death rates for major causes 1981 and 1991, ACT and Australia .....	37
Figure 17: Leading causes of death by rates for years of potential life lost (1-75 years), ACT and Australia, 1993.....	38
Figure 18: Percentage of new cases of cancer, leading sites in ACT females, 1987-1991 .....	45
Figure 19: Percentage of new cases of cancer, leading sites in ACT males, 1987-1991 .....	45
Figure 20: Percentage of cancer deaths, leading sites in ACT females, 1987-91 .....	46
Figure 21: Percentage of cancer deaths, leading sites in ACT males, 1987-91 .....	46
Figure 22: Breakdown of 1992-93 ACT hospital inpatient separations for cancer .....	47
Figure 23: Distribution of 1992-93 ACT hospital separations total days length of stay for cancer inpatients .....	48
Figure 24: ACT death rates for diseases of the circulatory system for males and females 1987-1993 .....	52
Figure 25: Age-specific rates (25-75+) for diseases of the circulatory system by sex in the ACT and Australia for 1993.....	53
Figure 26: Breakdown of 1992-93 ACT hospital separations for circulatory diseases.....	54
Figure 27: Breakdown of 1992-93 ACT hospital separations total days length of stay for circulatory diseases.....	54
Figure 28: Breakdown of 1992-93 ACT hospital separations for mental disorders .....	60
Figure 29: Breakdown of 1992-93 ACT hospital separations total days length of stay for mental disorders.....	61
Figure 30: Years of potential life lost through injury, ACT, 1993 .....	66
Figure 31: Breakdown of 1992-93 ACT hospital separations for external causes of injury and poisoning: males.....	68
Figure 32: Breakdown of 1992-93 ACT hospital separations for external causes of injury and poisoning: females .....	69

Figure 33: Years of potential life lost through suicide, ACT, 1993 .....	72
Figure 34: Comparison of Australian and ACT suicides of persons aged 15-24 years from 1973 to 1993 .....	73
Figure 35: ACT suicides of persons aged 15-24 years, 1975 to 1993.....	74
Figure 36: Deaths attributable to communicable diseases: number by sex, ACT, 1991-93 .....	77
Figure 37: ACT Hepatitis B notifications, July 1991 - April 1995, by age and sex.....	80
Figure 38: ACT Hepatitis B notifications (including acute and carrier), July 1991 - May 1995 .....	80
Figure 39: ACT Hepatitis C notifications, July 1991 - April 1995, by age and sex.....	81
Figure 40: ACT Hepatitis C notifications, July 1991 - October 1994.....	81
Figure 41: Pertussis notifications ACT, July 1991-March 1995.....	82
Figure 42: Measles notifications ACT, July 1991-March 1995 .....	82
Figure 43: Rubella notifications ACT, July 1991-March 1995.....	83
Figure 44: Haemophilus Influenzae Type B (HIB) notifications ACT, July 1991-March 1995 .....	83
Figure 45: ACT Salmonella notifications 1993-1995 .....	84
Figure 46: Number of ACT children (0-5 years) and estimated vaccine coverage for vaccines administered by Departmental Clinics and general practitioners, 1993-94.....	85
Figure 47: ACT Asthma death rates from 1986 to 1993.....	86
Figure 48: 1991-1992 and 1992-93 Hospital separations for asthma (ICD-9 code 493) inpatients by age .....	87
Figure 49: ACT hospital separations, 1992-93, for principle diagnosis of diabetes mellitus.....	90

## TABLES

Table 1: Age-specific birth rates, ACT, 1983 and 1993 .....	17
Table 2: Education summary, ACT and Australia, 1993.....	18
Table 3: Percentage ACT unemployment rates, 1992-94.....	19
Table 4: Selected health risk factors, ACT and Australia 1989-90.....	20
Table 5: Health-related actions, 1989-90 .....	21
Table 6: Rates, age-standardised ratios, for reported recent ill-health, ACT, 1989-90.....	21
Table 7: Rates, age-standardised ratios, for reported long-term conditions, ACT 1989-90.....	22
Table 8: ACT hospital summary 1992-1993 .....	25
Table 9: Estimated number of hospital separations in 1992-93 for selected principal diagnosis by sex by length of stay .....	26
Table 10: ACT hospital activity, March quarter 1994 and 1995.....	27
Table 11: ACT public hospitals, occasions of service, March quarter 1994 and 1995 .....	27
Table 12: Separations for ACT hospitals in 1992-1993 for high volume diagnostic groups by age and sex. ....	29
Table 13: Estimated number of ACT Hospital separations in 1992-1993 for separation type by principal diagnosis by sex.....	30
Table 14: ACT public health services, 1991-1994.....	31
Table 16: Number of deaths by specific causes: ACT, 1993.....	35
Table 17: Years of potential life lost (1-75 yrs) for selected causes of death, ACT 1993. ....	39
Table 15: Selected ACT programs available for identified health issues .....	41
Table 18: The most common cancers in specific age groups in the ACT, 1987-91.....	47
Table 19: Selected health status indicators, diseases of the circulatory system.....	55
Table 20: Age-sex standardised ratios of results related to cardiovascular risk factors .....	56

Table 21: 1989 Heart Foundation Risk Factor Prevalence Study results for males and females in Canberra.....	57
Table 22: Crude rates for people reporting mental health problems, Australia and the ACT, 1989-90 .....	60
Table 23: Number of separations and average length of stay for selected diagnoses, ACT, 1992-93 .....	61
Table 24: ACT mental health performance compared to national average .....	62
Table 25: ACT mental health services activity, 1992-93 and 1993-94 .....	64
Table 26: Occupied bed days, 1993-94.....	64
Table 27: Principal causes of death by sex, ACT and Australia, 1993 .....	67
Table 28: Deaths rates for injury: ACT and Australia, 1991-1993.....	67
Table 29: Estimated number of ACT hospital separations and average length of stay (ALOS) for selected external causes of injury or poisoning, male and female, ACT, 1992-93 .....	69
Table 30: Accidental falls by sex by age, ACT, 1992-93.....	70
Table 31: Standardised suicide rates for the ACT and Australia, 1982 to1993 .....	73
Table 32: External causes of injury (suicides and self-inflicted injuries) by age group (years), 1993-94 .....	75
Table 33: Estimated number of ACT hospital separations in 1992-93 for principal diagnosis by sex by length of stay .....	78
Table 34: ACT quarterly statistics for communicable diseases 1993-94 and 1994-95 .....	79
Table 35: Communicable disease rates, ACT and Australia, 1993-94.....	84
Table 36: 1989-90 National Health Survey, age-sex standardised ratios for ACT residents.....	87
Table 37: Standardised diabetes mellitus death rates average for three years around census years 1981 and 1991, ACT and Australia.....	90
Table 38: ACT Alcohol and Drug Service activity, 1992-94.....	93



# SUMMARY

This report is an initial overview of the health status of ACT residents. Where data are available, it shows how ACT residents rate in terms of their health, compared to their health status in the past and to the rest of Australia now. It aims to inform the community and assist ACT planners and policy makers of health services, by alerting them to major patterns of ill-health and untimely death in the Territory. This will give them a basis for the development of future appropriate health programs targeting areas of greatest need.

The National Goals and Targets project has clearly identified the lack of relevant, co-ordinated data as being a major concern in the achievement and monitoring of improved health status. Like other states and territories, the ACT also has this problem. With a recognition of the need for adequate data, systems should be developed to counteract the problems, and future publications will hopefully, reflect the richer data collections to be instituted.

The health status of people is dependent on more than just individual physical and mental wellness. Many of the causes of ill-health are outside the direct domain of clinical intervention. Social, environmental, educational and economic factors all impact on an individual's health status and the risk levels associated with ill health. Although the ACT is very fortunate in having good water and air quality, findings presented in Chapter Two suggest that the ACT has, contrary to expectations, a relatively high occurrence of respiratory problems.

The age distribution of the 300,912 residents in 1994 is relatively young with a median age of 30 years compared to 33 years for Australia. However this median age is expected to increase over the long term as the proportion of people in older age ranges increases. This has implications for health status and delivery of services.

Since the Territory has the highest participation rate in education, a relatively small unemployment rate except for people in the 15 to 19 age range, and a better socio-economic score than for Australia generally, it could be expected that the health status of residents would be of a higher quality than for Australia. This is in fact the case, with very few areas of exception.

## *Mortality*

The ACT had the lowest age-standardised mortality rates for both males (7.9 per 100,000) and females (4.4 per 100,000) in the country in 1993 (Australian males, 8.6 per 100,000; females, 5.1 per 100,000). Infant mortality rates (at 4.3 per 1,000) are also lower than for Australia (6.1 per 1,000).

Of the 1,110 deaths in 1993, 440 were from diseases of the circulatory system including heart disease, 345 were from cancer and 68 were from injury.

Areas where the ACT has a slightly higher death rate than nationally, are female neoplasms, female motor vehicle accidents, and male diabetes mellitus, (none of which is statistically significant). The fact that female neoplasm rates and the male suicide rates are increasing slightly in both the ACT and Australia, gives reason for concern. This situation needs careful monitoring.

Generally though, there is an encouraging reduction in rates for all causes of death from 1981 to 1991 both nationally and in the ACT.

## *Hospital utilization*

There is very little data available on sickness levels and types in the ACT population other than hospital data, which are limited to acute ill-health events. Such data can assist in analysing trends, especially if used in conjunction with surveys such as the National Health Surveys. National surveys have until recently, also been limited in the ACT sample sizes utilised.

In the 1992-93 year, there were 66,419 separations from all hospitals in the ACT, both public and private. The most common conditions were related to the digestive system (12.3%), complications of pregnancy, childbirth and puerperium (10.6%), genito-urinary system (7.6%), circulatory system (7.3%), musculo-skeletal (6.6%), neoplasms (6.5%), and respiratory system (6.2%).

Inpatient activity has increased marginally between years, with significant greater use of same day care. This has been made possible by the use of modern, improved technology and effective discharge support. The proportion of private occupied bed days has declined significantly by 25 per cent. This is in line with a national trend which is mainly due to a decline in private health insurance participation.

The ACT health system supports clients from the South East region of NSW as well as local residents. Over 20 per cent of patients in hospitals reside outside the ACT.

In terms of age and sex specific data, there are more separations in the age range 54-75 for ACT males than at other times in their lives. Reasons for hospitalisation during these times include diseases of the circulatory system, diseases of the digestive system and neoplasms. Females on the other hand, have the highest number of separations during the child-bearing ages of late teens to early fifties. Major causes include maternity related reasons, complications of pregnancy events and diseases of the digestive system.

## *Cancer*

Although not all cancers are fatal, cancer is the major cause of premature mortality in Australia today. Years of potential life lost due to cancer death has been estimated at 4,375 years or 35 per cent of the total years of potential life lost in the ACT in 1993. The risk of cancer is lowest in late childhood, but increases with age thereafter. As the ACT moves towards an ageing population, it can be expected that there will be an increase in the incidence of cancer in the Territory over time.

Of the total 1,110 deaths in the ACT in 1993, malignant neoplasms (cancer) accounted for 32 per cent of all male deaths and 29 per cent of all female deaths.

The ACT has a similar death rate from cancer as the rest of Australia. For the period 1987-91, deaths by leading sites in ACT males were from lung, prostate, colon, and rectum. Deaths by leading sites in ACT females were from breast, lung, and colon. The most common cancers in children were leukaemias, brain cancers and lymphomas, although incidence numbers of cancers in this age group were small. In the 15-64 years group, melanoma was among the three leading cancers for both females and males. Breast cancer was the leading cause of cancer in all females over 15 years, while prostate cancer in males and colon cancer in both sexes became more common in the older age groups.

## *Diseases of the circulatory system*

Diseases of the circulatory system accounted for 440 (40%) of all deaths in 1993. Of these deaths, 324 (29%) were due to heart disease, with 241 (22%) due to ischaemic (coronary) heart disease, and 79 (7%) due to cerebrovascular disease (stroke).

There has been no major change in the crude death rate for circulatory diseases over the last seven years in the Territory. However, with the expected gradual ageing of the population, this is likely to slowly increase unless there are major improvements in terms of preventive measures or medical breakthroughs.

Male and female crude death rates for circulatory diseases per 100,000 population are lower than for Australia with ACT males and females at 153 and 142 respectively, compared to Australian males and females at 300 and 303 respectively. Both male and female age-specific rates are also slightly lower than for Australia.

In terms of hospital separations, although other conditions had higher volume of separations, diseases of the circulatory system had the highest volume of total length of stay during 1992-1993 (12.1%) and the third highest average length of stay (7.6 days). This indicates that circulatory patients use a higher level of hospital resources than those with other conditions. In particular, cerebrovascular disease constitutes only 0.7 per cent of all separations, yet has an average length of stay of 28 days (3.4% of all days).

## *Mental Health*

It is generally recognised that, at some time in their lives one in five adult Australians and at least one in ten children and adolescents experience mental illness to a level which interferes with their lives. A report commissioned for the National Mental Health Strategy concluded that each year about three per cent of Australians experience a serious mental illness. Only about half of these are receiving treatment from either public mental health services, private psychiatrists or general practitioners.

There is limited information on the prevalence of mental illness in the ACT, but there is no reason to assume that ACT levels would be dissimilar to the national levels. The National Health Survey 1989-90 indicated that the ACT has a similar long-term mental disorder profile to Australia, but has significantly higher rates of mental health problems among males in the 15-24 age range and females in the 0-14 age range. Since these are the crucial years for education and vocational training, mental illness has a huge impact on employment possibilities and consequently, the situation needs careful monitoring and intervention.

Mental disorders accounted for two per cent of hospital separations in 1992-93. Psychoses is the major mental illness cause. The length of stay for psychoses is longer than for other mental illnesses. Further, mental illness separations account for the highest average length of stay of all illnesses and conditions, although the number of separations is relatively small.

The ACT has little reliance on psychiatric hospitals. There are no, and have never been any, psychiatric hospitals in the ACT. ACT psychiatric services are all mainstreamed.

The ACT is at the forefront with regards to the proportion it spends on resources for community mental health services. In 1993-94, it spent \$28 per capita on community mental health services compared to the national average of \$18. On the other hand, in terms of total per capita spending, the ACT rates sixth (\$50 per capita compared to \$55 national average).

## *Suicide*

There is considerable concern about the rising rate of suicide, especially among young people aged 15 to 24 in Australia. In 1993, suicide was the ninth leading cause of death in Australia and seventh in the ACT. There were 23 male and 4 female confirmed deaths from suicide in the ACT, six of which were for young people between 15 and 24 years of age. These six people were all male. The rate of suicide for men is considerably higher than that for women both nationally and in the ACT. In the ACT, men in the 15-24 years age group are nearly four times more likely than females to complete suicide. In the period from 1983 to 1993, 68 males and 18 females in that age group committed suicide. Hospital separation data indicate that the percentage of hospital separations for self inflicted injury is higher for females than for males however. This suggests that young men and women attempt suicide at much the same rate - men are simply more successful in completing it.

## *Injury*

Injuries are the fourth leading cause of death in both Australia and the ACT accounting for 6,595 and 64 deaths respectively in 1993. Injuries constituted a high proportion of years of potential life lost (11%) in 1993 in the Territory. It is encouraging to note however, that whilst the death rate from injuries is still unacceptable, it has been decreasing over the years.

Although the ACT has a lower death rate from injury than nationally, it appears that it has a higher number of injuries which do not cause death and which do not show up in hospital statistics.

It is interesting to note the differences in injury prevalence for males and females in hospital separation data. In most categories there is little difference, but males have considerably more interventions for motor accidents (7% of all accidents compared to 4% for females) and females more incidence of suicide attempts (2.3% compared to 1.6% for males). The suicide data supports the belief that males are more likely to complete a suicide (and therefore not require hospital treatment) whereas females do not complete as often, and will require hospital treatment.

Overall, females stay longer in hospital after an injury or poisoning (10.4 days compared to 8.1 days for males).

Falls accounted for 1,112 separations (551 male, 561 female) in the hospital system in the ACT in 1992-93. The average length of stay was 8.1 days for males and 12.2 days for females. The female stay rate is higher as it mainly involves elderly female patients with severe breaks caused from falling. The male stay rate mainly reflects young, healthy males with falls from such things as sporting and work related/handyperson injuries.

## *Communicable diseases*

The number of deaths caused through infectious and parasitic diseases is fluctuating and very small in the ACT.

People suffering from an infectious or parasitic disease are not usually admitted to hospital. They accounted for only 1.3 per cent of hospital separations (845 separations) in 1992-93.

All communicable diseases with the exception of measles, rubella and haemophilus influenza type b have a lower rate of incidence in the ACT than for Australia as a whole.

It is disturbing to note that, with the exception of pertussis, childhood vaccine preventable diseases had a higher incidence in the ACT than for Australia generally. Strategies to encourage full immunisation for these diseases are being implemented.

## *Asthma*

Asthma is a major cause of morbidity in the community, especially among children. It is often a long-term condition which frequently may lead to acute hospital episodes. Rates are higher in the ACT than in other states and territories and therefore need to be monitored.

There were 9 asthma deaths in the ACT in 1993.

Data on morbidity are difficult to collect, since only acute events are accounted for in hospital morbidity or mortality data. The 1995-96 National Health Survey results should give an up-to-date indication of incidence, especially since the ACT sample has been expanded to ensure more accurate analysis.

## *Diabetes Mellitus*

There are no accurate statistics available to gauge the exact number of diabetes cases or the number of deaths caused by diabetes, in the ACT or Australia. The Australian Bureau of Statistics Population Survey Monitor results estimate the national prevalence to be 3.8 per cent of all adults and 8.2 per cent of people aged 55 years and over.

There were 14 known deaths caused by diabetes mellitus in the ACT in 1993 (7 males, 7 females). This equates to 1.3 per cent of all deaths in the ACT for that year compared to the national figure of 2.1 per cent. This result is consistent with the fact that the ACT has a higher socio-economic score and a smaller Aboriginal and Torres Strait Islander population than other places. Indigenous people and people from a low socio-economic background are more prone to having diabetes.

Diabetes is a chronic condition which rarely warrants hospitalisation, but an indication of acute episodes can be derived from hospital separation data. Out of the 351 separations in 1992-93, 86 (or 24.5%) of them were for gestational diabetes (64) and complications of pregnancy due to diabetes (22). Since these diagnoses are exclusively affecting women, the peak for women of child bearing age is considerably higher than for men. With the exception of women in the child bearing ages, men and women have roughly the same incidence of hospital separations for diabetes.

Diabetes can lead to other major health problems such as peripheral vascular disease and foot problems, and must therefore, be managed carefully.

## *Alcohol and other drugs*

Problems associated with drug abuse place heavy demands on health and community services. Most hospital admissions for drug related causes are due to tobacco and alcohol use. Social problems related to drug abuse include risk of losing employment, risk to relationships and other psycho-social problems, financial difficulties and legal problems often related to criminal charges.

The last National Health Survey in 1989-90 indicated that ACT adults smoked more, and drank alcohol at a moderate or high rate compared to the rest of Australia. It should be noted that 82 per cent of ACT residents in fact drank at low risk levels however. One worrying national and ACT trend is that the prevalence of under-age drinking has increased in past years for both genders. The prevalence of smokers in the ACT is similar to the rest of Australia with 37 per cent of males and 24 per cent of females smoking.

In the National Health Survey, 1989-90, a very small percentage of ACT adults reported ever having used illicit drugs, with the exception of cannabis. Males had a similar or higher use of illicit drugs than females, with the highest prevalence of use occurring in the 20-34 age group. Cannabis use is fairly wide spread, especially in people under 30 years of age. Regular cannabis use is most common in males aged 20-24 years of whom 22 per cent use the drug weekly.

The ACT has a number of programs operating to reduce the harm caused by alcohol and other drugs.

# 1. INTRODUCTION

## 1.1 Purpose of the publication

This report has been compiled to give an overview of the health status of the Australian Capital Territory (ACT) population with some comparative information in relation to the other states and territories of Australia. It utilises valuable epidemiological methodology, but is broader than a purely epidemiological study. The major causes of morbidity and mortality are identified and the differences in outcomes for target groups are analysed. The main aim is to assist ACT planners and policy makers of health services, by alerting them to major patterns of ill-health and premature death in the Territory. The information it gives will inform the community and will assist planners in determining service priorities so that health programs are targeted to the areas of greatest need. It is also a valuable monitoring tool to ensure that health programs are relevant and appropriate to the needs of residents. It is envisaged that the report will be published regularly so that comparative analyses may be done. This will assist in the evaluation of programs as they relate to the specific needs of ACT residents.

The information presented is based on data which are routinely collected, either by the Australian Bureau of Statistics in national collections and surveys, by ACT Treasury or by the Department of Health and Community Care.

The National Health Goals and Targets project has clearly identified the lack of relevant, co-ordinated data as being a major concern in the achievement and monitoring of improved national health outcomes.<sup>1</sup> Like other states and territories, the ACT also has this problem. With the implementation of ACT Health Goals and Targets<sup>2</sup> over the next few years, data collection and analyses should rank as a high priority area for consideration and implementation. This publication considers data available on the selected major conditions targeted in the goals and targets exercise, but future publications will, hopefully, reflect the richer data collections to be instituted.

In the meantime, data have been presented in as recent a form as possible. Rather than finding a common year to report activity in the ACT which would have depicted relatively dated information, it was decided to use as recent, reliable data as possible. This has resulted in some non-conformity of years detailed in the various chapters.

## 1.2 Developing a profile of health status

Determining the health status of a community is a difficult task. Many people do not seek assistance from health practitioners or hospital services for many of their ailments much of the time. Using hospital data only, will not necessarily give an accurate picture of morbidity - a study in England, for instance, found positive correlation between hospital admission and disease prevalence in only two of the seven diseases or procedures investigated (respiratory disease and depression, but not digestive disorders, musculo-skeletal disorders, obesity and hip or knee pain)<sup>3</sup>.



However, using hospital utilisation data in conjunction with other data collections such as surveying medical practitioners and carrying out national health surveys will capture most events. The last National Health Survey was administered in 1989-90 which makes its findings somewhat dated. The next survey is currently being undertaken. The hospital data will assist in developing the profile if care is taken to take account of its limitations. (These limitations are outlined in the Explanatory Notes).

The health status of people is also dependent on more than just individual physical and mental wellness. Many of the causes of ill-health are outside the direct domain of medical intervention. Social, environmental, educational and economic factors all impact on an individual's health status and the risk levels associated with ill health.

#### **References**

1. *Better Health Outcomes for Australians: National Goals, Targets and Strategies for Better Health Outcomes Into the Next Century*, Commonwealth Department of Human Services and Health, 1994
2. *ACT Health Goals and Targets for the year 2000*, ACT Department of Health, 1994
3. Payne J, Coy J, Patterson S, Milner P, *Is use of hospital services a proxy for morbidity? A small area comparison of the prevalence of arthritis, depression, dyspepsia, obesity and respiratory disease with inpatient admission rates for these disorders in England*, *Journal of Epidemiology and Community Health*, 48:74-78, 1994

## **2. ENVIRONMENTAL & SOCIO-DEMOGRAPHIC PROFILE OF THE ACT**

### **2.1 Environment**

The ACT has an area of approximately 2,400 km<sup>2</sup> and is surrounded on all sides by New South Wales.<sup>1</sup> Consequently, the ACT provides some services to the surrounding NSW South East Region as well as to its own residents.

Almost all ACT residents live in metropolitan areas although about 85 per cent of the Territory's land mass is devoted to national parks, nature reserves, pine plantations and rural properties. This is shown quite clearly in Figure 1 which shows the statistical divisions and subdivisions of the ACT as designated by the Australian Bureau of Statistics. The area around Canberra is mainly mountainous.<sup>1</sup>

The 1991 Census found that most ACT people live in houses (80%) with most other people living in flats, town houses or semi-detached dwellings (18.7%). The remainder live in caravans, campers and improvised homes. Approximately one per cent are homeless.

The ACT is very fortunate in that it has good air quality. Canberra's levels of total suspended particulates are well below the recommended maximum indicated by the National Health and Medical Research Council of Australia (NHMRC). However, there is no room for complacency:

- \* Many ACT residents have wood burning heating which can add pollution to the air. Legislation is in place to ensure that emission standards on new heaters are of an acceptable standard and residents are reminded of the most efficient use of heaters. The decrease in use of leaded petrols also assists in reducing the lead levels in the air. The Department is also now testing fine particulate matter in the air, which will assist with monitoring air quality.

The ACT, unlike other jurisdictions, has not had an outbreak of Legionnaires Disease. The Department of Health and Community Care has a stringent regime for monitoring cooling towers in the Territory.

The ACT water supply quality fully complies with NHMRC guidelines and recreational water complies at least 80 per cent of the time. At times when recreational water does not meet the standards, warnings are issued to residents.

**Figure 1: Statistical divisions and subdivisions, Australian Capital Territory**

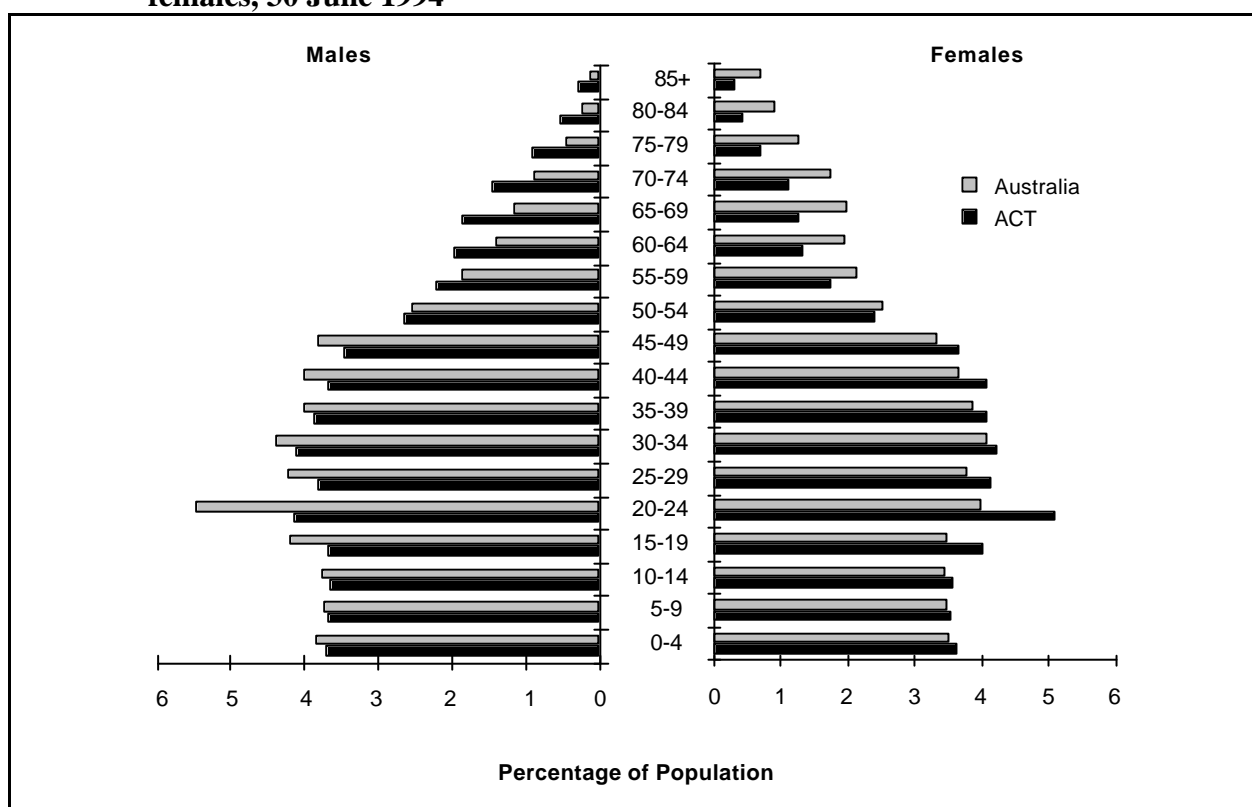
Source: Australian Bureau of Statistics, 1994

## 2.2 Age and sex distribution of the ACT population

The population of the ACT, with an estimated 300,912 in 1994 is small compared to other states.<sup>5</sup> The population increased sharply in the 1960s as a result of the establishment of Canberra as the administrative centre of Australia, but has been growing at a slower rate since the early 1980s.

The gender breakdown by percentage is detailed in Figure 2. In 1994 in the ACT, it was estimated that there were slightly more males (151,368) than females (149,544).<sup>5</sup> This is the reverse for Australia as a whole.

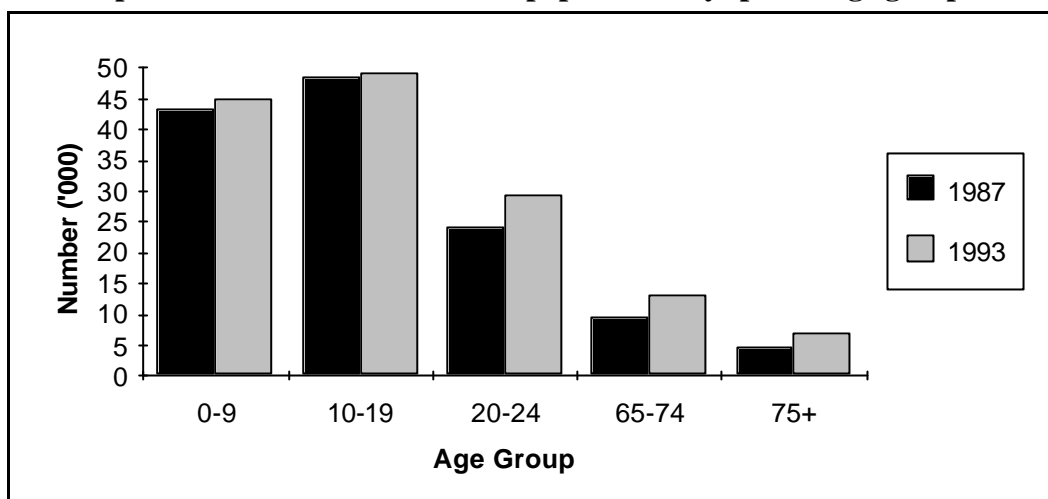
**Figure 2: Estimated age distribution of the ACT and Australian populations for males and females, 30 June 1994**



Source: ABS Publication, *Preliminary June 1993 and June 1994 Estimated Resident Population By Sex and Age States and Territories of Australia*. Catalogue No. 3201.0

The actual age distribution shows the population to be relatively young, with a median age of 30.4 years in 1994 compared with 33.4 years for Australia.<sup>5</sup> However this median age is expected to increase over the long term as the proportion of people in older age ranges increases. This is already occurring when you consider the rise in the period 1987 to 1993 (refer to Figure 3), where increases in the 65-74 years group were from 9,503 to 13,038 (an increase of 37%) and increases in the 75 years and over group were from 4,560 to 6,858 (an increase of 50%). Over the same period, there was an increase of only 20 per cent in the 20-24 age group, an increase of one per cent in the 10-19 age group and an increase of 4 per cent in the 0-9 age group.<sup>4</sup>

**Figure 3: Comparison of 1987 and 1993 ACT populations by specific age groups**



Source: ABS Publication, *Estimated Resident Population by Sex and Age States and Territories of Australia, June 1987 to June 1992 and Preliminary June 1992 and June 1993*, Catalogue No. 3201.0

The dependency ratio for children declined from 33.4 persons in 1991 to 31.9 persons in 1993. Conversely, the aged dependency rate has increased from 8.9 persons in 1991 to 9.4 in 1993. (Refer to Glossary for definition of terms)

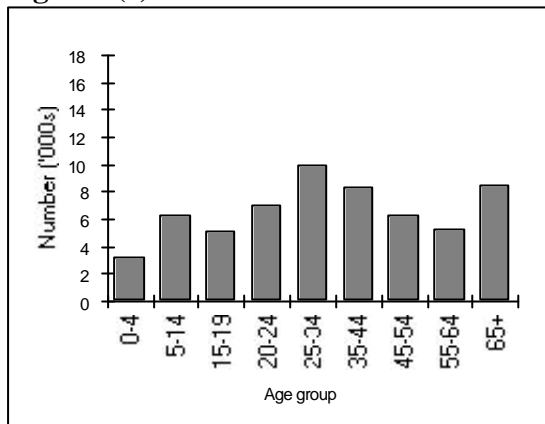
It is interesting to note the differences in age spread throughout the Territory. As the population ages there will be a considerable impact on the levels and types of services needed in the community. For example, it has been noted that the proportion of persons living in separate houses decreases as age increases. The number of people living in semi-detached, townhouse or flat type accommodation increases with their age. The distribution of retirement villages and nursing homes, together with the concentration of medium to high residential developments will determine the changing health service distribution needs in the various localities. It will impact on transport needs, paramedical, therapy, and medical requirements, educational and recreational needs. As people live longer, services need to accommodate the differing needs of an ageing population.

The population of each statistical local area in the ACT in 1993 is detailed in Figure 4. The differing age profiles in the areas of the ACT are shown quite clearly. Note that the new area of Gungahlin is not included. This area did not have a significant population in 1993. Recent survey results however, indicate that in 1995 it has approximately 24 per cent of its population in the age group 35-44 years, 4 per cent in 55-65 years group and 3 per cent in the 65 years and over group. The remaining 69 per cent of the population was for children and young adults.<sup>8</sup>

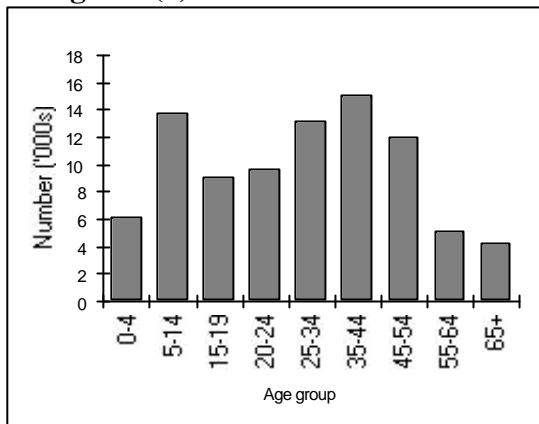
Children aged 0-14 years accounted for 22.6 per cent of the total ACT population. The area with the highest proportion of 0-14 year olds was Tuggeranong (30.5%), followed by Outer Canberra (22.9%), Belconnen (22.6%), Weston Creek (18.6%) and Woden Valley (17.3%) with Central Canberra having the least number (16.0%). Conversely, Central Canberra had the highest proportion of people aged 65 and over (14.2%), accounting for almost half of all people aged 65 and over in the ACT. The next highest was Woden Valley (9.7%) with Tuggeranong having the lowest proportion (2.4%). The 65 years and over group comprised 6.7 per cent of the total ACT population.

**Figure 4 : Age distributions of populations in ACT town centres, 1993**

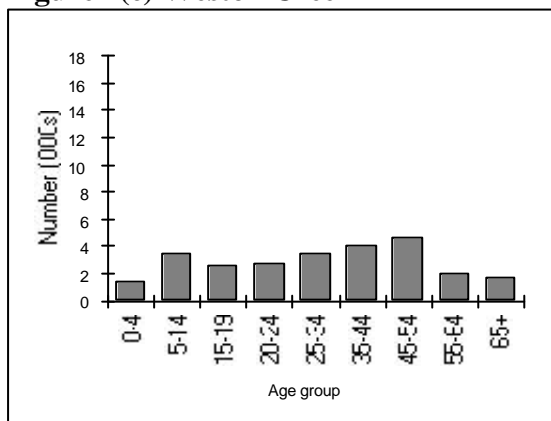
**Figure 4(a) Central Canberra**



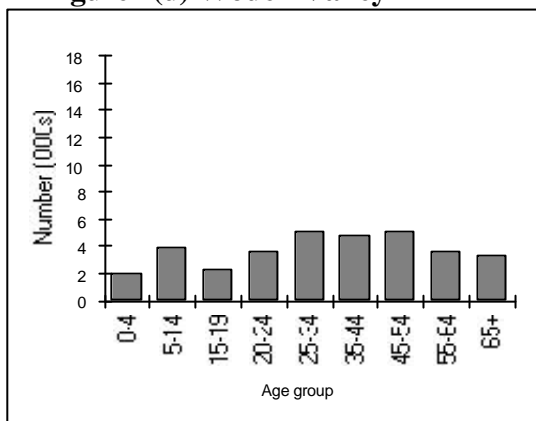
**Figure 4(b) Belconnen**



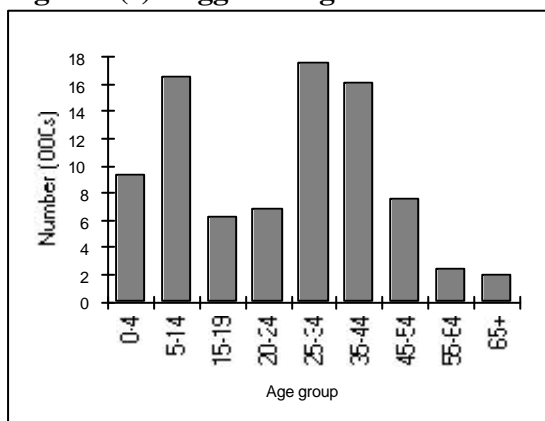
**Figure 4(c) Weston Creek**



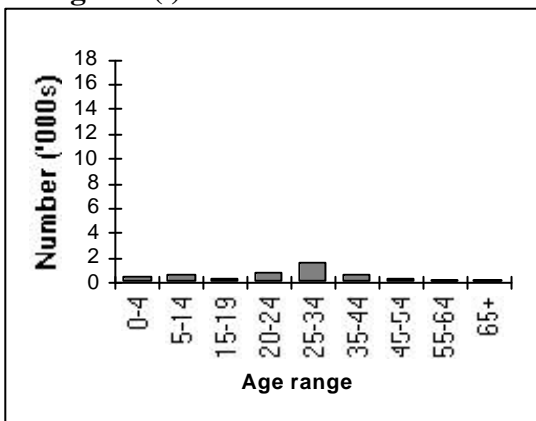
**Figure 4(d) Woden Valley**



**Figure 4(e) Tuggeranong**



**Figure 4(f) Outer Canberra**



Source: ABS, *June 1993 Estimated Resident Population by age and sex in Statistical Local Areas, ACT*, Catalogue No. 3207.8  
 \* Excludes Gungahlin

As mentioned with regard older people, clusters of various age groups in the localities have major implications in the planning of services. Areas such as Tuggeranong, with large numbers of young children, will require concentrated school, child health, sporting and transport facilities. Their parents, who are likely to be young, will require education, health and leisure facilities appropriate to their age. Areas such as Central Canberra, with relatively large numbers of aged people, may require different services and facilities appropriate to their age ranges. Care must be taken however, especially in well

established areas such as Central Canberra, not to neglect the other aged groups. Central Canberra has a large number of old people, but is also attracting a younger population as medium and high density housing is built. People from other suburbs who work in the city also often use city services. The socio-economic status of the area is changing with this growth.

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

This group comprises only a very small proportion of the ACT population.<sup>7</sup> There were 1,680 people who identified as Aboriginal and 95 as Torres Strait Islanders in the ACT at the 1991 Census. This number represents 0.7 per cent of the total Australian indigenous population and 0.6 per cent of the ACT total population.

Although very small in number, this group commands specific attention due to its differing culture and needs. The group is extremely mobile, but generally tends to move within the local area rather than moving interstate. (Between 1986 and 1991, 93.8% changed addresses within the Statistical Local Area - it should be noted that the SLA covers more than just the ACT). Its population has a much younger profile than the non-indigenous population, which is a reflection of higher fertility rates and lower life expectancy. The fertility rate is 2.6 compared to 1.8 for all ACT women, but is the lowest (indigenous) rate for all states and territories.

The Aboriginal and Torres Strait Islander community in the ACT has the highest education levels and labour force participation rates for all indigenous people throughout Australia. Forty two per cent of Aboriginal families have a non-Aboriginal mother compared to the national figure of 30 per cent.

### **2.4 Birthplace**

The 1991 Census found that a total of 24 per cent of the ACT population was born overseas compared to 23 per cent nationally. 33 per cent of ACT residents were born in Sydney and 32 per cent in Melbourne. The Territory has fewer concentrations (ie enclaves) of people born overseas than elsewhere in Australia. There are high concentrations of people from Asia living in Acton (probably overseas students attending educational institutions near the city) and Yugoslavs in O'Malley (a comparatively affluent suburb). The main non-English languages spoken are Chinese, Italian, Greek and Croatian.

### **2.5 Births**

There were 4,414 births registered to mothers usually resident in the ACT, in 1993. This comprised 2,180 female and 2,234 male births. Tuggeranong and Outer Canberra including Gungahlin, Harman and Oaks Estate had the highest crude birth rates (21.0 and 22.3 respectively, per 1,000 estimated resident population), with the Tuggeranong suburbs of Conder and Banks recording the highest (49.5 and 45.5 respectively, per 1,000 estimated resident population).<sup>3</sup>

If a comparison is made of the age specific birth rates for 1983 and 1993, it can be seen that the rate is decreasing in all age groups except the 30-39 group. The 25-29 age group remains the peak group for fertility (refer Table 1).

**Table 1: Age-specific birth rates, per 1,000 population, ACT, 1983 and 1993**

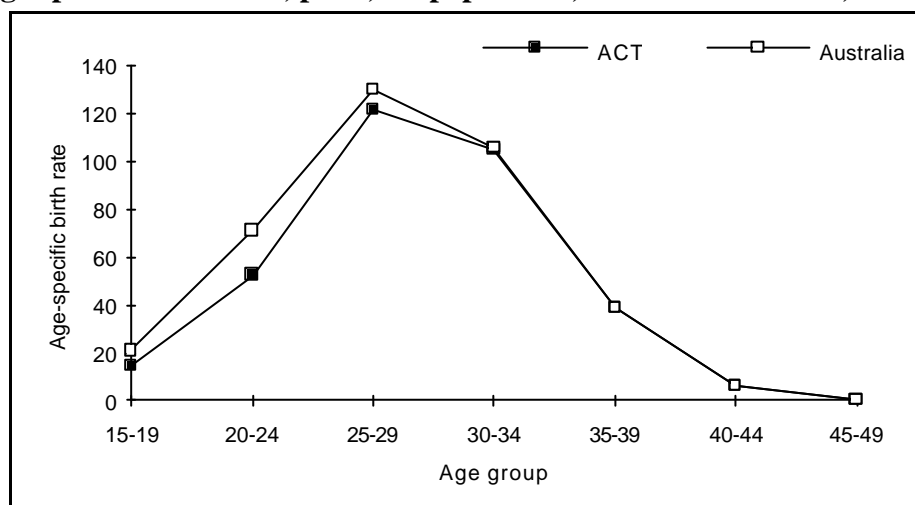
Age group	1983	1993
15-19	16.2	14.5
20-24	85.7	52.5
25-29	145.2	121.4
30-34	89.7	104.7
35-39	31.3	39.0
40-44	6.6	6.1
45-49	0.7	0.4

Source: ABS, 1993 *Demography, ACT*, Catalogue No. 3311.8

The proportion of births outside marriage is increasing with 1,010 births in 1993 which represents 23 per cent of all births. Of these ex-nuptial births, paternity was acknowledged in 88 per cent of cases compared to 82 per cent for Australia.

Figure 5 compares the age-specific birth rates for the ACT and Australia and demonstrates that women in the ACT in the peak child-bearing ages are having fewer children than Australian women generally. They are also delaying first pregnancy to an older age than other women in Australia.

**Figure 5: Age-specific birth rates, per 1,000 population, ACT and Australia, 1993**



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

A report released in June 1995 by the Australian Institute of Health and Welfare (*Congenital Malformations Australia 1981-92*) states that the ACT has the lowest birth defect rate (11.72 per 1,000 births) of any state or territory. The most common defects were Down's syndrome (associated with mothers giving birth at an older age, especially over 40 years), hypospadias and ventricular septic defect.

## 2.6 Fertility

The total fertility rate (per 1,000 population) in the ACT was 1.7 compared to 1.9 for Australia in 1993. The ACT rate has tended to fluctuate around 1.8 over the past decade.<sup>3</sup>



## 2.7 Living arrangements

The 1992 ABS National Survey of Families revealed that there were approximately 77,000 family households in the ACT, which represents 85.5 per cent of all households. In addition, there were 8.1 per cent (7,300) lone parent households and 5.4 per cent (5,800) non-family households. 46 per cent of households have only one or two people in them.<sup>1</sup>

## 2.8 Education

Many people who leave school at an early age are disadvantaged in relation to employment opportunities, occupational options, income levels and other aspects of lifestyle. As there is also a strong association between low socio-economic status and poor health, it is interesting to note the levels of education in the ACT compared to the levels in the rest of Australia.

Although all state and territory school student retention rates are decreasing slightly, the ACT retains the highest retention rate to year twelve compared with the rest of Australia. In the twelve months to July 1992, the ACT retention rate was 97.2 per cent compared with the national rate of 77.1 per cent.<sup>7</sup> Preliminary figures for 1993 are 94.2 per cent for the ACT compared to 76.6 per cent for Australia.<sup>1</sup> ACT people also undertake more tertiary studies than the Australian average. A summary of educational attainment is outlined in Table 2.

**Table 2: Education summary, ACT and Australia, 1993**

Participation	ACT	Australia
	per cent	per cent
In any education	57.6	48.2
Retention to year 12	94.2	76.6
In TAFE	9.3	9.5
In higher education	19.4	13.1

Source: ABS, *Australian Social Trends 1994*, Catalogue No. 4102.0

The ACT has the highest percentage of female students aged 15 to 24 years participating in tertiary study. A total of 4 per cent of all students in that age range in the ACT were female compared to 48.2 per cent nationally.

## 2.9 The ACT economy

The ACT economy is quite different to that of the rest of Australia.<sup>1</sup> Public administration, defence and community services industries account for 44 per cent of the ACT's Gross State Product (GSP) compared to about 17 per cent for Australia as a whole. On the other hand, the ACT only contributes 3 per cent of its GSP from mining and manufacturing industries compared to 23 per cent for Australia.

Although the ACT only contributes 2.1 per cent (1991-92) towards the total Australian GSP, its residents contributed 21 per cent more in per capita terms, than other Australians over the past ten years. Seventy one per cent of total household income was derived from wages, salaries and supplements in the ACT in 1991-92. This compares with 62 per cent for Australia as a whole. Of the 129,300 people in the labour force in 1992, 121,500 (94%) were living with members of their families.<sup>1</sup>

Unemployment rates in the period 1992-94 in the ACT are relatively small compared to those of Australia as can be seen in Table 3.<sup>2</sup> These figures should not be read with complacency. In February 1994, the average duration of unemployment in the ACT was 40.8 weeks, while the number of long-term unemployed people (those unemployed for 52 weeks and over) represented 25.5 per cent of total unemployment. The major area for concern lies with people 15 to 19 years of age who are unemployed. This group had a rising unemployment rate of 33.6 per cent (of people in the age group seeking or finding work) in the June quarter 1994 which represented 6.3 per cent of the total full-time unemployment rate.

**Table 3: Percentage ACT unemployment rates, 1992-94**

May	ACT			Australia persons
	males	females	persons	
1992	7.6	5.4	6.6	10.6
1993	6.7	5.7	6.2	10.7
1994	6.6	6.6	6.6	9.8

Source: DEET, *Small Area Labour markets - Australia*, June Quarter 1990 to 1994, .

### *Socio-economic disadvantage*

The ACT yielded a better socio-economic disadvantage score (1,071) than the Australian average (1,000) in 1991. It is interesting to note, however, that the difference between scores is narrowing over time. The Australian average is improving, but the ACT score is decreasing.<sup>6</sup> Since the ACT does not have concentrations of very affluent or very disadvantaged residents, it tends to be more homogenous than other areas.

### **References**

1. Australian Bureau of Statistics, *Australian Capital Territory in Focus 1994*, Catalogue No. 1307.8
2. *Small Area Labour Markets - Australia*, June Quarter 1990 to 1994, DEET 1994
3. Australian Bureau of Statistics, *Demography Australian Capital Territory*, Catalogue No. 3301.0 (1993)
4. Australian Bureau of Statistics, *Estimated Resident Population by Sex and Age States and Territories Of Australia*, June 1987 to June 1992 & Preliminary June 1992 and June 1993, Catalogue No. 3201.0
5. Australian Bureau of Statistics, *Estimated Resident Population by Sex and Age States and Territories of Australia*, June 1993 and Preliminary June 1994, Catalogue No. 3201.0
6. Australian Bureau of Statistics, *Socio-economic Indexes for Areas, Information Paper* Catalogue No. 2912.0
7. Australian Bureau of Statistics, *Social Trends 1994*, Catalogue No. 4102.0
8. Davis B & Associates, *Survey of Residents in Gungahlin and North Canberra, 1995, prepared for ACT Treasury*

## 3. MORBIDITY & HEALTH SERVICE USE

### 3.1 1989-90 National Health Survey and the ACT

The Australian Bureau of Statistics (ABS) 1989-90 National Health Survey collected data from approximately 54,000 people living throughout Australia. The sample was designed so that the states and territories could be separately analysed. However:

Until the 1995-96 survey, the sample size of respondents was very small in the ACT. This resulted in fluctuations in results and reduced reliability of findings. When responses were broken down into sub-groups (eg people aged under 18), the sample became even smaller resulting in more inaccuracies. It should also 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.

Since the last Survey was conducted in 1989-90, results are quite out-dated and should be interpreted with caution.

Although the National Health Survey 1989-90 only used a small sample of ACT residents, some trends emerged. According to its results (refer Table 4), a slightly higher proportion of adults in the ACT smoked tobacco and drank alcohol at a moderate or high risk level than in Australia overall. However, they exercised more and were either underweight or at more acceptable weight levels than national figures. The ACT had the highest immunisation rate for children after Western Australia.

**Table 4: Selected health risk factors, ACT and Australia 1989-90<sup>(a)</sup>**

Selected health risk factors	ACT	ACT	Australia
	ratio	per cent	per cent
<b>Smoker status -</b>			
Smokers	100.3	30.3	28.4
Ex-smoker/never smoked	n/a	69.7	71.6
<b>Alcohol consumption -</b>			
No alcohol/low risk level	82.2 (no), 110.2 (low)	87.2	88.9
Moderate or high risk level	106.3 (moderate) 112.3 (high)	12.8	11.1
<b>Exercise -</b>			
No /low exercise level	83.2 (no) 106.1 (low)	63.3	68.0
Moderate or high exercise level	110.6 (moderate) 112.9 (high)	36.7	32.0
<b>Body Mass -</b>			
Underweight/acceptable weight	92.9	64.9	60.0
Overweight/obese	89.9	31.6	36.5
<b>Total</b>		100.0	100.0

(a) Persons aged 18 and over (b) age-sex standardised ratio where Australia is 100.0 n/a means not available  
Source: ABS 1989-90 National Health Survey

These dated figures should be interpreted with caution, since many measures have been taken after the survey to encourage a healthier lifestyle with some positive results. There is concern regarding current immunisation rates, which indicate that the ACT has a higher than acceptable incidence of childhood vaccine preventable diseases (refer Chapter 6, Communicable Diseases).

In terms of ACT people seeking health related assistance, Table 5 indicates how Territorians compared with Australia as a whole, during the two weeks before the survey (with the exception of hospital admissions which is over the twelve month period prior to interview). Figures are expressed as age-sex standardised ratios based on totals for all Australians:

**Table 5 : Health-related actions, 1989-90<sup>(a)</sup>**

Health-related actions	ACT Ratio (b)	ACT Rate (c)	Australia Rate (c)	ACT v Australia
Hospital admissions	85.6	*	9.2	** fewer
Consultations with doctors	81.1	152.9	200.1	** fewer
Consultations with dentists	96.7	52.1	53.1	
Consultations with other health professionals	110.6	103.0	94.4	** ACT had the second highest rate
Taken vitamins/minerals	105.6 (d)	243.3	233.1	** higher
Other medication/ointment use		666.5	641.6	** higher
Total actions	104.3	772.9	755.0	** slightly higher

(a) Persons aged 18 and over (b) ACT age-sex standardised ratio with Australia at 100.0 (c) rate per 1,000 population (d) ratio taking any medication \* sample too small to determine a meaningful rate \*\* statistically significantly difference to Australia

Source: ABS 1989-90 National Health Survey

When asked about recent illness, ACT respondents to the survey self-reported slightly more illness/injury than for the rest of Australia (76.1% of the ACT population compared to 72.9% of the Australian population). Specific self-assessment rates are outlined in Table 6.

**Table 6: Rates, age-standardised ratios, for reported recent ill-health, ACT, 1989-90<sup>(a)</sup>**

Illness	Ratio	ACT Rate	Australian Rate
Injury and poisoning	129.5*	94.4	74.6
Respiratory illness	109.2*	258.2	233.9
Infectious and parasitic diseases	123.0*	33.3	26.5
Illnesses of the circulatory system	84.2*	69.1	118.1
Diseases of digestive system	94.7*	114.2	129.9

(a) rates per 1,000 \* significantly different to Australia, with Australia as reference = 100.0

Source: National Health Survey 1989-90 as cited by Erica Fisher, Research and Statistics, ACT Department of Health, 1992

In the ACT, 72.0 per cent of the population self-reported long-term conditions, as compared to 66.2 per cent of the Australian population. The ACT results include a high number of people reporting trivial eyesight disorders and migraines. Specific details of self-reporting are outlined in Table 7.

**Table 7: Rates, age-standardised ratios, for reported long-term conditions, ACT 1989-90** <sup>(a)</sup>

Illness	ACT Rate	Australian Rate	Ratio
Respiratory diseases	280.5	219.8	127.0*
Diseases of nervous system	404.8	382.3	119.4*
Musculoskeletal system	281.8	258.0	121.5*
Circulatory diseases	120.5	131.0	118.5*
Illnesses of the digestive system	44.9	52.7	n/a

(a) per 1,000 population \* significantly different to Australia, with Australia as reference = 100.0 n/a means not available  
Source: National Health Survey 1989-90 as cited by Erica Fisher, Research and Statistics, ACT Department of Health, 1992

ACT residents were admitted to hospital less than for Australia (rate per 1,000 population) - a rate of 109.9 compared to 137.0 and visited a doctor less than Australia as a whole (152.9 compared to 200.1). They did however, use slightly more skin ointments and other medications (666.5 compared to 641.6).

It cannot be repeated too often, that these results were from a very small sample and are very dated. They should only be interpreted as showing a possible trend.

### 3.2 Hospitals

The majority of hospital services are provided by the two major hospitals; Woden Valley Hospital including the Detox Unit and the Renal Satellite, and Calvary Hospital including Calvary Nursing Home type beds. These hospitals provided approximately 78 per cent of hospital inpatient admissions, accounted for approximately 84 per cent of occupied bed days and almost all outpatient services in the ACT in 1993-94. Other hospital services are provided by two private hospitals; Calvary Private and John James Memorial. There are also four recognised day-only private hospitals.

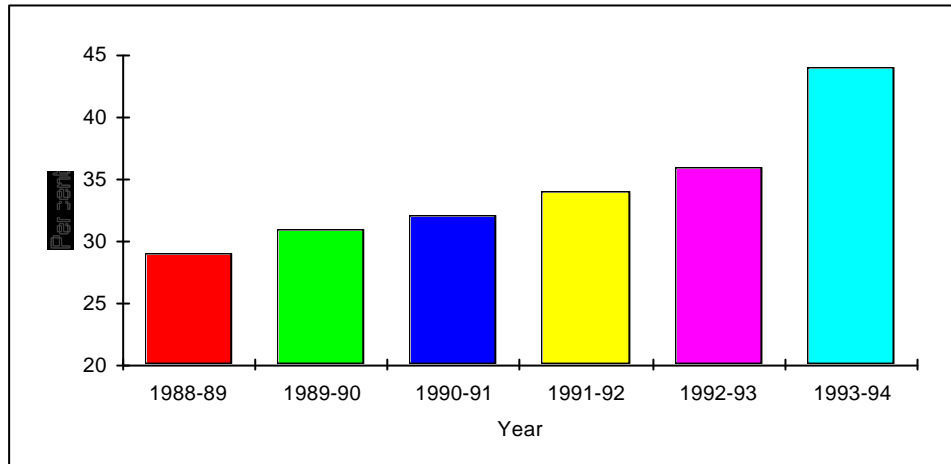
On average, approximately 20 per cent of all separations were by people living outside the ACT, mainly NSW residents. In some areas, the percentage can be as high as 50 per cent. This percentage has been reasonably constant over the last five years.

Public hospital activity levels during 1993-94 were reduced by the Visiting Medical Officer dispute in November and December 1993 (an estimated 2,000 admissions were not treated by the public system). Despite a reduction in the number of available beds across the public hospital system, activity levels were maintained at the 1992-93 level (when adjustment is made for the effect of the VMO dispute). The public hospital system continued to place emphasis on reductions in length of stay through specific programs such as Midcall and the Early Discharge Programs and by increasing utilisation of day only procedures. Both of these strategies are based on sound clinical decision making processes, where both the patient and the procedure have been assessed as suitable for the admission to take place on a day only basis.

In line with national and international trends, Figures 6 and 7 show that there has been an increase in the use of day only treatment and a decrease in the overall average length of hospital stay. However some of the increase in 1993-94 was due to a change in recording practices with the inclusion of renal interventions in this category.

The proportion of private patients in public hospital beds continues to decline. (In 1992-93, 30.5% of occupied bed days were used by private patients compared to 23.0% in 1993-94). Hospital based occasions of service for non-admitted patients decreased slightly by 2.7 per cent to 404,070 in 1993-94.

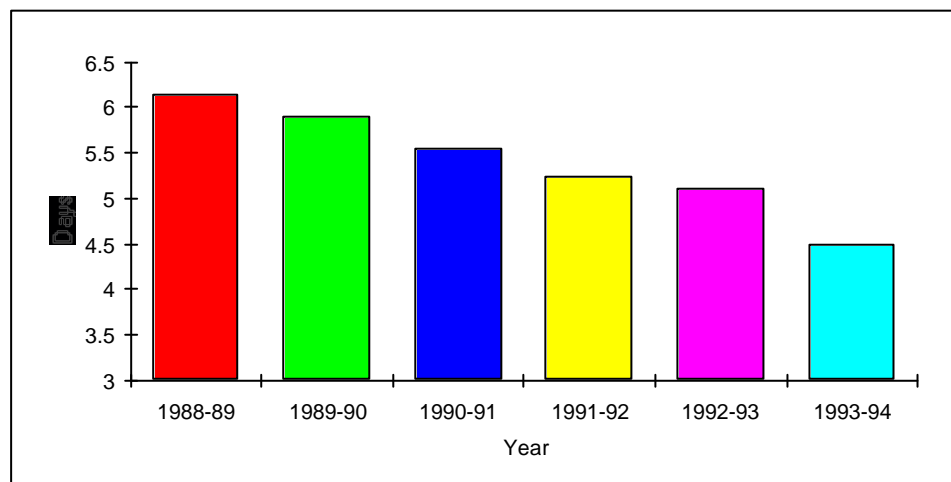
**Figure 6: Day only separations as a percentage of total separations, ACT 1988-1994**



1993-94 increase partly due to inclusion of renal day only interventions for first time

Source: ACT Department of Health *Annual Report 1993-94*

**Figure 7: Average length of stay, ACT hospitals, 1988-94**



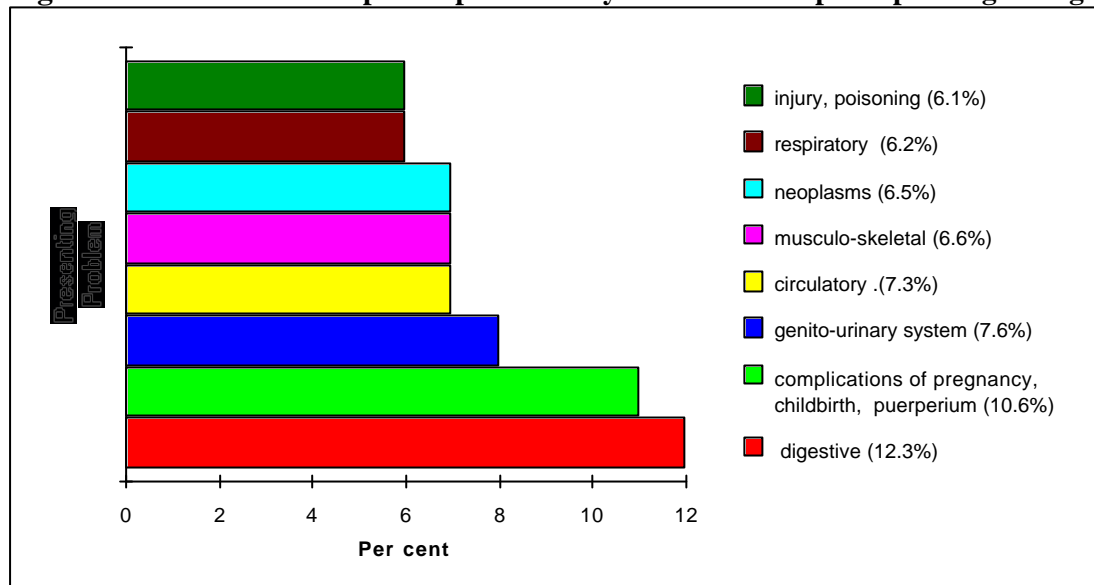
Source: ACT Department of Health *Annual Report 1993-94*

### *General hospital profile*

It should be noted, that, due to a visiting medical officer strike towards the end of 1993, the following data presented is for 1992-93. This will ensure that results are not influenced by this event.

In the 1992-93 year, there were 66,419 inpatient separations from all hospitals in the ACT, both public and private. The most common presenting problems are outlined in Figure 8.

**Figure 8: 1992-93 ACT hospital separations by most common principal diagnosis group**



Source: Raw data from the ACT Hospital Morbidity Data Collection 1992-93, Performance Information Section, Department of Health and Community Care

Tables 8 and 9 give a broad profile of principal diagnoses and procedures which are carried out in ACT hospitals. They are grouped according to ICD-9-CM codes which are internationally recognised as an appropriate way of coding hospital separation. It should be noted that ICD-9 codes listed denote the principal reason for treatment, but not necessarily the underlying cause (eg a person may present with and be treated for, pneumonia and be recorded as a pneumonia patient, but the main condition may be lung cancer).

In Table 8, inpatient refers to the number of persons who separated from hospital at least once during the financial year. For example, a person is counted as an inpatient even though they may have had several episodes in hospital during the year. In relation to particular diagnoses and procedures, the definition of an inpatient is applied within each group so that inpatients may be counted more than once in the year if they were diagnosed with different conditions between hospital episodes or admitted to different hospitals. Note that inpatients can only be identified within a hospital, and not between hospitals. Consequently, it is not possible to give accurate numbers of individuals using the hospital system, nor how many times they are admitted. The "inpatient" data should therefore be treated with caution. (Investigations are proceeding to eliminate this problem by introducing a uniform system of patient identification numbering).

Table 8 gives a broad picture of hospital utilisation. It can be seen that there were 49,580 inpatients, but 66,419 separations. This indicates that some people have had more than one episode in hospital. When you combine the number of separations with the proportion of time spent in hospital, an indication of where the heavy utilisation occurs, emerges. It can be seen that the principal diagnoses which have the highest number of separations also have the highest proportions of lengths of stay in the hospital, excluding childbirth. The only other exception is for acute mental disorders where the number of separations is comparatively small (2% of all separations), but the length of stay the highest (6.2% of all hospital days). The actual average length of stay for people with mental disorders is 13.8 days which is considerably higher than for all other diagnoses.

**Table 8: ACT hospital summary 1992-1993.**

	separations	inpatients	Total length of stay	Average length of stay	Median length of stay
<b>Sex</b>	<b>no.</b>	<b>no.</b>	<b>days</b>	<b>days</b>	<b>days</b>
male	29630	21547	134937	4.6	2
female	36789	28033	167535	4.6	2
Total	66419	49580	302472	4.6	2
<b>Principal diagnosis</b>					
infectious and parasitic diseases	845	802	3754	4.4	2
neoplasms	4297	3587	25872	6	2
endocrine, nutritional and metabolic disease, and immunity disorders	691	491	4483	6.5	4
diseases of the blood and blood-forming organs	553	360	1715	3.1	1
mental disorders	1345	960	18621	13.8	8
diseases of the nervous system and sense organs	3001	2719	9946	3.3	1
diseases of the circulatory system	4820	4001	36543	7.6	4
diseases of the respiratory system	4136	3672	19395	4.7	2
diseases of the digestive system	8162	7505	24486	3	1
diseases of the genito-urinary system	5051	4660	18002	3.6	1
complications of pregnancy, childbirth and the puerperium	7061	6084	30557	4.3	4
diseases of the skin and subcutaneous tissue	897	838	4340	4.8	1
diseases of the musculoskeletal system and connective tissue	4393	3955	21130	4.8	2
congenital anomalies	726	693	3010	4.1	2
certain conditions originating in perinatal period	1684	1647	14377	8.5	6
signs, symptoms and ill-defined conditions	2250	2104	7085	3.1	2
injury and poisoning	4069	3834	28014	6.9	3
supplementary classification of factors	12380	6111	30607	2.5	1
unknown	58	46			
Total	66419	54069	301937	4.5	2
<b>Principal medical procedure</b>					
operations on the nervous system	1171	1033	10011	8.5	3
operations on the endocrine system	79	77	447	5.7	4
operations on the eye	1162	1071	2005	1.7	1
operations on the ear	928	893	1247	1.3	1
operations on the nose, mouth and pharynx	3693	3639	5041	1.4	1
operations on the respiratory system	557	496	5950	10.7	5
operations on the cardiovascular system	5784	1921	16051	2.8	1
operations on the haemic and lymphatic systems	430	372	2873	6.7	1
operations on the digestive system	8293	7400	33582	4	1
operations on the urinary system	1335	1139	6398	4.8	2
operations on the male genital organs	1521	1435	7821	5.1	3
operations on the female genital organs	4340	4017	11538	2.7	1
obstetrical procedures	4472	4463	24244	5.4	5
operations on the musculoskeletal system	5849	5492	35525	6.1	2
operations on the integumentary system	2361	2207	7820	3.3	1
miscellaneous diagnostic and therapeutic procedures	5575	2458	21176	3.8	1
Total	47550	38113	191729	4	1
<b>Total external cause of injury and poisoning</b>	5736	5317	52209	9.1	4
<b>Usual area of residence</b>					
ACT	51208	38058	225833	4.4	2
Non-ACT	12693	9302	68012	5.4	2
Unknown/missing	2518	2220	8627	3.4	1
Total	66419	49580	302472	4.6	2

Source: Raw data from the ACT Hospital Morbidity Data Collection 1992-93,  
Performance Information Section, Department of Health and Community Care



**Table 9: Estimated number of hospital separations in 1992-93 for selected principal diagnosis by sex by length of stay.**

Principal diagnosis	Sex	Length of stay (days)							ALOS	Mdn
		<1	1	2	3	4-7	8-14	15+		
<b>Infectious and parasitic diseases</b>	<b>M</b>	77	54	84	51	97	42	19	4.5	2
	<b>F</b>	86	55	79	51	95	35	20	4.3	2
AIDS/HIV	M	2	1	1	0	2	0	1	8.6	2
	F	0	1	0	0	1	0	0	2.5	3
<b>Neoplasms</b>	<b>M</b>	759	198	131	88	276	289	277	6.7	2
	<b>F</b>	883	241	156	59	382	391	167	5.4	2
Malignant neoplasms	M	442	114	85	61	229	271	260	8.2	4
	F	360	90	69	39	166	199	148	7.3	3
Benign: - uterus	F	83	9	6	1	133	141	2	6	7
<b>Endocrine, nutritional and metabolic diseases and immunity disorders</b>	<b>M</b>	107	24	30	30	67	52	24	5.8	3
	<b>F</b>	71	16	25	31	110	65	39	7.2	4
Diabetes mellitus	M	5	6	16	15	43	28	17	9.2	6
	F	1	7	8	17	46	32	24	9.9	6
<b>Mental Disorders</b>	<b>M</b>	25	76	48	57	122	124	168	12.9	7
	<b>F</b>	36	44	38	46	136	173	252	14.6	9
Psychoses	M	9	40	32	36	88	98	131	14.8	8
	F	5	18	17	25	79	104	176	16.7	12
Neuroses	M	14	36	16	21	34	26	37	8.6	4
	F	30	26	21	21	57	69	76	11.8	7
<b>Diseases of the respiratory system</b>	<b>M</b>	113	673	414	276	468	201	113	4.4	2
	<b>F</b>	76	525	350	248	404	189	86	5	2
Pneumonia	M	8	11	28	42	177	59	30	7.2	5
	F	6	12	27	39	123	62	31	8.6	6
Bronchitis	M	4	5	3	4	18	13	2	6.2	5
	F	1	4	4	4	16	7	7	9.4	6
Emphysema	M	0	2	2	0	6	7	2	7.7	6
	F	0	0	0	0	0	1	3	17	19
Asthma	M	13	103	160	103	109	20	3	3	2
	F	8	78	120	94	131	29	6	3.6	3
<b>Diseases of the genito-urinary system</b>	<b>M</b>	365	246	163	107	430	191	76	4.7	3
	<b>F</b>	1806	487	257	114	423	298	88	3.1	1
Prostate-hyperplasia	M	141	71	28	21	236	111	34	5.5	5
<b>Supplementary classification of factors</b>	<b>M</b>	4003	360	322	348	944	93	52	2.3	1
	<b>F</b>	4009	362	354	341	1002	127	63	2.6	1
Sterilization	M	138	2	0	0	0	0	0	1	1
	F	252	40	10	0	2	0	0	1.1	1
Normal neonate	M	31	156	184	249	580	15	1	3.8	3
	F	34	161	213	250	651	16	1	3.5	4
Extracorporeal dialysis	M	1881	1	0	0	0	0	0	1	1
	F	1915	0	0	1	0	1	0	1	1
Maintenance chemotherapy	M	1347	14	43	30	49	5	4	1.3	1
	F	1155	11	46	25	27	2	2	1.2	1

Source: Raw data from the ACT Hospital Morbidity Data Collection 1992-93, Performance Information Section, Department of Health and Community Care

Table 9 details the number of separations by length of stay for various categories within the major categories. These categories have been nominated because of public interest in these separation causes and give a broad profile of hospital use for them.

It is interesting to note the large number of dialysis and chemotherapy treatments which are included in the supplementary classification of factors. They are nearly all administered in less than one day and, due to the large number of them, skew the overall average length of stay statistics. It should also be noted that it is important to include the maintenance chemotherapy figures in considerations about the data related to neoplasms.

Recent statistics on hospital key indicators are detailed in Table 10. Separation activity has increased marginally with significant greater use of same day care. The proportion of private occupied bed days has declined significantly by 25 per cent - this is in line with a national trend which is mainly due to a decline in private health insurance participation.

**Table 10: ACT hospital activity, March quarter 1994 and 1995**

<b>ACT public hospitals: Woden Valley, Calvary &amp; QE II</b>	<b>March quarter '94</b>	<b>March quarter '95</b>
	<b>number</b>	<b>number</b>
Separations	12,813	13,036
Same day separations	5,570	6,870
Occupied bed days	57,001	55,047
	<b>per cent</b>	<b>per cent</b>
Private patient separations	21%	17%
Private patient OBDs	24%	18%
Average length of stay	4.45	4.22

Source: Department of Health and Community Care Activity Report, March Quarter 1995

It is worth noting at this point that hospital separations data only includes those patients *admitted* to the hospital. Many patients use outpatient clinics and are treated in emergency departments without being admitted. The number of those patients seen in ACT Public Hospitals during the March quarters 1994 and 1995 are shown in Table 11. Diagnostic details for these visits will be available when the new data system (currently being developed) has been fully established in the emergency departments of both hospitals.

**Table 11: ACT public hospitals, occasions of service, March quarter 1994 and 1995**

	<b>1994</b>	<b>1995</b>
Non-admitted patients	75,084	74,679*
Emergency department	19,158	18,364

\* The decline in emergency occasions of service may be due to more appropriate use of community based facilities for non emergency treatment.

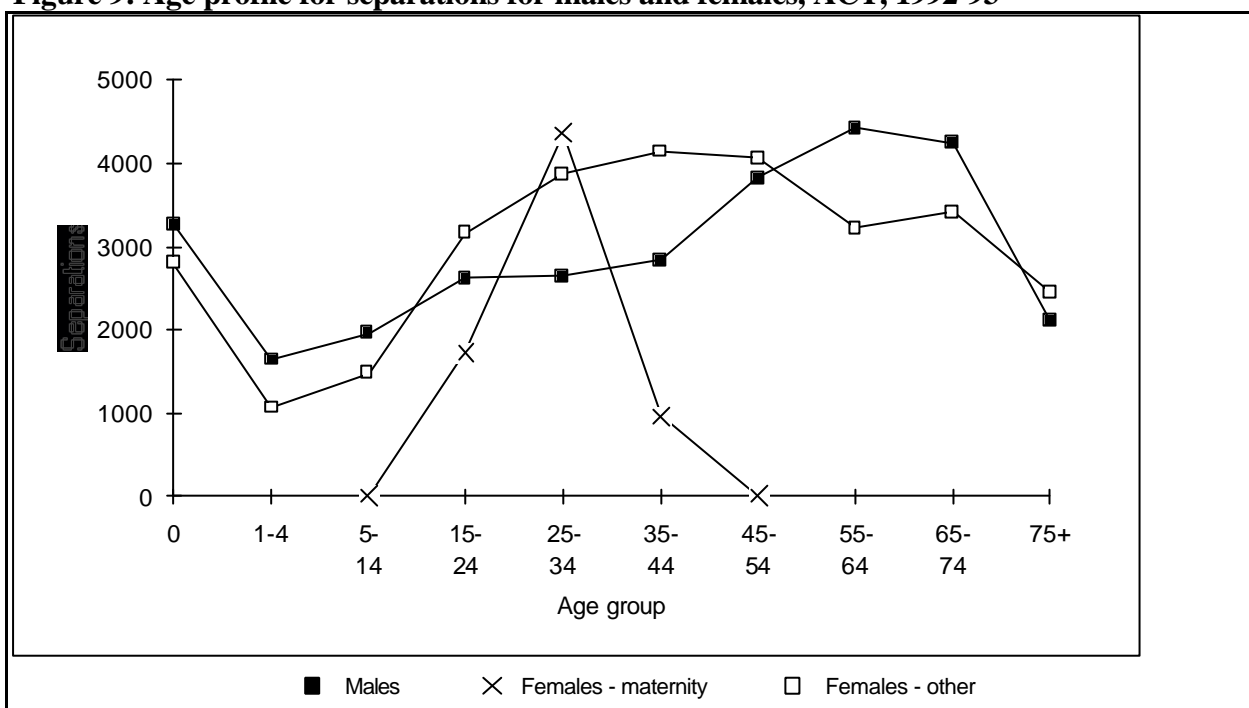
Source: Department of Health and Community Care Activity Report, March Quarter 1995

## Age-specific hospital separations

Figure 9 gives an overall profile of how hospital services are utilised in relation to age categories. There is a difference in peak usage between males and females. It can be seen that separations are greatest for males in the 54-75 age range. Reasons for hospitalisation during these times include diseases of the circulatory system, diseases of the digestive system and neoplasms.

Females on the other hand, have more separations during the child-bearing ages of late teens to mid fifties than at other times in their lives. Major causes include those which are maternity related, complications of pregnancy events and diseases of the digestive system.

**Figure 9: Age profile for separations for males and females, ACT, 1992-93**



Source: Raw data from the ACT Hospital Morbidity Data Collection 1992-93, Performance Information Section, Department of Health and Community Care

A summary of age-related separations is given in Table 12.

**Table 12: Separations for ACT hospitals in 1992-1993 for high volume diagnostic groups by age and sex.**

Age (years)	Sex	Most frequent major diagnostic groups <sup>(a)</sup>
1- 4	M & F	Respiratory disease (29%), in particular, Asthma (11%). Diseases of the nervous system (15%), in particular, Ear mastoid process (11%) Diseases of the digestive system (12%)
5-14	M & F	Respiratory disease (26%), in particular, females with tonsils (13%) Digestive disease (12%) and diseases of the nervous system (11%)
15-24	F	Complications of Pregnancy (35%). In particular, direct obstetric (16%)
	M & F	Diseases of the digestive system (22%). In particular, teeth etc (15%)
	M	Diseases of the musculoskeletal system & connective tissue (15%), in particular, arthropathies & related conditions (10%)
25-34	F	Complications of Pregnancy (53%). In particular, direct obstetric (39%) and diseases of the genito-urinary system (11%)
	M	Diseases of the digestive system (19%), musculoskeletal & connective tissue (16%), injury & poisoning (15%)
	M & F	Supplementary classifications (11%).
35-44	F	Complications of Pregnancy (19%). In particular, direct obstetric (12%) and diseases of the genito-urinary system (18%) and digestive diseases (10%)
	M	Digestive diseases (19%) and diseases of the musculoskeletal system & connective tissue (15%)
45-54	M & F	Supplementary classifications (23%), in particular, extracorporeal dialysis (10%) and diseases of the digestive system (14%)
	F	Genito-urinary diseases (16%) and neoplasms (14%)
	M	Circulatory diseases (13%)
55-64	M & F	Diseases of the circulatory system (14%), diseases of the digestive system (12%) and neoplasms (10%), in particular, malignant neoplasms (7%)
65-74	M & F	Diseases of the circulatory system (46%) Neoplasms (33%), in particular, malignant neoplasms (26%) Digestive diseases (33%) Musculoskeletal diseases (19%), in particular, arthropathies, related conditions (9%) Diseases of the genito-urinary (18%), in particular, for males prostate-hyperplasia (14%) Diseases of the nervous system (15%), in particular, for females eye and adnexa (14%) Respiratory diseases (12%)
75+	M & F	Diseases of the circulatory system (23%) Neoplasms (13%), for males (18%), for females (9%) Digestive diseases (12%) Diseases of the nervous system, for males (8%), for females (12%)

(a) Percentages refer to the percentage of all separations for that particular age group and sex shown.

Source: Raw data from the ACT Hospital Morbidity Data Collection 1992-93

Performance Information Section, Department of Health and Community Care

Table 13 indicates where a patient went after discharge. Most people in all categories returned to their homes. Transfers to an acute hospital refers to transfers from other ACT hospitals to Woden Valley Hospital, and transfers from ACT hospitals to interstate acute hospitals. Woden Valley Hospital had 916 transfers from it in 1992-93. It is interesting to note that death rates are decreasing over time (Refer Chapter 4.1).

**Table 13: Estimated number of ACT hospital separations in 1992-93 for separation type by principal diagnosis by sex.**

	sex	Separation type				
		acute hospital	nursing home	other health care	died	home/other
<b>Principal diagnosis (a)</b>						
infectious and parasitic diseases	M	5	2	0	10	407
	F	9	3	2	10	397
neoplasms	M	55	10	3	112	1838
	F	39	9	2	72	2157
endocrine, nutritional and metabolic disease, and immunity disorders	M	7	1	0	2	324
	F	3	6	0	3	345
diseases of the blood and blood-forming organs	M	5	0	0	3	323
	F	2	0	0	3	217
mental disorders	M	18	11	14	4	573
	F	20	26	11	2	666
diseases of the nervous system and sense organs	M	19	9	1	7	1364
	F	15	12	1	2	1571
diseases of the circulatory system	M	257	23	1	90	2375
	F	150	42	8	108	1765
diseases of the respiratory system	M	25	19	6	35	2172
	F	17	18	6	33	1804
diseases of the digestive system	M	36	15	3	29	3864
	F	42	18	6	20	4129
diseases of the genito-urinary system	M	13	6	0	10	1549
	F	8	5	1	7	3451
complications of pregnancy, childbirth and the puerperium	F	90	22	2	0	6947
diseases of the skin and subcutaneous tissue	M	3	1	0	1	458
	F	3	4	1	0	426
diseases of the musculoskeletal system and connective tissue	M	28	4	1	1	2345
	F	23	2	1	3	1984
congenital anomalies	M	19	0	0	6	442
	F	11	1	1	1	245
certain conditions originating in perinatal period	M	92	14	0	8	838
	F	56	20	3	4	649
signs, symptoms and ill-defined conditions	M	18	5	1	4	1102
	F	21	8	1	1	1089
injury and poisoning	M	101	19	7	25	2277
	F	88	48	7	17	1479
supplementary classification of factors	M	46	15	3	3	6055
	F	42	30	3	0	6183
<b>Total</b>	<b>M</b>	<b>747</b>	<b>154</b>	<b>40</b>	<b>352</b>	<b>28334</b>
	<b>F</b>	<b>639</b>	<b>276</b>	<b>56</b>	<b>286</b>	<b>35530</b>

Source: Raw data from the ACT Hospital Morbidity Data Collection 1992-93, Performance Information Section, Department of Health and Community Care

### 3.3 Other public health services

Table 14 gives a broad picture of public health utilisation for 1991 to 1994.

**Table 14: ACT public health services, 1991-1994**

Service/organisation	1991-92	1992-93	1993-94
<b>Public nursing homes (Jindalee, Calvary)</b>			
Beds available at 30 June	146	146	146
Admissions	72	133	54
Percentage occupancy	97.7	99	97.78
<b>Child dental services (a)</b>			
School dental examinations	43,936	44,624	45,669(h)
<b>Community mental health service</b>			
No. of registrations (includes Psych Rehabilitation.)	4,323	3,521(h)	3,034(h)(i)
<b>ACT ambulance service</b>			
Patients attended, treated & carried	14,772	12,717(h) (b)	13,225
Kilometres travelled (b)	578,600	222,700	N/A (g)
<b>Community health centres (j)</b>			
No. of centres	8	8	8
Occasions of service:			
C'ty Medical practitioners	63,719	63,590	55,790
Immunisations	22,693	22,297	24,949
Nutritionists	2,738	3,445	2,930
Physiotherapists	17,951	15,625	14,455
Podiatrists	4,204	4,596	4,488
Practice Nurses	60,800	45,579	34,018
Social workers	5,696	4,364	3,832
<b>Community nursing service</b>			
Occasions of service			
Domiciliary visits	129,041	128,096	123,987 (k)
Palliative care	9,042	9,104	8,375
Infant health	53,236	54,622	
Child health	37,033	29,863	87,525 (f)
Health education	14,382	14,530	16,536
<b>Alcohol and drug service community unit</b>			
Counselling:			
No. of clients	158	87 (c)	N/A (e)
Occasions of service	1,079	1,106	4,436 (i)
Education:			
Educ. & training programs	247	233	199
No. of participants (d)	1,692	N/A	N/A (e)
<b>Rehabilitation and aged care service</b>			
Mobile Rehab. Unit- Occasions of service	3,350	5,317	2,300

Source: Performance Information Section, ACT Department of Health and Community Care

(a) Includes visits to Jervis Bay and Wreck Bay. (b) Incomplete collection for the period. (c) Revised system for the collection of number of clients. (d) A number of participants not included in 1992-93 data due to methodological changes. (e) Not collected anymore. (f) Infant health and child health now counted together. (g) Not counted due to new system changes. (h) Figures from the 1993-94 ACT Health Annual Report (i) new counting procedures. (j) emphasis changed to early detection and health promotion activities and group work. (k) reduction due to closure of Bruce Hostel.

# 4. ACT MORTALITY

Mortality describes the frequency of death within a community and was one of the earliest measures used in assessing health or ill-health within populations. Unlike most health measures, records for mortality across Australia go back for a long period of time. These records have been kept for administrative purposes by births, deaths and marriages.

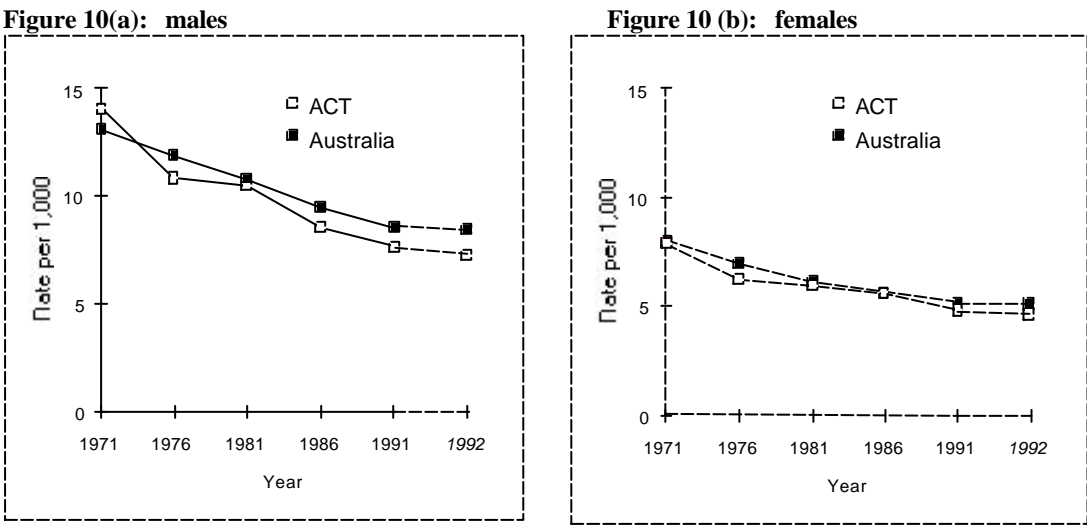
## 4.1 General profile

In 1993 there were 1,110 deaths in the ACT (478 females, 632 males).<sup>3</sup> Aranda with a crude death rate of 15.9 had the highest mortality rate with Central Canberra (including Ainslie, Lyneham and Narrabundah) the region of highest rate (7.6).<sup>3</sup> The varying crude death rates reflect in part, the older age profile of these areas. For example, there are nursing homes in Aranda, Lyneham and Narrabundah which increase the numbers of elderly people in these suburbs.

Since the ACT has a relatively positive demographic, socio-economic, lifestyle and illness profile, it could be expected that this would be reflected in mortality rates. In fact, in 1993, the ACT had the lowest (age-standardised) mortality rate for all states and territories.<sup>5</sup> (The ACT has a relatively young age structure compared to that of the Australian population and death is very much an age-related event. In order to adjust for this effect and to allow comparison, age standardised figures are used). After adjusting for age, the ACT mortality rates are consistently lower than the national average and most states and the Northern Territory for the period 1988-1993.<sup>5</sup>

Both ACT and national age-standardised mortality have declined in the last twenty years. Male rates have declined more quickly, but are not yet as low as those for females (refer Figure 10).

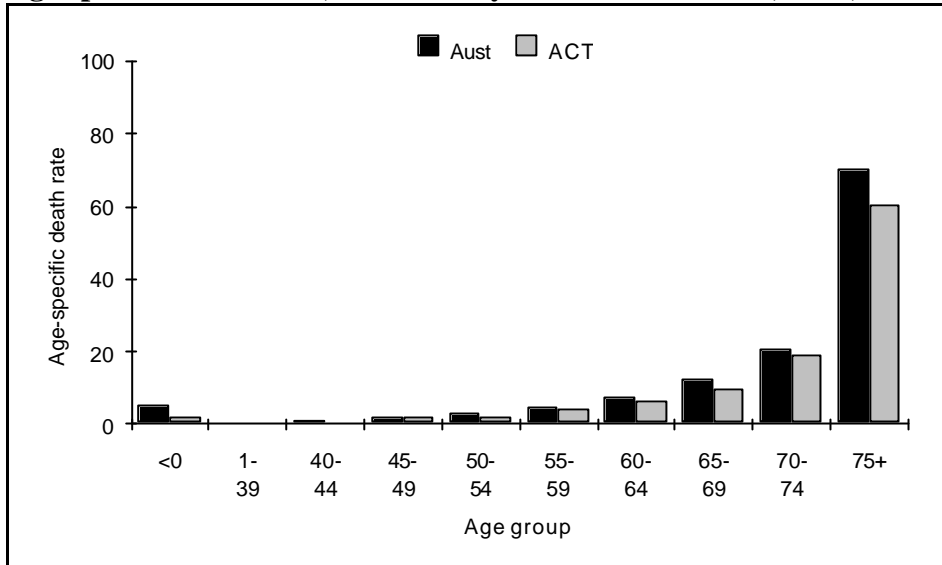
**Figure 10: Age-standardised death rates, males and females, ACT and Australia for census years 1971 to 1991 and for 1992**



Source: ABS & NCEPH, *Trends in Mortality*, 1994, Catalogue Number 3313.0

In every age range for females, the rates for the ACT fare better than for Australia as a whole. (refer Figure 11).

**Figure 11: Age-specific death rates, all causes by ACT and Australia, 1993, females(a)**

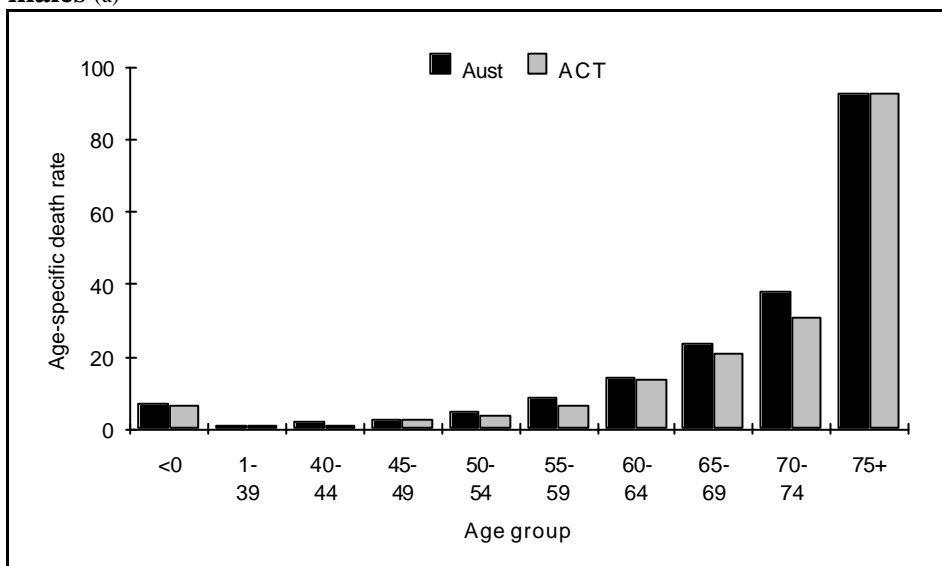


(a) per 1,000 population

Source: ABS 1993 Deaths Australia, Catalogue No. 3302.0 & 1993 Demography ACT, Catalogue No. 3311.8

In nearly every age range for males, the ACT has lower rates than for Australia generally. The exception is for age ranges 30 to 34 where the ACT has a similar rate to Australia (1.8 compared with 1.4).

**Figure 12: Age-specific death rates, all causes by ACT and Australia, 1993, males (a)**



(a) per 1,000 population

Source: ABS 1993 Deaths Australia, Catalogue No. 3302.0 & 1993 Demography ACT, Catalogue No. 3311.8

For both males and females deaths tend to increase with age.

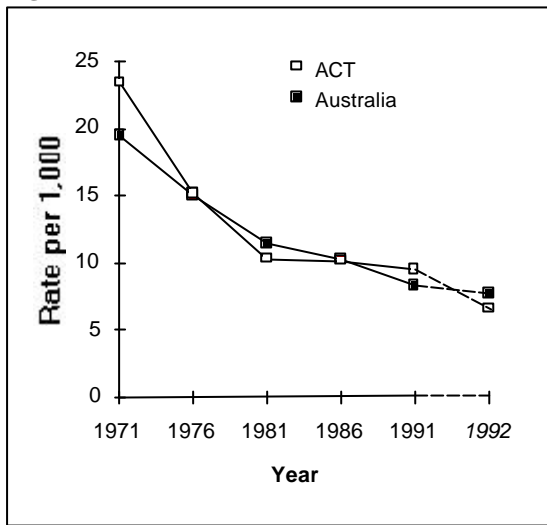
Over the period 1988-1993 there has been little variance within age groups. This suggests that the effects of an aging population will be long-term not immediate.

Infant mortality rates are often considered to be an indicator of overall socio-economic status of a population. Figure 13 examines infant mortality rates and shows that ACT infant mortality rates (at 4.3 per thousand) are lower than for Australia (6.1 per thousand).

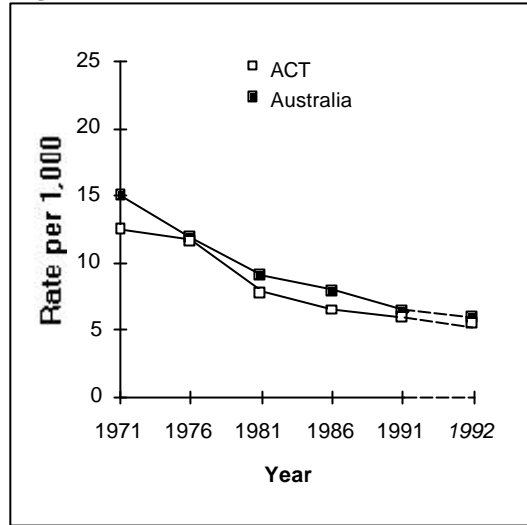


**Figure 13: Infant mortality rates, age 0 to 1, Australia and ACT, males, average for three years around census years 1971 to 1991 and for 1992**

**Figure 13(a) males**



**Figure 13(b) females**



Rate per 1,000 live births

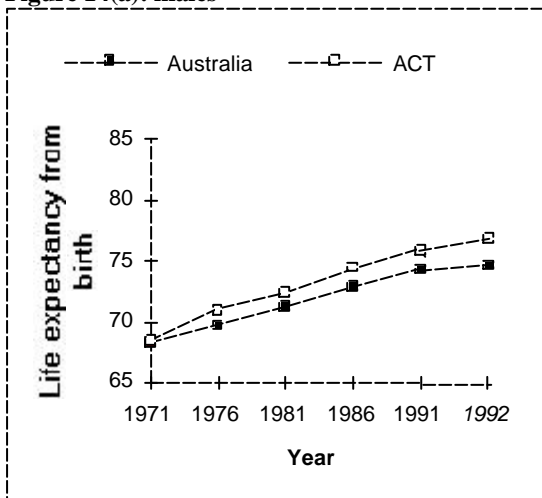
Source: ABS & NCEPH, *Trends in Mortality*, 1994, Catalogue Number 3313.0

## 4.2 Life expectancy

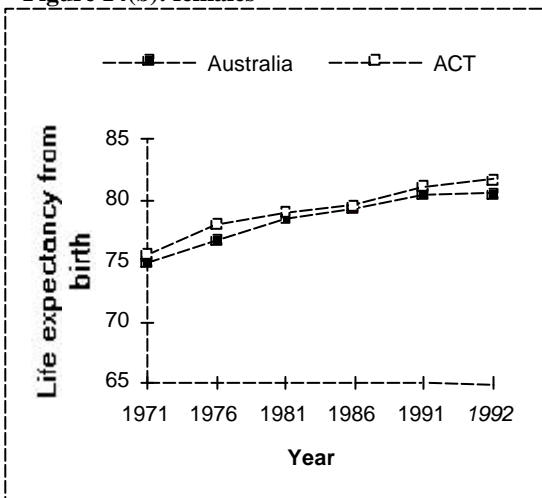
People born in the ACT in 1993 recorded the highest expectation of life from birth of all states and territories: 82.3 years for females (compared to 80.9 years nationally) and 76.2 years for males (compared to 75.0 years nationally). This trend has been constant over the years, as shown in Figure 14.

**Figure 14: Expectation of life from birth for males and females, ACT and Australia, for average of years around Census years 1971 to 1991 and for 1992.**

**Figure 14(a): males**



**Figure 14(b): females**



Source: *Trends in Mortality*, 1994, ABS Catalogue No. 3313.0

### 4.3 Causes of death

A study of the causes of death in the ACT reveals that in 1993, the two major causes of death for females and males combined, were heart disease and cancer (malignant neoplasms). This is the same position as for 1983.

In terms of number of deaths, cancer is now the main cause of death in the ACT with a total of 345 (31% of all deaths) compared to 324 (29%) for heart disease.<sup>4</sup> (Refer Table 16).

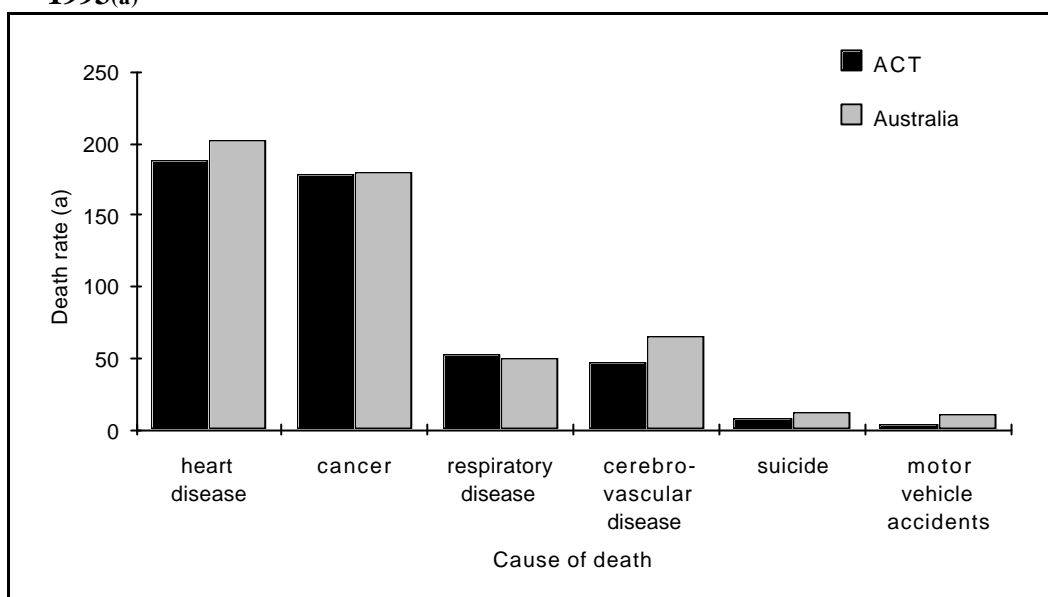
**Table 16: Number of deaths by specific causes: ACT, 1993**

Cause of Death (ICD)	Male	Female	Total
<b>Diseases of circulatory system</b>	229	211	440
All heart disease (393-398,402,404,410-416,420-429)	176	148	324
Cerebrovascular disease (430-438)	35	44	79
<b>Neoplasms</b>	209	142	351
Malignant neoplasms (cancer)(140-208)	204	141	345
. Colon (153)	22	20	42
. Respiratory and intrathoracic (160-165)	44	20	64
. Breast (174,175)	0	35	35
. Genitourinary organs (179-189)	4	14	66
. Lymphatic and haematopoietic tissue (200-208)	2	17	40
<b>Diseases of the respiratory system</b>	52	36	88
Pneumonia and Influenza (480-487)	40	21	61
Chronic obstructive pulmonary disease and allied conditions (490-496)	5	9	14
<b>Injury - accidents, poisoning, violence</b>	49	19	68
Motor vehicle accidents (E810-E819)	8	3	11
Falls, drowning, submersion (E880-E888, E910)	5	4	9
Suicide (E950-E959)	23	4	27
<b>Endocrine, nutritional and metabolic diseases and immunity disorders</b>	18	9	27
Diabetes (250)	7	7	14
<b>Infectious diseases</b>	9	5	14
<b>Mental disorders</b>	2	8	10
<b>Total deaths</b>	<b>632</b>	<b>478</b>	<b>1,110</b>

Source: ABS 1993 *Causes of Death Australia* (3303.0)

Stated as a proportion of all deaths, cancer is the main cause of death, but when the number of deaths is age-standardised to compare with Australia, heart disease is the main cause in the ACT. Even so, it can be seen from Figure 15 that the ACT population has fewer deaths than the national average for heart diseases however.

**Figure 15: Age-Standardised death rates for major causes of death, ACT and Australia, 1993(a)**

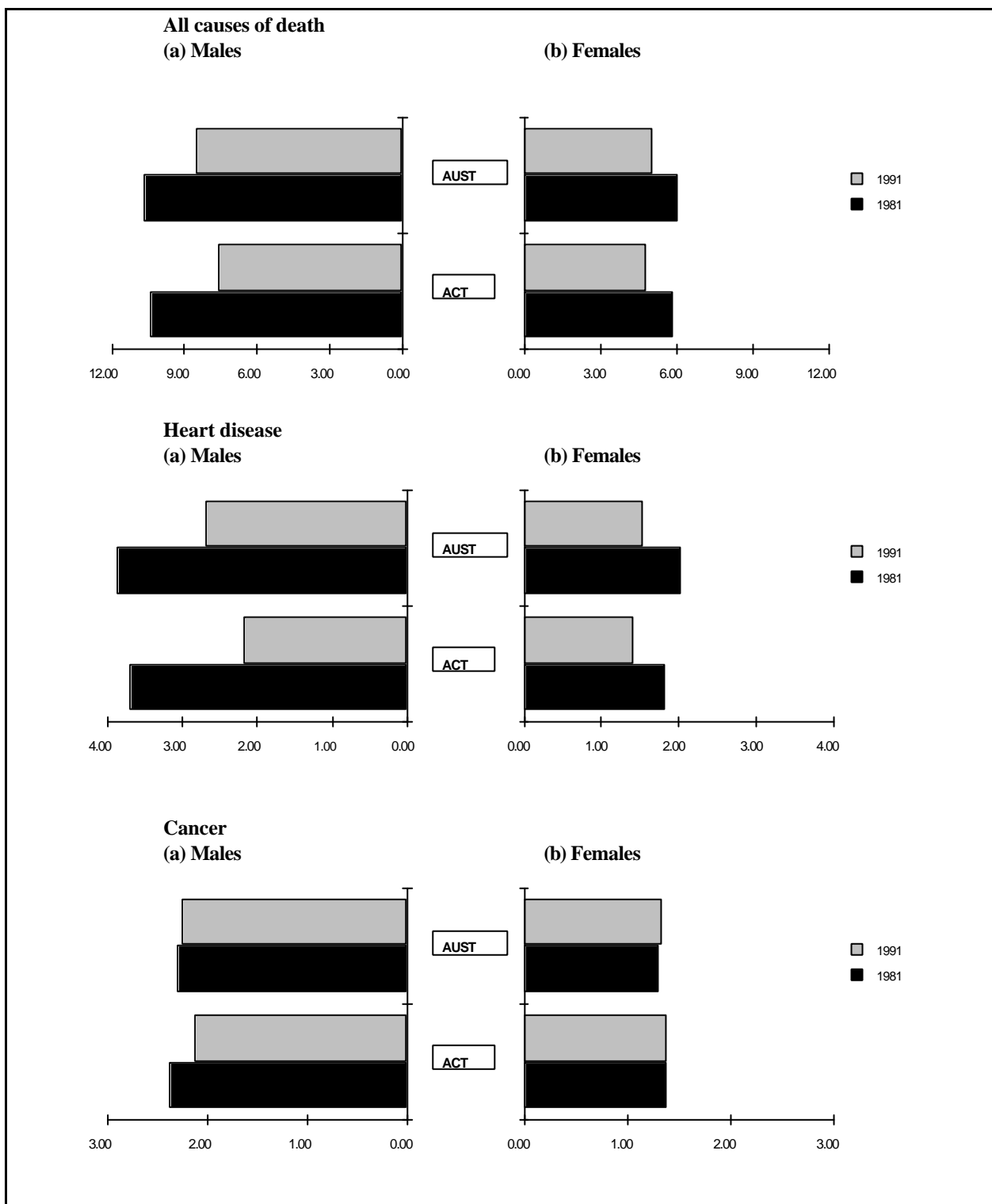


(a) Deaths per 100,000 population, standardised for age and sex using the 1991 Australian population as the standard population. Source: ABS, 1993 *Demography ACT*, Catalogue No. 3311.8

Figure 16 details male and female death rates over a ten year period to 1991 and allows for a comparison, not only between ACT gender specific rates, but also between gender specific rates for Australia.

It can be seen that death rates for ACT males have decreased for all causes - in particular for heart disease. ACT female rates, on the other hand, have decreased overall, with the exception of cancer where they have remained at a similar level. For both males and females ACT rates compare favourably with Australian rates. In other areas, Figure 15 shows that the ACT death rate for respiratory disease is slightly higher than the national rate and will need to be monitored.

**Figure 16: Age-standardised cause-specific death rates for major causes 1981 and 1991, ACT and Australia, males and females<sup>(a)</sup>**



(a) Rate per 1,000, standardised to the 1986 total Australian population  
 Source: ABS & NCEPH, Trends in mortality, ABS Catalogue No. 3313.0

## 4.4 Years of potential life lost

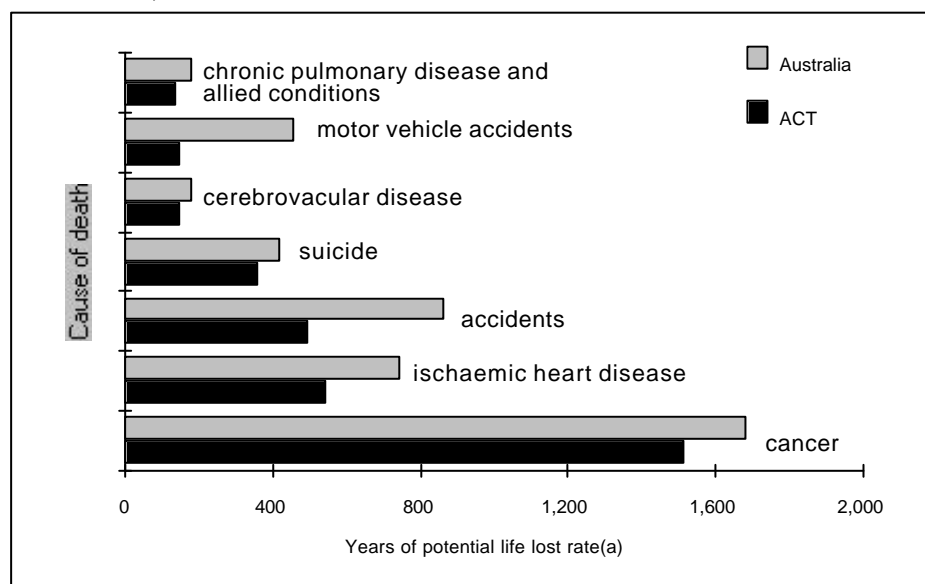
Estimates of years of potential life lost (YPLL) were calculated for deaths of persons aged 1 to 75 years based on the assumption that deaths occurring during this period are considered untimely.<sup>4</sup>

In conjunction with morbidity information, YPLL can assist those working on health service provision by providing a clearer picture of overall needs. Deaths tend to occur at an older age. However, many more life years are lost when deaths occur in younger people. This is reflected well in the distribution of ACT deaths and YPLL for suicides and accidents (refer Table 17). Figure 17 complements Table 17 and outlines the leading causes of death by rates for YPLL. It compares ACT rates with those for Australia and shows that ACT rates are lower for all leading causes. That is, less years of life are lost per 100,000 population in the ACT compared to the whole of Australia, despite our younger population (as the effects of age have been removed through standardisation).

Table 17 shows that in 1993, cancer (malignant neoplasms) had the highest percentage of deaths (31%) and the highest YPLL (35%) for selected causes of death. Ischaemic heart disease had 20 per cent of deaths, but only 13 per cent of YPLL. Suicides accounted for 2 per cent of total deaths with 8 per cent of YPLL and accidents accounted for 3 per cent of total deaths with 11 per cent of YPLL.

ACT residents have a consistently smaller rate of YPLL than the Australian population in leading causes of death.

**Figure 17: Leading causes of death by rates for years of potential life lost (1-75 yrs), ACT and Australia, 1993(a)**



(a) Years of potential life lost are standardised for age.

Source: Causes of Death Australia, ABS Publications Catalogue No. 3303.0. Unpublished data.

**Table 17: Years of potential life lost (1-75 yrs) and number of deaths for selected causes of death, ACT 1993.**

Cause of death category (ICD)	Number		Percentage	
	YPLL	Deaths	YPLL	Deaths
<b>Diseases of the circulatory system</b>				
Ischaemic heart disease (410-414)	1,587	224	13	20
Cerebrovascular disease (430-438)	448	79	4	7
Disease of arteries, arterioles and capillaries (440-448)	65	28	1	3
<b>Neoplasms</b>				
Malignant neoplasms (cancer) (140-208)	4,375	345	35	31
<b>Diseases of the respiratory system</b>				
Chronic obstructive pulmonary disease and allied conditions (490-496)	404	61	3	5
Pneumonia and influenza (480-487)	36	14	<1	1
<b>Injury - accidents, poisoning, violence</b>				
Accidents (E800-E949)	1,437	36	11	3
Suicide (E950-E959)	1,044	27	8	2
Motor vehicle traffic accidents (E810-E819)	441	11	3	1
<b>Diseases of the nervous system and sense organs</b>				
Hereditary and degenerative diseases of the central nervous system (330-337)	73	13	1	1
<b>Diseases of the digestive system</b>				
Chronic liver disease and cirrhosis (571)	224	9	2	1
<b>Endocrine, nutritional and metabolic diseases and immunity disorders</b>				
Diabetes mellitus (250)	167	14	1	1
<b>Diseases of the genitourinary system organs</b>				
Nephritis, nephrotic syndrome and nephrosis (580-589)	53	9	<1	1
<b>Mental disorders</b>				
Senile and presenile organic psychotic conditions (290)	<1	9	<1	1
<i>All causes</i>	12,622	1,110	100	100

(a) Years of potential life lost are standardised for age.

Source: Causes of Death Australia, ABS Publications Catalogue No. 3303.0. Unpublished data.

## References

1. Australian Bureau of Statistics & National Centre for Epidemiology and Population Health, *Trends in Mortality*, ABS Catalogue No. 3313.0, 1994
2. , Australia Institute of Health and Welfare, *Australia's Health 1994*
3. Australian Bureau of Statistics, *1993 Demography Australian Capital Territory*, Catalogue No. 3311.8
4. Australian Bureau of Statistics, Unpublished data, *1993 Causes of Death, Australia*, Catalogue No. 3303.0
5. Australian Bureau of Statistics, *1993 Deaths Australia*, Catalogue No. 3302.0
6. Glover J, Woollacott T, *A Social Health Atlas of Australia*, Volume 2, September 1992

## 5. ACT PROGRAMS TO IMPROVE HEALTH STATUS

### *Programs available for identified health issues*

In line with ACT (and national) health goals and targets, current programs related to promoting healthy lifestyles, are assisting in the prevention of poor health, and in treatment and rehabilitation of people with diseases and illness.

The Public and Environmental Health Service of the Department of Health and Community Care has an education program which targets such groups as school children, the elderly and the unemployed. The program aims to provide education on food safety and healthy methods of preparation and storing of foods.

Other programs include those administered by Primary Health in the Department of Health and Community Care:

- \* Health matters for women over 60 project which is a self-help group promoting breast and cervical screening, exercise etc. for older women;
- \* Asthma education project aimed at primary school children;
- \* "Book into Health" which is a joint project with the Library Association promoting health and lifestyle messages on bookmarks;
- \* "Keep Living, Keep Moving" program which is an introductory exercise program for retired people;
- \* "Strategies for Ageing" groups run by nurse practitioners;
- \* Weight Control Program which uses a multidisciplinary approach including counselling and nutrition advice;
- \* "Neat Feet" footcare self-management programs for older people;
- \* A significant number of publications including "Food for children in day care", "Caring for your well-being", "Tots in Tuggeranong". Some of these publications are published in various languages to ensure easy access.

Table 15 details some other programs targeting healthy practices. The identified risk factors outlined are particular risk factors for such conditions as heart disease, cancers, asthma and other respiratory diseases, but also impact on other conditions such as depression and obesity.

**Table 15: Selected ACT programs available for identified health issues**

<b>Program</b>	<b>Target Groups &amp; Strategies</b>	<b>Health Issues</b>
Tobacco amendment Bill, 1989	Reduce tobacco availability to children & adolescents	Smoking
Health Promotion in the work place	- Raise awareness of issues related to mental, physical and social health and to achieve higher levels of wellness and productivity - Develop healthy workplace canteens	Smoking Nutrition
ACT Health Promotion Fund	Sponsorship of sports and the arts	Smoking Nutrition
Take Away Food Project	- Aims to increase availability of and increase demand for healthy take-away foods. - Information for consumers - Mass media campaign	Nutrition
Youth Peer Support	Aims to assist young people with life-threatening diseases to build self-esteem, and skills in negotiation and communication.	Social support
Health Assessment in the Workplace and Lifestyle Seminars	Physical assessment of risk factors, individual counselling, small group education in the adult working population.	Multiple Risk Factors (smoking, blood pressure, nutrition, exercise)
The Healthy Cities Network	A wide range of strategies including community action, education, and advocacy to bring about changes in the living and social environments of the participating cities.	Healthy environment
Non-smoking workplaces, restaurants, sporting venues	All States and Territories have been active in working to reduce the prevalence of smoking by, for example, changing environments	Healthy environment
Cardiac Rehabilitation Program	- Education for patients upon entry to WVH - Upon discharge, continuing education & supervised training in the gym (patients may be referred from GPs or specialists outside WVH). - ACT Division of the Australian Cardiac Association's walking program	Multiple Risk Factors (smoking, blood pressure, nutrition, exercise)
ACT Division - National Heart Foundation programs	Heart Week. Lectures for GPs. Health Lifestyle education for schools.	Multiple Risk Factors (smoking, blood pressure, nutrition, exercise)
Fresh Start Project	Health Promotion Program to provide GPs with resources to help patients reduce risk factors	Multiple Risk Factors
Asthma Education Program	Living with Asthma course for adults and parents of children with Asthma.	Asthma

### *ACT initiatives*

The Government's ability to define and analyse the needs of residents and become proactive in satisfying those needs is paramount to any health enhancement plan. The ACT Government through its ACT Department of Health and Community Care, has initiated several mechanisms in addition to those previously listed to address the needs of its constituents. These include:



- \* engaging a consultancy firm to undertake a *complete review of the Department*: The final report of the consultancy was released in April 1994 and most of its recommendations are being implemented. These include implementing a strategic framework and processes for achieving improvements in financial management and developing realistic and appropriate budgets to finance services, which is particularly challenging at this time, since the Commonwealth Grants Commission has reduced the ACT allocation considerably;
- \* as a follow-up measure, engaging a *consultancy* (in June 1995) to work with the Department to further refine the efficient service offered by the Department to ensure an efficient, appropriate and cost effective quality service;
- \* undertaking major service *reviews* where necessary. Those currently being undertaken include the Maternity Services Review, reviews on Youth Health, Post Acute Home-based Care and Rehabilitation;
- \* *re-developing the Woden Valley Hospital* to more appropriately service the community: major construction initiatives are costing \$173m over seven years;
- \* establishing the *Canberra Clinical School* in 1995 to enhance education opportunities for medical students and develop research initiatives in areas of specific concern to ACT residents (eg. obstetrics). Seventeen final year medical students commenced studies in March 1995 and are undertaking medical and surgical placements at Woden Valley and Calvary hospitals;
- \* developing *health goals and targets* for the ACT: The priority areas for the ACT reflect the four national focus areas of cardiovascular disease, cancer, injury and mental health as well as targeting a number of prevalent conditions in the ACT which include alcohol abuse, respiratory conditions (particularly asthma) and musculoskeletal conditions. A Health Outcomes Reference Group to manage the implementation phase of the goals and targets has recently been established;
- \* associated with the development of goals and targets is the need for quality, timely *data* on which to assess needs, monitor progress in meeting those needs and to evaluate programs. Some recent initiatives include liaising with the Australian Bureau of Statistics in their preparations for the National Health Survey, administering a yearly quality of life survey in conjunction with the University of Canberra, establishing a cancer registry, establishing a cervical cytology register and establishing the Care Continuum Project;

*ACT Cancer Registry* - This registry was established in June 1994 to receive notifications of cancer, co-ordinate the data and monitor trends in cancer incidence and death rates in the ACT population. It is part of a national network.

*ACT Care Continuum and Health Outcomes of Hospital Inpatients Project* - This is a two year innovative pilot project, funded by the Commonwealth Department of Human Services and Health, which commenced in early 1995 and is being undertaken by the Epidemiology and Population Health Section of the ACT Department of Health and Community Care in collaboration with the Australian National University. The project involves investigating approximately 10,000 inpatients and their experiences

prior to admission, during their hospital stay and up to six months after discharge. Questions regarding formal and informal service utilisation, costs across the care continuum and how to make better use of resources, and health outcomes including quality of life are being addressed. Data will be collected through an interview questionnaire, a diary maintained by the patient although mostly filled in by service providers and self-completion questionnaires complemented by existing data bases. The information collected will allow for the development of a profile of patient care and outcomes on which to base future planning for the enhancement of quality of care and relevance of health interventions.<sup>2</sup>

### *Intersectoral implications*

Other major influences on health status include such conditions as quality, accessible housing, an appropriate accessible transport system, an educational mechanism to ensure people are aware of services and how to access them, and the level of involvement of people in the decision making processes around policy which impacts on their health and lifestyle status. Whilst most of these influences are outside the immediate responsibility of the Department of Health and Community Care, an integrated approach to service delivery assists in ensuring that the different departments co-operate in addressing the holistic needs of the ACT population. Within the Department of Health and Community Care, client consultation is assured through representation on the Health Advisory Council and various working parties, reference groups and committees.

It will be important to address the factors detailed above, through the adoption of the principles of the Ottawa Charter (1986) if further improvements in health status are to be achieved by the whole community.

### References

1. *ACT Health Goals and Targets for the year 2000*, ACT Department of Health, 1994
2. Shadbolt B, *The Care Continuum and Health Outcomes Project; The Research Plan*, Canberra, Department of Health and Community Care, 1995

## 6. SELECTED HEALTH PROBLEMS IN THE ACT

The major health problems affecting people in the ACT were identified in the 1993-1998 ACT Department of Health Corporate Plan after extensive analyses of epidemiological, demographic and health service utilisation data, and from community consultation, especially during the process of developing ACT Health Goals and Targets:

### 6.1 Cancer

Cancer is a malignant growth of human tissue that has the potential to invade tissue beyond its site of origin. Leukaemia is a form of cancer. Neoplasm is the term which refers to malignant or non-malignant abnormal growths or tumours.

Approximately one in four people will develop a cancer (not including non-melanocytic cancer) during their life time.<sup>1</sup> Although all cancers are not fatal, cancer is the major cause of premature mortality in Australia. The risk of cancer is lowest in late childhood, but increases with age thereafter. As the ACT moves towards an older population, it can be expected that there will be an increase in the incidence of cancer in the Territory.

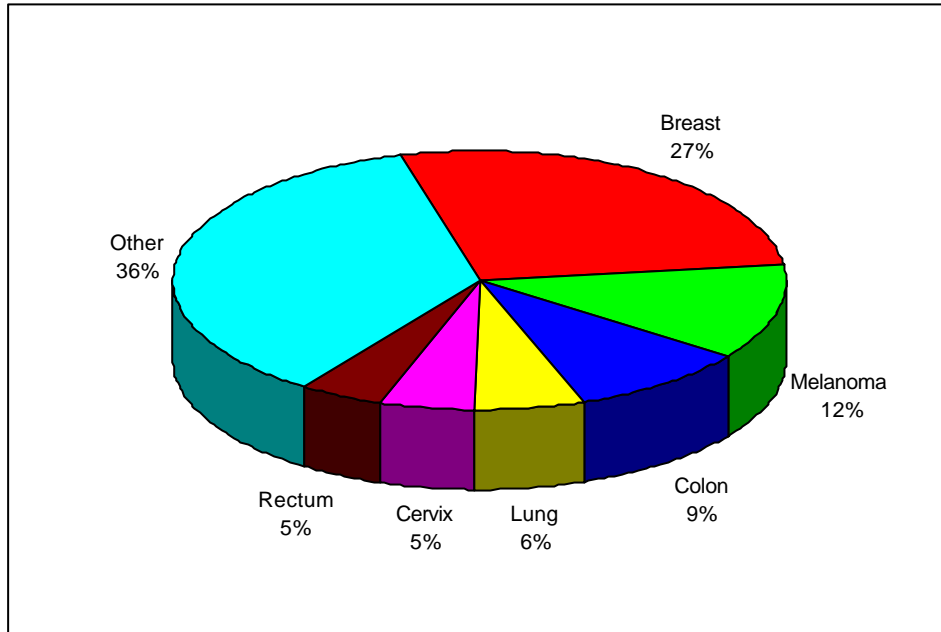
Of the total of 1,110 deaths in the ACT in 1993, malignant neoplasms (cancer) accounted for 32 per cent of all male deaths, 29 per cent of all female deaths, and 31 per cent of all deaths. The standardised death rate in the ACT (178.4) was similar to that of Australia (180.1).<sup>44</sup> The total incidence of cancer in the ACT population is generally similar to, or slightly lower than, the rates experienced in NSW. <sup>(1)</sup>

Years of potential life lost (YPLL) due to cancer death has been estimated at 4,375 years or 35 per cent of total YPLL in the ACT in 1993.<sup>27</sup> Cancer is the single highest cause of YPLL, followed by cardiovascular disease (21%) and accidents (11%).

The incidence for the most common cancers for females and males for 1987-1991 are shown in Figures 18 and 19 respectively. The most common sites for females were breast, melanoma, colon, lung, cervix uteri and rectum and the total number of new female cases during the five year period was 1553. For males the most common sites were lung, melanoma, prostate, colon and rectum with a total number of 1559 new cases for the five year period.

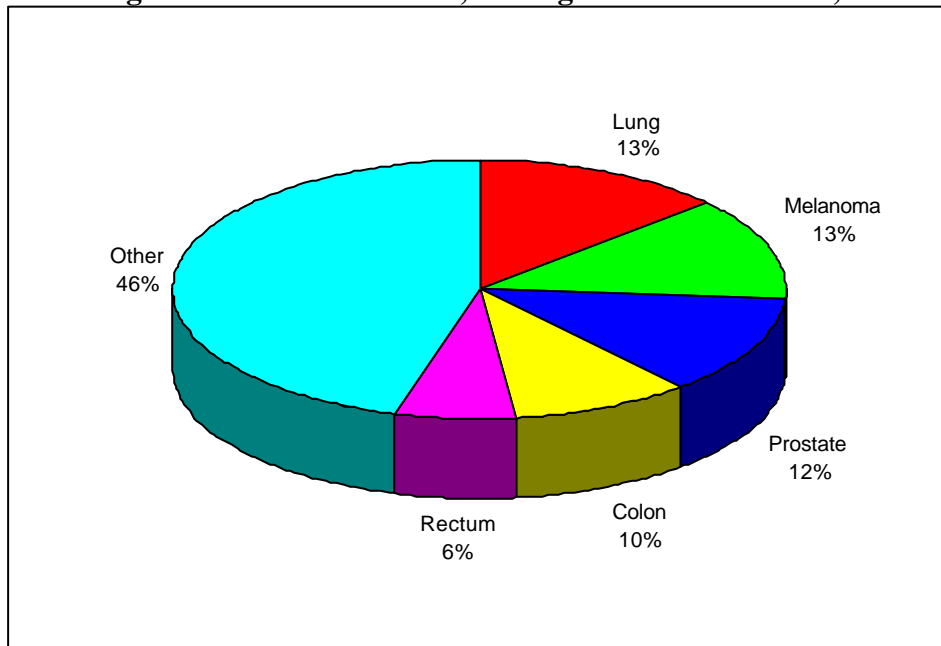
Of the 647 ACT female cancer **deaths** between 1987 and 1991, as shown in Figure 20, leading sites were breast, lung, colon, unknown primary and rectum. Of the 751 ACT male cancer **deaths** between 1987 and 1991, leading sites, as shown in Figure 21, were lung, prostate, colon, rectum, unknown primary and stomach.

**Figure 18 : Percentage of new cases of cancer, leading sites in ACT females, 1987-1991**



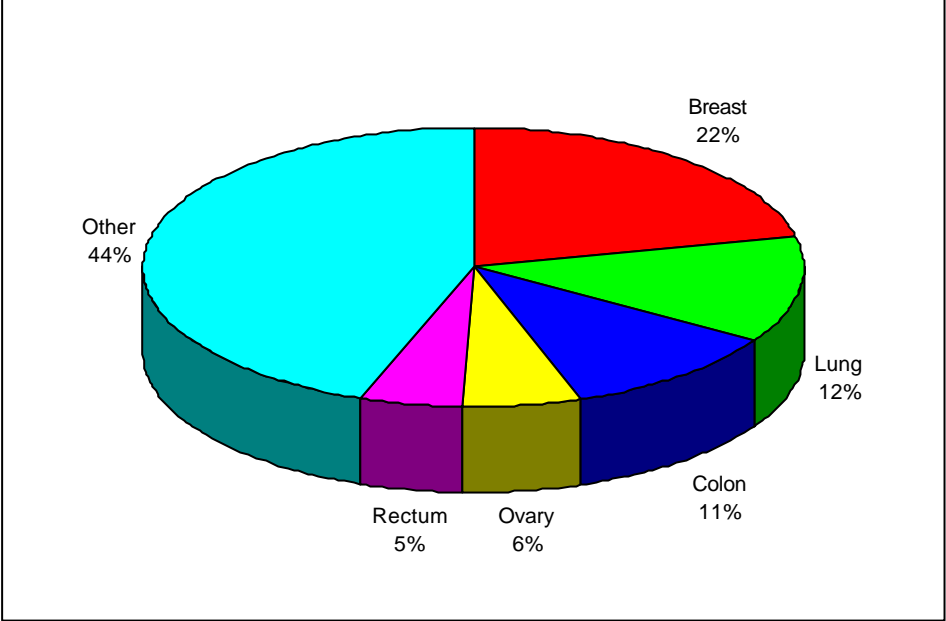
Source: Cancer in the ACT 1982-1991

**Figure 19: Percentage of new cases of cancer, leading sites in ACT males, 1987-1991**



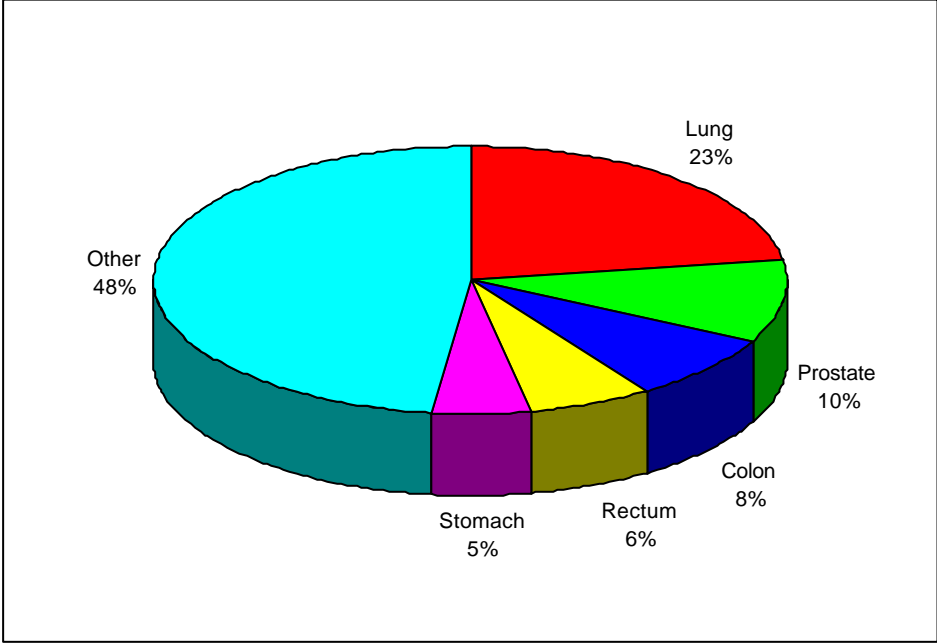
Source: Cancer in the ACT 1982-1991

**Figure 20: Percentage of cancer deaths, leading sites in ACT females, 1987-91**



Source: Cancer in the ACT 1982-1991

**Figure 21: Percentage of cancer deaths, leading sites in ACT males, 1987-91**



Source: Cancer in the ACT 1982-1991

The most common cancers in children were leukaemias, brain cancers and lymphomas, although incidence numbers of cancers in this age group were small. In the 15-44 years and 45-64 years groups, melanoma was among the three leading cancers for both females and males. Breast cancer was the leading cause of cancer in all females over 15 years, while prostate cancer in males and colon cancer in both sexes became more common in the older age groups as shown in Table 18.

**Table 18: The most common cancers in specific age groups in the ACT, 1987-1991 (per cent of all cancers in that age group in brackets)**

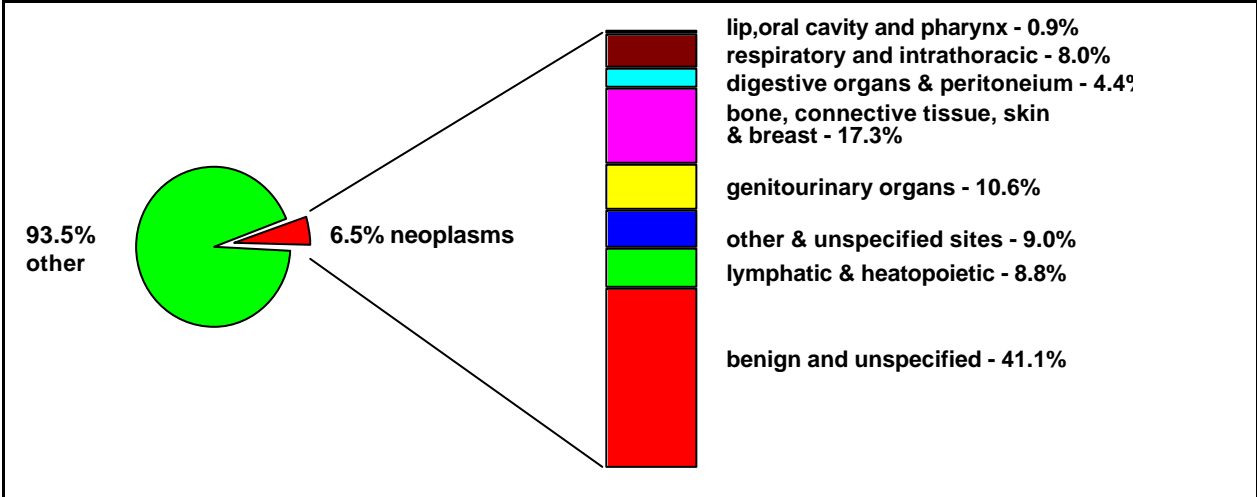
	0-14 years	15-44 years	45-64 years	65+ years
<b>Males</b>	<b>n = 30</b>	<b>n = 248</b>	<b>n = 580</b>	<b>n = 701</b>
	leukaemias (37%)	melanoma (31%)	lung (15%)	prostate (21%)
	brain (20%)	lymphomas (9%)	melanoma (13%)	lung (16%)
	lymphomas (10%)	testis (8%)	colon (12%)	colon (10%)
<b>Females</b>	<b>n = 19</b>	<b>n = 350</b>	<b>n = 616</b>	<b>n = 568</b>
	brain (26%)	breast (34%)	breast (34%)	breast (17%)
	leukaemias (16%)	melanoma (28%)	melanoma (11%)	colon (15%)
	lymphomas (11%)	cervix (9%)	colon (8%)	lung (10%)

Source: Cancer in the Australian Capital Territory 1982-91

*Hospital inpatient separations*

Public and private hospital morbidity data give a broad profile of acute interventions. In 1992-93 neoplasm separations accounted for 4,297 (6.5%) of the total 66,419 hospital separations. Figure 22 shows the proportion of separations where the patient was principally diagnosed with a neoplasm as part of the total number of separations for public and private hospitals in 1992-93.

**Figure 22: Breakdown of 1992-93 ACT hospital inpatient separations for neoplasms**

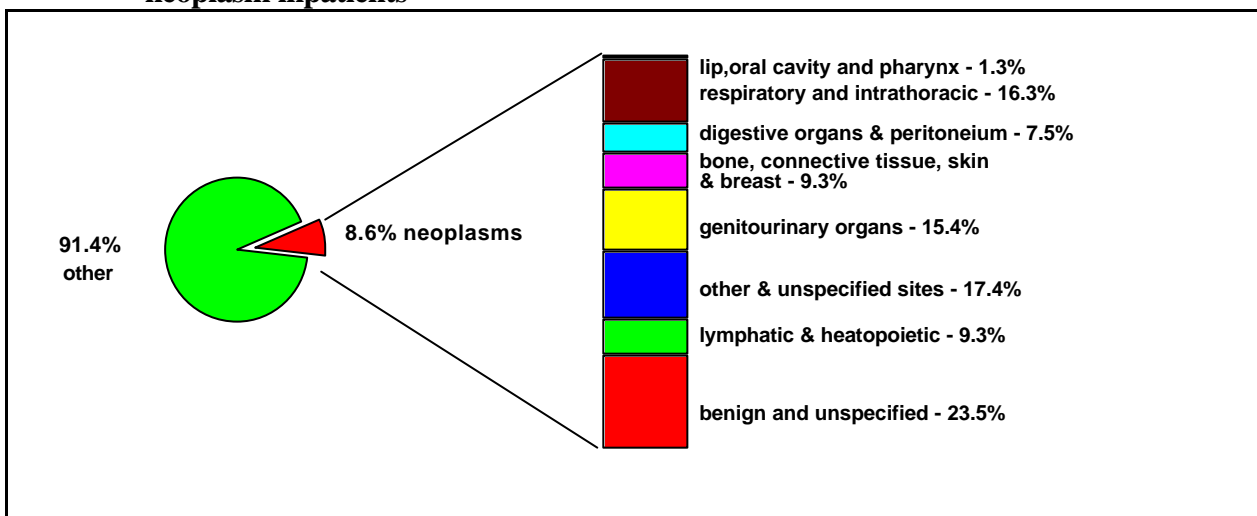


Source: Raw data from the ACT Hospital Morbidity Data Collection 1992-93  
Performance Information Section, Department of Health and Community Care

## Total length of stay

If you look at number of separations in conjunction with the length of stay, a profile of cancer treatment for hospital inpatients emerges (refer Figures 22 and 23). It can be seen for example, that respiratory and intrathoracic treatment accounts for 8 per cent of all cancer separations, but utilises 16.3 per cent of (cancer) bed days (ie. heavy utilisation of bed days). On the other hand, bone, connective tissue, skin and breast cancer accounts for 17.3 per cent of cancer separations, but only utilises 9.3 per cent of bed days (ie. relatively small utilisation of bed days). This is a reflection on the amount of treatment received and/or the severity of the episode. It should be noted that part day procedures such as those undertaken at outpatients and accident and emergency departments are not included in these deliberations.

**Figure 23: Distribution of 1992-93 ACT hospital separations: total days length of stay for neoplasm inpatients**



Source: Raw data from the ACT Hospital Morbidity Data Collection 1992-93  
Performance Information Section, Department of Health and Community Care

## Survival rates following cancer onset

It is recognised that changes in survival rates can be a useful measure in determining the efficacy of treatment. They should, however, be interpreted with caution, since they are affected by variations in lead time for diagnosis, length time, patient selection and disease classification. Furthermore, they do not measure the quality of life of the patients who survive.

Survival rates for the ACT are unavailable at this time. Until recently, the NSW Cancer Registry collected ACT data, but accurate coverage was not assured. Mandatory reporting was only introduced in 1994.

Five year survival rates are available for South Australia and may assist in ascertaining ACT rates.<sup>6</sup> South Australian data indicates that the relative five year survival rate for all cancers for males is 45 per cent, and for females 57 per cent. Of the most common cancers, for males, lung cancer has an 11 per cent success for 5 years survival rate and for females, breast cancer has a 75 per cent successful survival rate. The female rate is predicated on lower survival rates for younger women with improved survival rate for women after menopause.

The South Australian Registry has been able to identify significant improvements in relative survival for some cancers by comparing cases diagnosed over the period 1977-82 and 1983-90 (five year survival ratio for cancer of the cervix improved by 8% to 73%, prostate by 7% to 67%, oesophagus by 8% to 15%). These ratios should be interpreted with caution, but give an indication of trends.

**Non-melanocytic skin cancers** are not included in the discussion above. These are the most common cancers in Australia. Almost all of them are basal cell and squamous cell carcinomas which are often self detected and simply removed in doctors' surgeries. They are usually not histologically confirmed or reported. Giles, Marks and Foley estimated that the national age standardised treatment rate was approximately 823 cases per 100,000 population per year in the late 1980's.<sup>4</sup>

### *Implications for the future*

Over the period 1982-1992, the number of new cases and deaths from cancer has been increasing, but much of this is due to absolute increases in population rather than increases in risk of developing cancer. Since the ACT population is ageing, it can be expected that the number of new cases and deaths due to cancer will rise. This has implications for service planners as service demand increases.

It should also be noted that the most common sites for cancer in people over sixty five are prostate in men, breast in women and colon and lung in both sexes. It is expected that there will be an increase in these cancers.

### *Strategies for addressing the problem*

Although causal factors for many cancers are not readily understood, it is estimated that only about 30 per cent of all cancers can be attributed, or at least partly attributed to behavioural or environmental factors.<sup>5</sup> Nevertheless, this has a vital impact on philosophy around prevention strategies.

With regard to **lung cancer**, there has been a concerted effort in the ACT to discourage people from smoking and thereby reducing their chance of developing this cancer. Legislative moves to increase the age to eighteen for people able to buy cigarettes, making purchases accountable by proof of age and encouraging restaurants, enclosed public places and office buildings to be smoke-free have had considerable effect on the smoking habits of the public. This effort will need to continue. Unfortunately, lung cancer in women is still increasing, (although there are indications to suggest that it is decreasing in men) so young women in particular, will need targeting.

There are no known preventative measures for **breast cancer**, but early detection will increase the chances of successful treatment. The ACT Government agreed in 1992 to participate in the National Program for the Early Detection of Breast Cancer by establishing the **ACT Breast Screening Clinic** in Civic. The Clinic offers free, two yearly mammograms for women over forty. It actively offers testing to all women over fifty.



It is thought that **melanoma (and non-melanocytic skin cancer)** risk can be reduced dramatically by decreasing exposure to the sun. Also, early detection of this cancer allows for effective treatment. It is therefore imperative for educative programs to continue, especially targeting young people.

There are no proven preventative strategies for **prostate cancer**. The issue of screening has received increasing attention, but there is no evidence at this stage that screening using prostate specific antigen reduces the death rate from this cancer.

Whilst there are two tests available for screening for **cancer of the colon**, evidence to date has not confirmed that population screening can reduce mortality from this cancer. Screening for people with a family history of colon cancer is however, recommended.

For **cervical cancer**, the **ACT Cervical Cytology Register** has been established to provide Pap smear histories and a back-up reminder and recall system for women. The Register also assists in monitoring quality assurance of Pap smears and will provide aggregate data to monitor the effectiveness of the program. A concentrated education program continues. As for most cancers, early detection of this cancer increases the chances of successful treatment. Pre-cancerous changes can be detected fairly easily and up to 90 per cent of all cervical cancer can therefore be prevented.

Other initiatives which assist in the prevention and successful treatment of cancer in the Territory include:

**The ACT Cancer Registry:** The Public Health (Cancer Reporting) Regulations were endorsed by the Minister for Health in June 1994. They make it mandatory for all hospitals, nursing homes and pathology laboratories to notify every time a person with cancer attends their institution, or a pathology specimen shows the presence of cancer.

The ACT Cancer Registry was established in mid 1994 to receive and analyse all notifications of cancer cases in the ACT. It is part of a national network of cancer registries and monitors trends in cancer incidence in the ACT. It also compares ACT data with that for the rest of Australia. Information on trends will assist with service planning in the future.

**Hospital Based Cancer Registry:** The ACT is in the developmental stage of establishing a hospital-based registry at Woden Valley Hospital. Data collected will focus on the treatment and clinical status of patients.

**Clinical Oncology Services:** A comprehensive specialist cancer service for the ACT and South Eastern Region is provided at the Woden Valley Hospital. The Radiotherapy Department is well equipped, has two linear accelerators and treats some five hundred new patients a year. The Medical Oncology and Clinical Haematology Departments see approximately six hundred new patients a year and provide access to the most current treatments such as autologous bone marrow transplants using an apheresis machine. The need for patients to travel interstate for treatment has been reduced considerably. Psycho-social aspects of treatment are undertaken by oncology social workers who are an integral part of the oncology team.

Calvary Public and Private Hospitals and John James Memorial Private Hospital provide community hospital type surgical, medical and diagnostic services for cancer patients.

ACT Community Nursing provides a **Home Based Palliative Care Team** which provide specialised care to terminally ill patients and their families. The establishment of a seventeen bed **hospice** on Acton Peninsula has widened choices for terminally ill patients. The Hospice opened in 1995 with an initial 10 bed capacity.

Other government services to assist home-bound patients include the **Mobile Rehabilitation Service** which provides occupational therapist assessments of physical needs and the **ACT Library Service** which provides a home library service.

**The ACT Cancer Society** has operated since 1969 and works in co-operation with the Department of Health and Community Care. It offers extensive support services to those diagnosed with cancer and their families, through counselling, group support and emergency help. The education and information service it offers is vital in the prevention and control of cancer. It also administers a Research Funding Program for Canberra-based researchers to advance knowledge of the disease.

Other non-government services supporting home-bound patients include the **Heavy Linen Laundry Service** (Red Cross), **Homebound Service** (Red Cross), **Respite Care ACT Inc**, and **Home Help Service ACT Inc**.

**Area Health Management: ACT Plan for Cancer Services:** The Plan has five essential objectives;

- \* To assess the current health needs of people diagnosed with cancer in the ACT;
- \* To improve the links between the tiers of primary, secondary and tertiary health care for people with cancer to ensure optimum continuity of care;
- \* To develop planning mechanisms that ensure there is a cost-effective mix of health services to health needs;
- \* To develop mechanisms which examine the purchaser/provider split;
- \* To develop an appropriate information system.

These are being achieved through the establishment of a reference group with five working parties which are addressing the issues related to promotion/prevention, diagnosis and early intervention, treatment, rehabilitation and extended care, and palliative care. The group and working parties have memberships which reflect all interested parties (consumers, service providers, policy/research). The intention is to implement a cancer information system, develop a health literacy model, report on current cancer care and control at the regional level and report on linking the Area Health Management with Health Goals and Targets initiatives. The Plan is well underway and the first progress report will be issued soon.

## 6.2 Diseases of the Circulatory System.

Diseases of the circulatory system can be described as diseases relating to the heart and blood vessels.<sup>18</sup> They include diseases such as rheumatic, hypertensive & ischaemic heart disease, diseases of the pulmonary circulation, cerebrovascular disease, peripheral vascular disease, diseases of the arteries, veins, lymphatics and other circulatory conditions.<sup>19,22</sup>

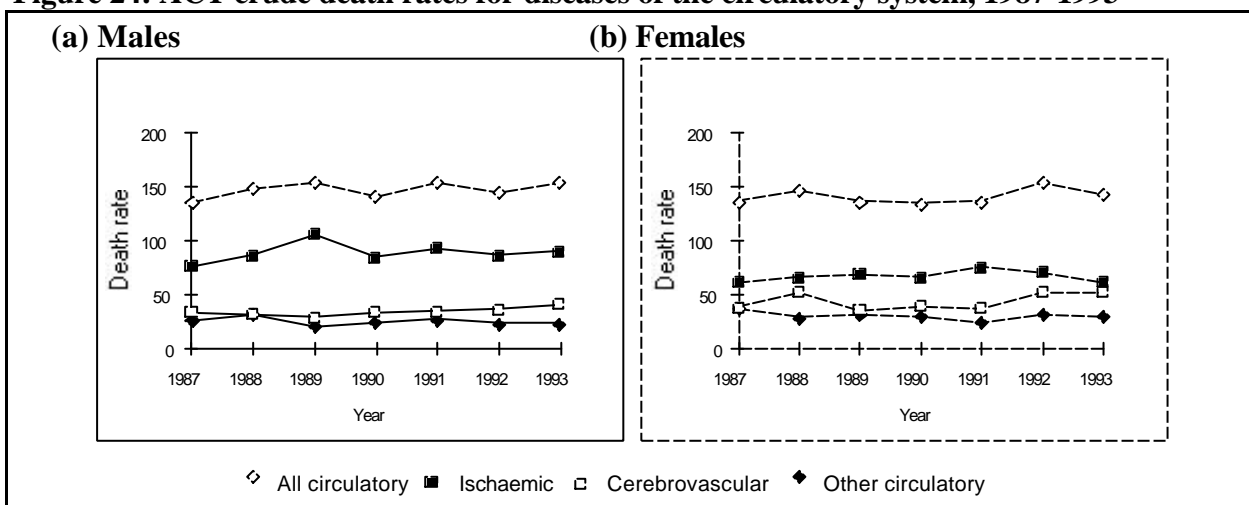
### *Mortality*

In the ACT, diseases of the circulatory system accounted for 440 (40%) of all deaths in 1993. Of these deaths, 324 (29%) were due to heart disease, with 241 (22%) due to ischaemic (coronary) heart disease, and 79 (7%) due to cerebrovascular disease (stroke).<sup>8(a)</sup>

In terms of years of potential life lost (YPLL), premature death due to circulatory diseases accounted for 2,563 (21%) of all the ACT population's YPLL. Other YPLL were: 1,587 years for ischaemic heart disease, 448 years for cerebrovascular disease and 65 years for disease of arteries, arterioles and capillaries.

During the 1970s, mortality due to diseases of the circulatory system in Australia declined considerably. However, there is no room for complacency as the Australian situation is less favourable than in many other countries.<sup>6</sup>

**Figure 24: ACT crude death rates for diseases of the circulatory system, 1987-1993**



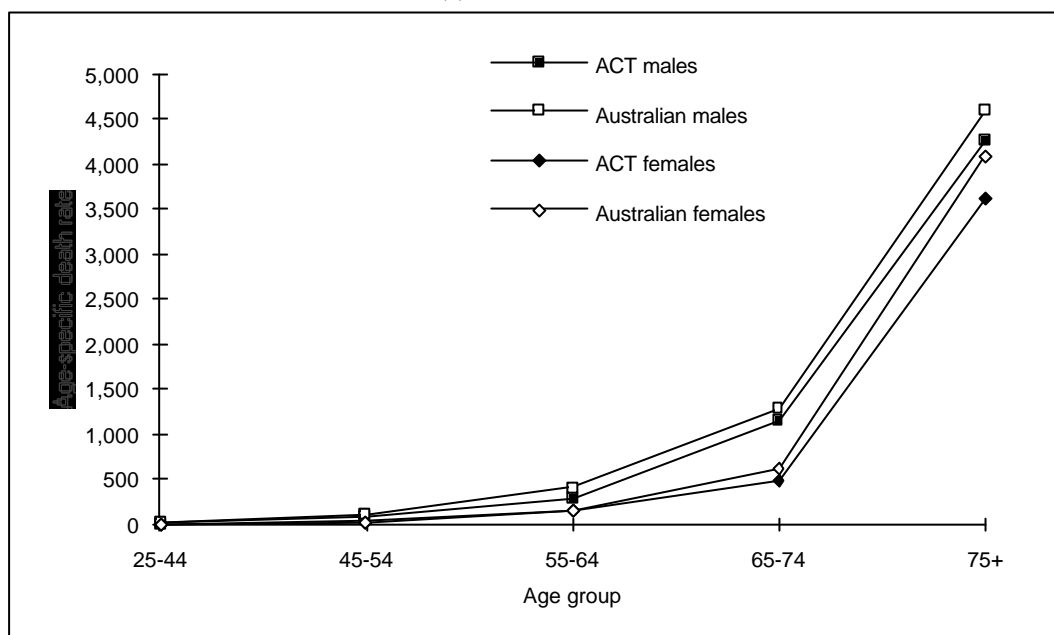
Source: Causes of Death Australia, ABS Publications Catalogue No. 3303.0

Estimated Resident Population By Sex and Age States and Territories of Australia, ABS Publications No. 3201.0

In the ACT, there has been no major change in the death rate for circulatory diseases over the last seven years (refer Figure 24). Although the overall circulatory disease death rates for males and females are similar, Figure 24 shows that the makeup of these rates varies. Males have a higher death rate from ischaemic heart disease while females have a higher death rate from cerebrovascular and other circulatory disease.

In the ACT, male and female circulatory death rates per 100,000 population are lower than for Australia, with ACT males and females at 153 and 142 compared to Australian males and females at 300 and 303. Age standardisation brings the ACT rates closer to that of Australia, with 257 compared to 290 for males and 257 compared to 298 for females. This implies that some of the differences can be attributed to the ACT having a younger population. Figure 25 shows within age groups that the ACT again fares better than Australia.

**Figure 25: Age-specific rates (25-75+) for diseases of the circulatory system by sex in the ACT and Australia for 1993(a).**



(a) Deaths per 100,000 of the estimated mid-year population.

Source: 1993 Demography, Australian Capital Territory, ABS Publication Catalogue No. 3311.8  
1993 Causes of Death Australia, ABS Publication Catalogue No. 3303.0

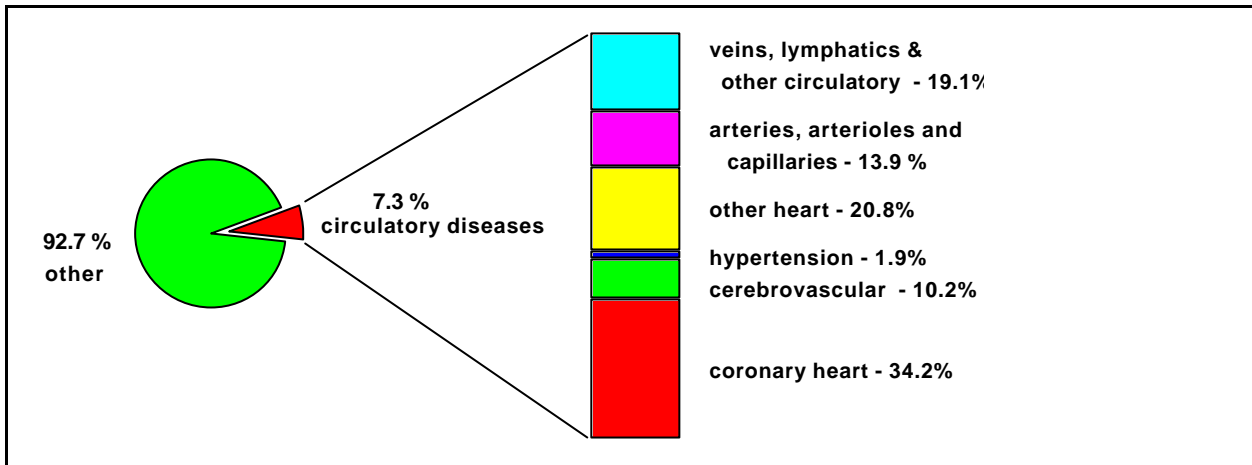
## Morbidity

### (a) Hospital morbidity

Hospital morbidity provides a measure of morbidity from circulatory diseases based on separations from hospital. However, since the ACT caters for a large number of crossborder patients, care must be taken in the interpretation of ACT results. It is also worth noting that there are currently no bi-pass operations being undertaken in the ACT. Hospital morbidity data for 1992-93 show diseases of the circulatory system as the fourth most frequent reason for separation in the ACT (refer Table 8).

In 1992-1993, 4,820 or 7.3 per cent of people were separated from ACT public and private hospitals as a result of treatment for circulatory related conditions. Of these separations 34 per cent were for coronary heart conditions, 21 per cent due to other heart conditions and peripheral vascular disease, and 10 per cent for cerebrovascular conditions (refer Figure 26). The proportion of these separations representing NSW patients is not known.

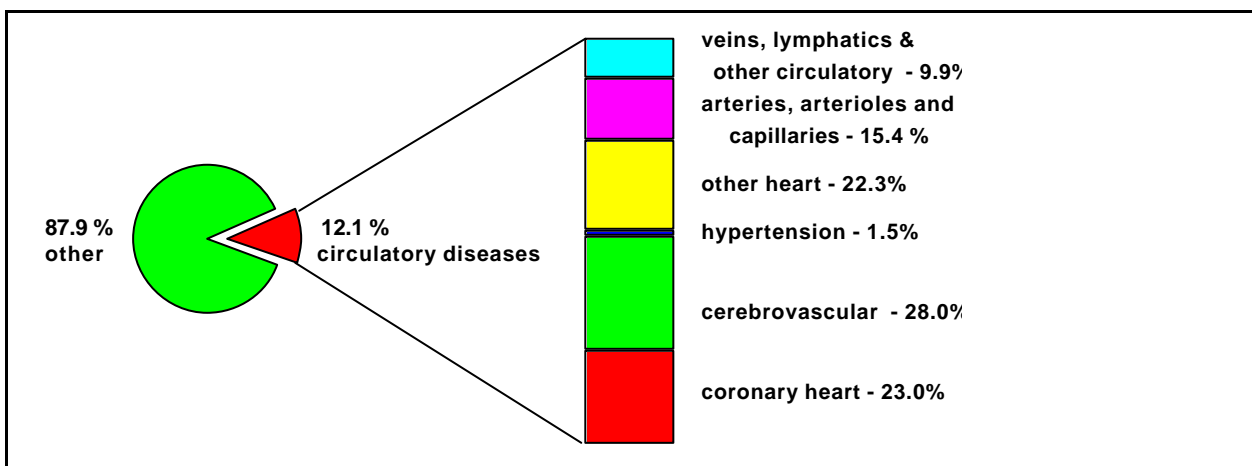
**Figure 26: Breakdown of 1992-93 ACT hospital separations for circulatory diseases.**



Source: Raw data from the ACT Hospital Morbidity Data Collection 1992-93.  
Performance Information Section. ACT Department of Health and Community Care.

Although other conditions had a higher volume of separations, circulatory diseases proportionately accounted for the most days in hospital during 1992-1993 with a total of 36,543 days (12.1%) and the third highest average length of stay (7.6 days). This indicates that patients with circulatory diseases use a higher level of hospital resources than patients for other conditions. In particular, cerebrovascular disease constitutes only 493 (0.7%) of all separations, yet has an average length of stay of 28 days (giving a total of 10,231 (3.4%) days in hospital). This is further confirmed by DRG-weights which show that on average patients with diseases of the circulatory system use about twice the resources of other patients.

**Figure 27: Breakdown of 1992-93 ACT hospital separations, total days length of stay for circulatory diseases.**



Source: Raw data from the ACT Hospital Morbidity Data Collection 1992-93.  
Performance Information Section. ACT Department of Health and Community Care.

*(b) Other Sources of Morbidity Data*

Additional sources of morbidity data may be found in surveys carried out by government and non-government bodies including the national health surveys conducted by the ABS every five years. Unfortunately, not all such surveys have meaningful data available for the ACT.

In the 1989-90 National Health Survey, 9.0 per cent of ACT residents and 13.0 per cent of Australians reported having cardiovascular conditions (refer explanatory notes). Similarly, those in the ACT and Australia reporting hypertension were 5.5 per cent and 9.0 per cent respectively. For heart disease they were 1.8 per cent and 2.6 per cent respectively.<sup>40</sup>

Age-sex standardisation of those who indicated circulatory conditions<sup>20</sup> showed the ACT had a significantly better or similar profile for hypertension and heart disease than that of Australia (refer Table 19). ACT also did well when comparing against individual states and territories.

**Table 19: Selected health status indicators, diseases of the circulatory system.**

Description	Persons (a) ACT	Ratios (b)	Comments
<b><u>Health Status</u></b>			
<b>Recent illness (c)</b>			
hypertension	10.7	69.7 *	lower than for Australia
heart disease	2.5	74.2	
<b>Long-term conditions (d)</b>			
hypertension	14.8	102.9	
all circulatory	33.7	118.5 *	includes varicose veins etc.

(a) Persons who reported condition, '000 (b) Age-sex standardised ratios (c) Refers to medical conditions 2 weeks prior to being interviewed (d) Refers to medical conditions which have lasted at least 6 months or which are expected to last 6 months or more. \* significantly different to Australia, with Australia as reference = 100.0

Source: 1989-90 National Health Survey Summary of Results, ABS Publication Catalogue No. 4364.0,  
1989-90 National Health Survey Health Status Indicators, ABS Publication Catalogue No. 4370.0.  
1989-90 National Health Survey as cited in Glover G and Woollacott T, *A Social Health Atlas of Australia*

### *Risk factors for heart disease.*

Risk factors for diseases relating to the heart, often referred to as cardiovascular risk factors, are of two different types: those that may be prevented or modified (such as smoking) and those that cannot be altered (such as gender).

The most important risk factors associated with coronary heart disease and stroke are smoking, hypertension, high blood cholesterol and physical inactivity. Other factors shown to have a relationship with heart disease include obesity, alcohol consumption and diabetes.<sup>22,23</sup> Many of the risk factors for heart disease are also risk factors for other diseases, including cancer and asthma.

The 1989-90 National Health Survey shows the ACT to have the highest prevalence of smokers (30.3 per cent compared to a national average of 28.4 per cent) and a slightly lower than average number of ex-smokers (22.9 per cent compared to the national average of 23.2 per cent).<sup>42</sup> The ACT had the highest number of males and females who had consumed alcohol prior to the interview - however, the average daily consumption was less than for the NT, Queensland and New South Wales and similar to the national average.<sup>41</sup> ACT residents also had the highest number of those who exercised two weeks prior to interview with 71.7 per cent reporting exercise compared to 65.4 per cent of Australians.<sup>43</sup>

**Table 20: Selected health risk factors, diseases of the circulatory system.**

Description	Persons (a) ACT	Ratios (b)	Comments
<b>Health Risk factors</b>			
<b>Smoking (c)</b>			
males smoker	36.6	108.7	
females smoker	23.7	89.7	ACT reported lowest levels
total ACT smoker	60.3	100.3	
<b>Alcohol consumption</b>			
nil alcohol consumed	58.6	82.2*	nearly 20% less than national average
low level health risk	115.1	110.2*	
medium level health risk	15.2	106.3	
high level health risk	10.3	112.3	higher than average, however not significantly different
<b>Exercise</b>			
those who did not exercise	57.6	83.2*	ACT had fewest undertaking no exercise.
low level exercise	68.4	110.2*	
medium level exercise	37.2	106.3	
high level exercise	35.9	112.3	
<b>Height and weight (d)</b>			
Females underweight	16.1	89.1	
Females overweight	15.6	85.8*	lowest overweight, almost 15% under average
Males overweight	33.1	92.1	lowest of all states and territories

(a) Persons who reported condition, '000 (b) Age-sex standardised ratios (c) smoking is defined as regularly smoking one or more a day. (d) underweight <20 kg/m<sup>2</sup>, acceptable 20-25 kg/m<sup>2</sup>, overweight 25-30 kg/m<sup>2</sup>, obese > 30kg/m<sup>2</sup>

\* significantly different to Australia, with Australia as reference = 100.0

Source: 1989-90 National Health Survey Summary of Results, ABS Publication Catalogue No. 4364.0,

1989-90 National Health Survey Health Risk Factors, ABS Publication Catalogue No. 4380.0.

1989-90 National Health Survey as cited in Glover G and Woollacott T, *A Social Health Atlas of Australia*

However, as can be seen in Table 20, after adjusting for age and sex, ACT residents had a better or similar risk factor profile to that of Australia. ACT females reported the lowest levels of smoking, and the ACT population had lower alcohol consumption with more residents undertaking exercise. There is concern that this study only captures those in the 18 and over age group however, as this may cover up any problems concerning smoking and the use of alcohol in teenagers.

The 1989 Heart Foundation Risk Factor Prevalence Study confirmed the results in the 1989-90 National Health Survey. Results (refer Table 21) however, are not directly comparable for a number of methodological reasons. The risk factor profile for Canberra shows residents have the highest prevalence of exercise participation during leisure time and rank well in terms of smoking and raised cholesterol. Both males and females have better overall risk factors profiles than other cities.<sup>21</sup>

**Table 21: 1989 Heart Foundation Risk Factor Prevalence Study results for males and females in Canberra.**

<b>Risk Factor</b>	<b>Prevalence % (a)</b>	<b>Prevalence ratio (b)</b>	<b>Rank in Australia(c)</b>
<b>Males</b>			
Hypertensives	17.7	1.70	5
Raised cholesterol (d)	45.8	1.09	2
Cigarette smokers (f)	23.4	1.19	2
Overweight or obese	50.0	1.12	3
No exercise	20.9	1.00	1
Overall rank			1
<b>Females</b>			
Hypertensives	10.5	1.04	2
Raised cholesterol (d),(e)	41.1	1.16	3
Cigarette smokers (f)	17.5	1.26	2
Overweight or obese (g)	36.7	1.26	5
No exercise	24.7	1.02	1
Overall rank			1

(a) Age standardised over the range 20-69 year. (b) Ratio of prevalence to minimum prevalence. (c) For each risk factor, cities have been ranked from 1=lowest prevalence to 8=highest prevalence. Equal rank has been given when prevalence estimates are relatively close. (d) Nothing to eat or drink in the 12 hours before testing apart from water, black tea or coffee. (e) Excludes women taking the oral contraceptive pill. (f) May also smoke cigars and/or a pipe and includes persons who smoke hand-rolled cigarettes. (g) Excludes pregnant women.

Source: 1989 Heart Foundation Risk Factor Prevalence Study, Survey No. 3 1989

It would be very beneficial if morbidity and mortality for circulatory diseases, in particular heart disease, were reduced by the early detection of the disease through screening risk factors. However, to date there have been inconsistent findings on the benefits of such screening.<sup>23</sup>

### *Current activities in the ACT*

The ACT is participating in a move to develop a national system which is able to monitor heart disease across the care continuum. In particular, the monitoring system will look at coronary heart disease, ischaemic heart disease and cerebrovascular disease. It will cover deaths, number of cases, new cases reported, uses of drugs, rehabilitation, hospital and surgical care, pre-hospital and emergency care, risk factors and prevention.

It is proposed that the national monitoring system will comprise a minimum data collection, supplemented through various surveys including the ABS National Health Surveys. Where national indicators will not provide sufficient information, the ACT will need to increase the sample in national surveys or coordinate supplementary surveys to obtain ACT information.

It is hoped that such a monitoring system would allow for the reliable estimation or provision of information on the incidence and prevalence for major circulatory conditions. This is currently not possible for many cardiovascular conditions where sufficient information is not available. This is



particularly difficult when estimation is totally dependent on hospital separation data only. For example, in WA, a study showed that hospital separations underestimated morbidity for stroke patients by 40 per cent.<sup>25</sup>

Programs which are assisting in the prevention, treatment and rehabilitation phases of care are outlined in Table 15 (Refer Chapter 5).

In addition, the Cardiac Rehabilitation program assisted 543 patients between April 1992 and April 1995. Of those patients who were previously employed, 70 to 80 per cent have re-entered the workforce. Also, 70 to 80 per cent of the patients in the program have improved in their physical health and well-being. The program is expecting the participation rate to increase in future years.

The ACT Government is exploring a proposal for the establishment of a cardiothoracic unit at Woden Valley Hospital. Currently ACT patients needing heart surgery are required to go interstate for treatment.

## 6.3 Mental Health

Mental health reform in Australia is being driven by the National Mental Health Strategy, which is complemented in the ACT by the ACT Strategic Plan for Mental Health Services. These strategies target the needs of people with serious mental illness, since they are the group in greatest need, but do not ignore the needs of people with less serious mental illness.

There is no agreed definition of serious mental illness, although the United States National Advisory Mental Health Council (1993) version, as cited in the First National Mental Health Report can be used as a guide: "Severe mental illness is defined through diagnosis, disability and duration and includes disorders with psychotic symptoms such as schizophrenia, schizoaffective disorder, autism, as well as severe forms of other disorders such as major depression, panic disorder and obsessive compulsive disorder". With regard to mental illness generally, there is even less agreement as to a definition. The mental health problems such as "nerves" and "tension" which are detailed in the National Health Survey are not generally defined as mental illness although they may, at some stage, be precursors to more serious problems.

It is generally recognised that, at some time in their lives one in five adult Australians and at least one in ten children and adolescents experience mental illness to a level which interferes with their lives. A report commissioned for the National Mental Health Strategy estimated that the prevalence of serious mental illness each year was about 3 per cent of Australians. Only about half of these are receiving treatment from either public mental health services, private psychiatrists or general practitioners.<sup>16</sup>

Recent, accurate data on the prevalence of mental illness in Australia are not available. This is a major problem in designing policy to enhance the mental health of people. National data to date have included a very small sample of ACT residents among a larger sample from other states and territories.

Some information can be found in the results of the 1989-90 National Health Survey, in which an estimated 4,800 people self-reported as having long-term mental disorders in the ACT (age-sex standardised ratio of 106.6). This is not significantly different to the national average of 100.0. However significantly higher age-standardised rates of mental health problems among males in the 15-24 age range (4.97% in the ACT compared to 1.46% in Australia) and females in the 0-14 age range (3.06% compared to 0.79% nationally) were reported.<sup>12</sup> Since these are the crucial years for education and vocational training, mental illness during this period has a huge impact on employment possibilities and consequently, the situation needs careful monitoring and intervention.

Major conditions reported nationally were nerves, tension, nervousness or emotional problems (52.7% of all people self-reporting mental disorders, comprising 40.6% males and 59.5% females), depression (15.3% comprising 36.1% males and 64.1% females) and psychoses (8.4% comprising 52.5% males and 47.5% females). The highest percentage of psychoses occurred in the 25-44 age range and depression peaked in the 46-64 age range.

Table 22 gives a comparison of the ACT and Australia with regard to crude rates for various mental disorders as reported during the National Health Survey 1989-90. It shows that ACT residents self-reported fewer recent mental health problems than other Australians, less long-term nervous and emotional problems, but more long-term depression and "other" mental problems.

**Table 22: Crude rates for people reporting mental health problems, Australia and the ACT, 1989-90<sup>(a)</sup>**

Mental disorder	Recent illness		Long-term illness	
	ACT	Australia	ACT	Australia
Nerves, emotional problems	1896	2635	823	951
Depression	358	583	322	275
Psychosis	**	131	**	151
Other	179	285	823	516

(a) Per 100,000 population. \*\* Numbers are too small to establish a usable rate.  
 Source: 1989-90 National Health Survey, ABS Catalogue No. 4380

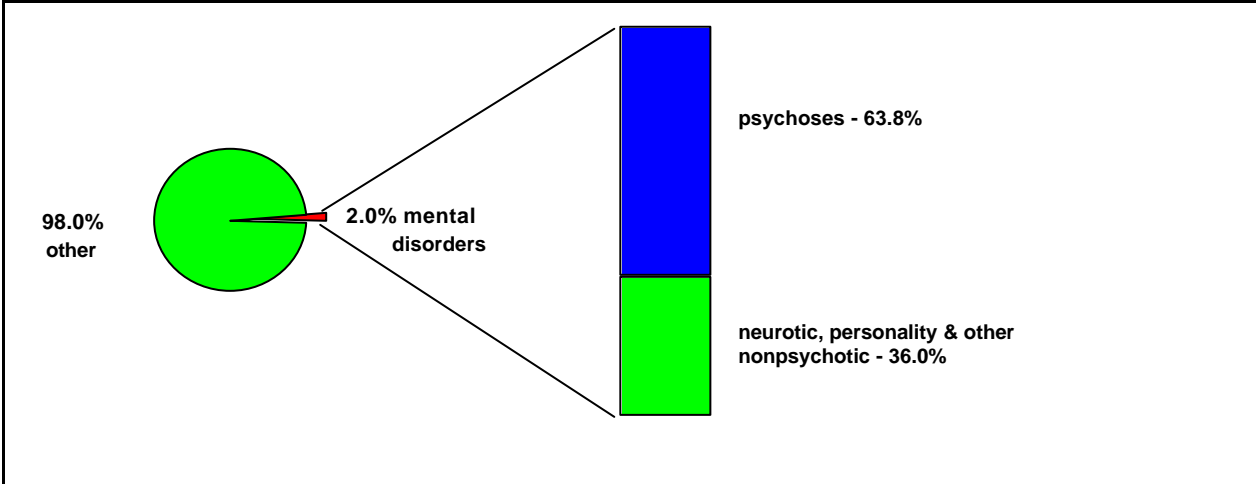
*The ageing population and dementia*

Since the incidence of dementia increases with age<sup>14</sup>, and the ACT population is slowly ageing, the prevalence of dementia in the ACT can be expected to rise over time. However, even though the elderly population in the ACT is growing more quickly than the national average, the number of dementia cases is not expected to increase significantly until well into the next century<sup>15</sup>.

*Hospital inpatient separations*

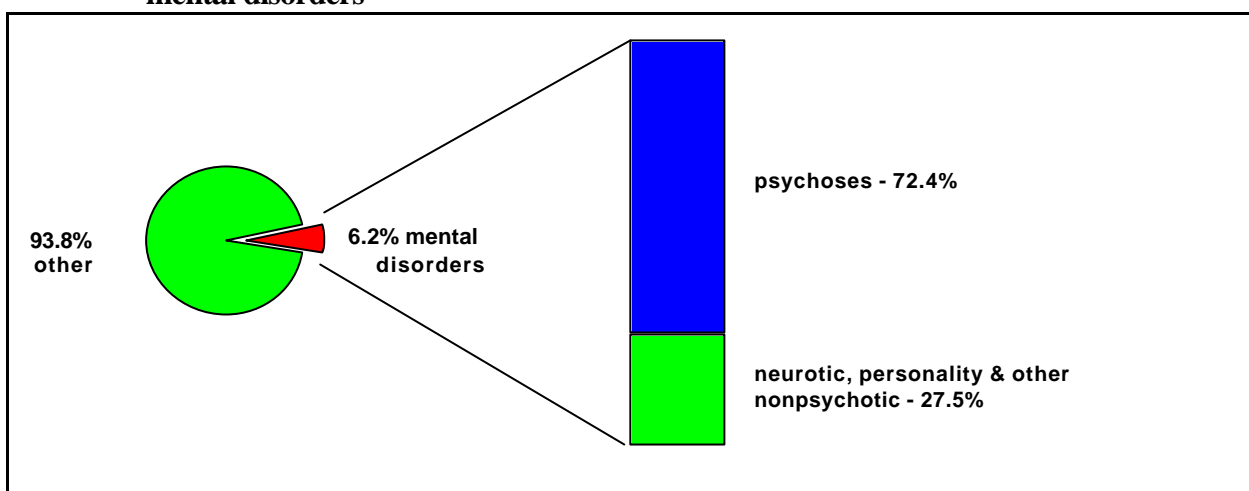
Hospital data do not give a full profile of mental illness, since most events do not require hospitalisation. However, a study of hospital inpatient separations and the *length of stay* in hospitals will assist in developing a profile of acute severe mental illness in the Territory (Refer Figure 28).

**Figure 28: Breakdown of 1992-93 ACT hospital separations for mental disorders**



Source: Raw data from the ACT Hospital Morbidity Collection 1992-93  
 Performance Information Section, Department of Health and Community Care

**Figure 29: Breakdown of 1992-93 ACT hospital separations total days length of stay for mental disorders**



Source: Raw data from the ACT Hospital Morbidity Collection 1992-93  
Performance Information Section, Department of Health and Community Care

It can be concluded from Figures 28 and 29 that psychoses are the major mental health cause for hospitalisation and that length of stay for psychoses is longer than for other mental illnesses.

Mental illness separations in fact, account for the highest average length of stay of all illnesses and conditions, although the number of separations is very small by comparison to some of the separations for other causes (Refer Table 23). (It should be noted that data includes interstate patients in ACT hospitals).

**Table 23: Number of separations and average length of stay for selected diagnoses, ACT, 1992-93 (Ranked in highest number of ALOS)**

Principle diagnosis	No. of separations	Average length of stay
Mental disorders	1345	13.8 days*
Diseases of circulatory system	4820	7.6 days
Injury and poisoning	4069	6.9 days

\* the average length of stay in the WVH acute facility was 11.4 days. The average denoted above includes such conditions as dementia treated on other wards in the various hospitals. More recent data indicate that the average length of stay for mental disorders is decreasing, consistent with national trends.

Source: Raw data from the ACT Hospital Morbidity Data Collection 1992-93, Performance Information Section, Department of Health and Community Care

### *ACT facilities*

The ACT has little reliance on psychiatric hospitals and psychiatric services are all mainstreamed. There are no, and have never been any, psychiatric hospitals in the ACT. There is a 32 bed acute unit at Woden Valley Hospital, a 20 bed general psychiatry unit at Calvary Hospital, one 40 bed and one 20 bed hostel and 6 group houses for people with mental illness. The Psychiatric unit at Woden Valley Hospital and the two hostels account for 42 per cent of the Departmental service budget, leaving 58 per cent for community regional initiatives. Further attention needs to be given to making the proportions more equitable, but this is being addressed in a five year strategic plan. Nevertheless, the ACT is at the forefront with regards to the proportion it spends on resources for community mental

health services. In 1993-94, it spent \$28 per capita on community mental health services compared to the national average of \$18. On the other hand, in terms of total per capita spending on mental health, the ACT rates sixth with an expenditure of \$50 per capita compared to the national average of \$55.<sup>16</sup> Calvary hospital has a separate budget and available data is reported separately.

Table 24 outlines the ACT performance against indicators for mental health services in 1993-94. It should be noted that, as for other health services, people from the South East region of NSW are included in this data.

**Table 24: ACT mental health performance compared to national average**

<b>Indicator</b>	<b>ACT</b>	<b>National average</b>
<b>State spending per capita</b>	<b>\$50</b>	<b>\$55</b>
<b>Service expenditure (%):</b>		
- community services	58%	32%
- co-located hospitals	42%	20%
- separate psychiatric hospitals	-	48%
<b>Inpatient services:</b>		
- total psychiatric beds	52	
- total beds per 100,000 population	17.4	41.8
- acute beds per 100,000	17.4	20.6
- acute beds co-located	100%	55%
- inpatient expenditure per capita	\$20	\$37
<b>Community services</b>		
- expenditure per capita	\$28	\$18
- service expenditure directed to NGOs	2.4%	2.4%
<b>24 hour staffed residential services</b>		
- total no. of beds	60	
- adult beds per 100,000	19.9	2.2
- psychogeriatric beds per 100,000	-	2.5
<b>Workforce:</b>		
- % in community-based services	55%	22%

Source: National Mental Health Report 1994, Department of Human Services and Health, 1995

Clearly, the mental health of people is not solely dependent on clinical interventions. Health is determined by biological and medical conditions and/or pre-dispositions as well as environmental conditions such as the quality of air, the climate, socio-economic status, health education and knowledge, nutrition and access to adequate housing and services. The ACT Government therefore takes a global approach in its planning for quality mental health services. Interdepartmental liaison to ensure access to housing and transport and liaison with Commonwealth Government agencies such as Social Security are integral to its approach.

Non-government (NGO), community and self-help organisations play a major role in enhancing the mental health of the Territory. In recognition of the crucial role of non-government involvement, the Department of Health and Community Care assists non-government organisations through a grants process. Grants specifically for mental health activities have been allocated to a number of community

organisations. There is a small private mental health sector in the Territory, which includes health professionals working in a private capacity and ten private psychiatrists.

### *Other ACT initiatives*

It has not been possible to draw any accurate conclusions regarding the mental health of ACT residents from national data. (The small sample results in fluctuations which do not necessarily reflect trends). Consequently, negotiations with the Bureau of Statistics were conducted with the result that a larger sample of the ACT population are being surveyed in the 1995-96 National Health Survey. In addition, the Commonwealth Department of Human Services and Health has commissioned a national mental health survey which is currently being developed for use in 1995/96. Results should be available by mid 1997. These initiatives will ensure a more accurate profile of mental illness in both the ACT and Australia generally.

Within the ACT Department of Health and Community Services, a data manager has recently been employed to address data requirements for mental health and enhance the Client Information System. To date, however, there is only limited information on the prevalence of mental illness and mental health problems in the ACT.

ACT Mental Health Services, which is part of the Department of Health and Community Care, is involved with the over-arching clinical care of people with mental illness and the implementation of preventative and educative strategies for reducing mental illness in the Territory. It embraces the use of multi-disciplinary teams based on a case management approach, early intervention and continuity of care leading to the rehabilitation of clients within mainstream services. ACT Mental Health Services is one of the few mental health services fully accredited by the Australian Council of Healthcare Standards.

It operates in three components:

- \* Community Mental Health which includes Forensic and Child and Adolescent Services and operates Adult Regional Services;
- \* Psychiatric Rehabilitation Services; and
- \* Psychiatric Inpatient Services.

Activity for ACT Mental Health Services is outlined in the Table 25.

The method of recording mental health statistics has changed over the past two years. A new system has been developed and should offer more comprehensive data in future. Information on diagnoses outside the hospital system is not available.

**Table 25 : ACT mental health services activity, 1992-93 and 1993-94**

Service Type	1992-93	1993-94
<b>After Hours Crisis Service</b>		
Total number of contacts:		
- Domiciliary	391	444
- Office	864	1,886
- Telephone	4,511	9,340
Total number of contacts	5,766	11,670
Total number of contacts by shift:		
- Morning	704	4,529
- Evening	3,089	5,462
- Night	1,973	1,679
<b>Community Mental Health Services (including Child and Adolescent Service and Forensic Service)</b>		
New referrals	3,382	2,926
Total number of contacts	27,682	36,178
<b>Psychiatric Unit</b>		
Available beds (1992-93 average)	31.6	32
Total admissions	879	906
Average length of stay (days)	11.87	11.44
Average occupancy (%)	91	88.8
<b>Hostels</b>		
Available beds	60	60
Total admissions	27	19
Average occupancy	98.1	97.4
<b>Psychiatric Rehabilitation Services</b>		
New referrals	139	108
Estimated total number of clients	n/a	350
Total number of contacts	n/a	13,251

Source: ACT Department of Health Annual Report 1993-94 and unpublished data from Mental Health Services

In addition to the above, activity at Calvary Hospital, which is not administered by Mental Health Services, is outlined in Table 26.

**Table 26 : Occupied bed days, 1993-94**

Facility	Beds available	Separations	Occupied bed days
Calvary Hospital Unit	20	428	6,540

Calvary Hospital also runs a day program (62 patients in 1993-94) and an outpatient clinic (1057 clients in 1993-94).

Recent initiatives by the ACT Department of Health and Community Care in response to client changing needs include:

- \* development of a five year strategic plan for 1993-98;
- \* development of guidelines on continuity of care based on Area Integrated Mental Health Service guidelines;
- \* 24 hour crisis team and after hours crisis assessment team;
- \* establishment of a research officer position to undertake ACT relevant applied research;

- \* establishment of an education officer position to develop programs for service providers (eg housing) which will assist them to respond more effectively to people with mental disorders;
- \* establishment of a project officer position to address the needs of special needs groups such as people with dual diagnoses, people experiencing their first episode of psychosis, children of parents with mental illness, people with HIV/AIDS, Aboriginal and Torres Strait Islander people;
- \* establishment of a two year pilot program to develop a network of volunteers to assist isolated clients to access community, social and recreational pursuits;
- \* provision of forensic services, which include the establishment of pre-trial hearings within the Psychiatric Unit to reduce the trauma to clients in having to attend court. This has operated successfully in its first full year of operation;
- \* expansion of the Intensive Rehabilitation Team;
- \* increased services for children and adolescents with the establishment of a trainee psychiatrist position;
- \* expansion of the intensive treatment program for clients with refractory schizophrenia, who do not respond well to other treatments;
- \* expansion of activities in the Psychiatric Rehabilitation Services (PRS) to include neuro-cognitive training, development of life plans with clients to assist in rehabilitation and to encourage clients to be cognizant of their health (especially in monitoring their mental health) and sensitive vocational training including the establishment of a training coffee shop. The coffee shop venture is a joint program run by PRS and Canberra Schizophrenia Fellowship with training provided by the Commonwealth Employment Service;
- \* establishment of a clinical consultant position to work on a joint project with ACT Education and other relevant agencies to work with families with primary school aged children with moderate to severe emotional and/or behavioural problems;
- \* completion of a review into the functions and roles of existing accommodation for people with mental illness. The final report has been released for comment.

### *Community attitudes*

The impact of a community's attitude to people with mental illness is well recognised. A national study conducted by Rearch Research for the Commonwealth Department of Health, Housing, Local Government and Community Services in 1993 concluded that stigma or discrimination against people with mental illness, caused by ignorance and/or intolerance and often portrayed by avoidance and discomfort, can affect people with mental illness in accessing housing, limiting education, training and employment opportunities, limiting recreation opportunities, exacerbating poverty and endangering the development of positive self-esteem.<sup>13</sup> \$8 million has been allocated by the Commonwealth for a four year Community Attitudes Strategy which includes a media education approach. The first TV advertisements began in April 1995. Materials produced will have state and territory contact numbers for any queries or extra information. The ACT is pleased to be involved in the Strategy.



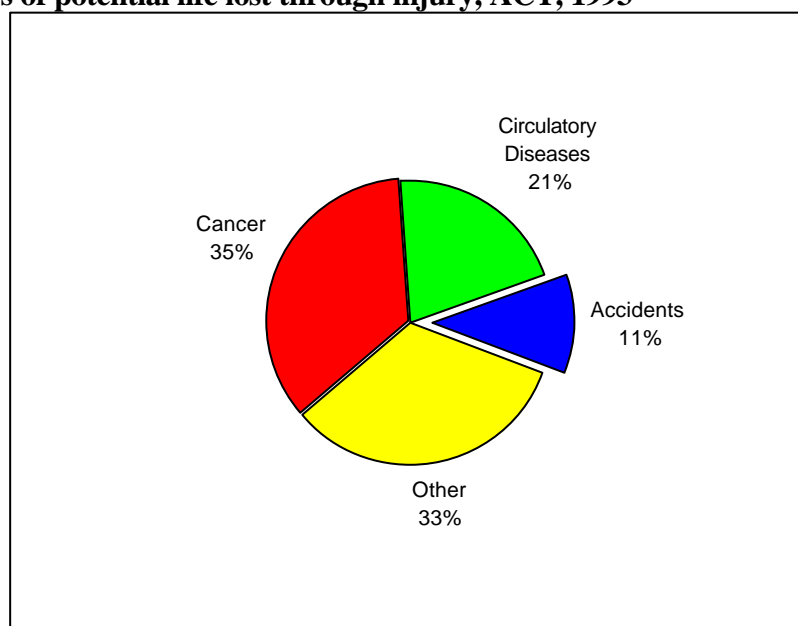
## 6.4 Injury

An injury is defined as any physical, psychological or social harm to a person, that is caused by an external agent of force.<sup>3</sup> The external cause may be physical, chemical or psychological. The injury may be accidental or intentional. Accidental injury covers such issues as motor accidents, falls, burns, sporting and occupational injuries and accidental poisonings, most of which are preventable. Intentional injury (also preventable) may be administered by external forces or be self-inflicted and covers such issues as domestic violence, child abuse, sexual assault, other forms of assault and suicide. Suicide, particularly in young people, is an area of such concern that it is also discussed separately in the next section (3.5).

### *Mortality*

Injuries in Australia, and indeed in most developed countries, are a major public health problem which impact on virtually all people at some time. Death by injury, since it is most prevalent in young people (especially in the 15 to 24 age range where a large proportion of deaths are due to sports, motor vehicle accidents and suicide), accounts for a high loss of years of potential life. As Figure 30 shows, accidental deaths were 11 per cent of the total years of potential life lost (1,437 years) in the ACT. This is a serious loss when you consider these accidents account for just over 2 per cent of all deaths.

**Figure 30: Years of potential life lost through injury, ACT, 1993**



\* Standardised to Australian population as at 30 June 1991

Source: ABS *Cause of Deaths 1993*, Unpublished data, Catalogue No. 3303.0

As Table 27 shows, injuries are the fourth leading cause of death in both Australia and the ACT, accounting for 6,595 and 64 deaths in 1993 respectively.

**Table 27: Principal causes of death by sex, ACT and Australia, 1993**

Cause of death	ACT				Australia			
	Females	Males	Total	%	Females	Males	Total	%
Malignant neoplasms	141	204	345	31.1	14,212	18,479	32,691	26.9
Ischaemic heart disease	90	134	224	20.1	13,424	16,335	29,759	24.5
Cerebro-vascular disease	44	35	79	7	7,319	4,818	12,137	10.0
Accidents and suicides	28	45	64	5.8	1,827	4,768	6,595	5.4

Source: Unpublished data - Health Surveys Section, ABS. *Causes of Death, Australia 1993*

Injuries in Australia also account for a higher percentage of hospitalisations (9%) than either cancer (7%) or circulatory diseases (8%) and a greater percentage of occupied bed days (10%) than for cancer (9%) and most other causes (National Injury Surveillance Unit, 1994).

The National Injury Surveillance Unit estimated in 1991 (unpublished data), that for every injury death there are about 40 hospital admissions, 760 doctor consultations and several thousand "recent injuries", mostly of minor severity.<sup>9</sup> It has been estimated that in the ACT, for each injury related death, there are about 55 hospital admissions, 350 visits to hospital accident and emergency departments and 1,350 medical consultations for injuries.<sup>3</sup> Injury was reported as the second most common illness in the ACT in the 1989-90 National Health Survey.

Table 28 shows that whilst the death rate from injuries is still unacceptable, it has at least decreased over recent years. The ACT profile is a little more dramatic, but this can be attributed to the small number of deaths per year.

**Table 28 : Death rates for injury: ACT and Australia, 1991-1993<sup>(a)</sup>**

	1991	1992	1993
ACT	36	31	23
Australia	45	43	40

(a) Rates per 100,000

Source: ABS, 1993 Causes of Death, Australia, Catalogue No. 3303.0

The National Health Survey 1989-90 actually showed the ACT as having more self-reported accidents than anywhere else in Australia (19.7% of ACT population compared to 14.1% of Australian population). Although the ACT has a lower death rate from injury, it appears that it has a higher number of injuries which do not cause death and which do not show up in hospital statistics. Anecdotal evidence suggests that ACT residents may simply report more cases than other Australians. It will be interesting to compare the 1989-90 Survey results with those of the 1995-96 National Health Survey.

## Disability

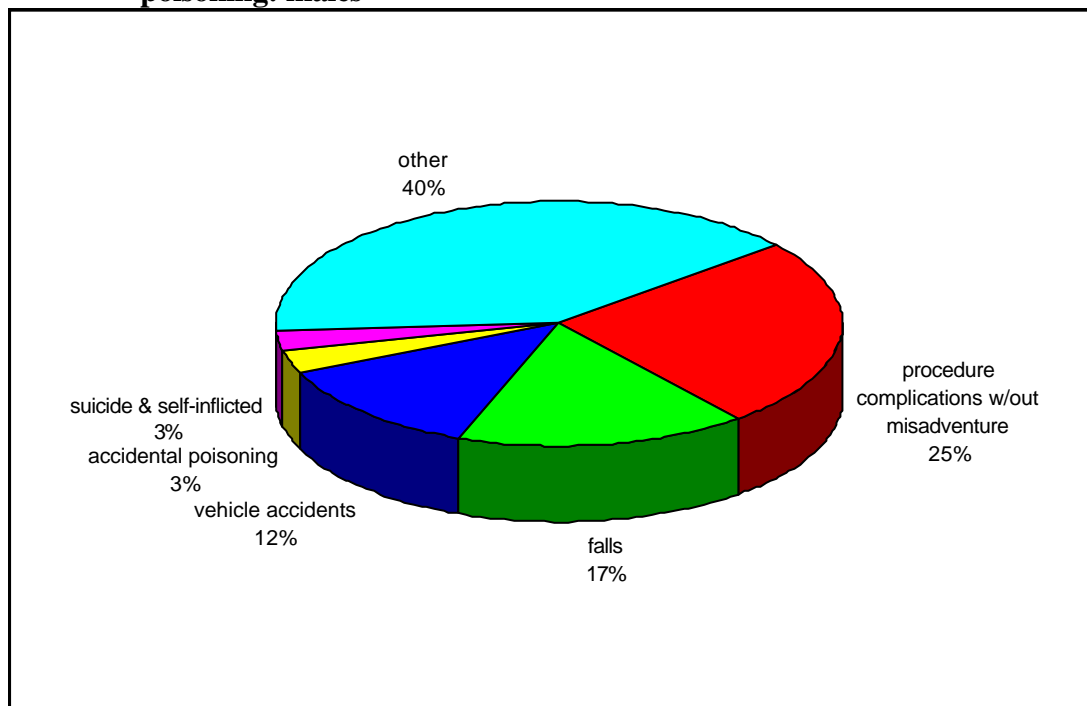
Many victims of injury suffer long-term disability which affects their quality of life and ability to participate in the community. It has been estimated that approximately 25 per cent of all disabilities within the community are directly related to serious injury. This does not fully take into account the psychological damage caused by serious injury, especially in violent circumstances.

## Hospital inpatient separations

There were 5736 separations for external causes of injury and poisonings in 1992-93. Of these, 3294 were males and 2442 were females. The breakdown of these separations is given in Figures 31 and 32.

In examining the frequency hospitalisation for injury, it is interesting to note the differences for males and females. In most categories there is little difference. However, males are more likely to be hospitalised as a result of motor vehicle accidents (7% of all accidents compared to 4% for females) and females more likely to attempt suicide (2.3% compared to 1.6% for males). The suicide data show males are more likely to complete a suicide (and therefore not require hospital treatment) whereas females do not complete as often, and are more likely to require hospital treatment.

**Figure 31: Breakdown of 1992-93 ACT hospital separations for external causes of injury and poisoning: males**

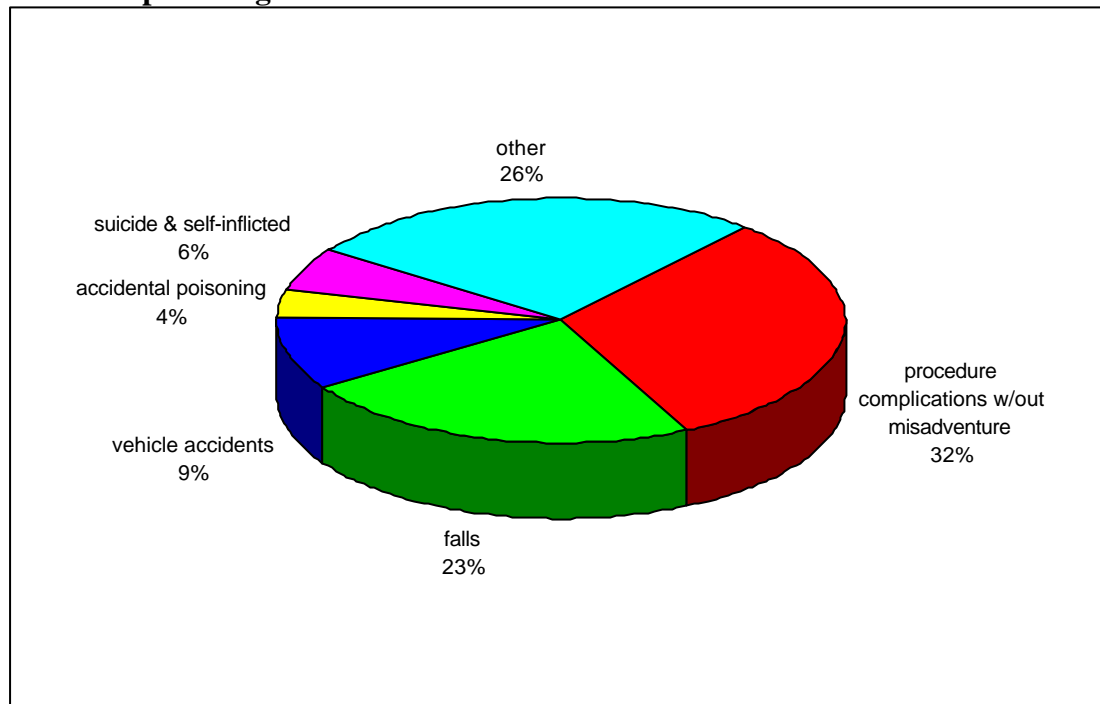


\* Procedures causing complications refers to medical and surgical procedures causing abnormal reaction or later complication, without misadventure. This category includes such complications as with prostheses, grafts, transplanted organs, cardiac devices etc.

Source: Raw data from the ACT Hospital Morbidity Data Collection 1992-93,

Performance Information Section, Department of Health and Community Care

**Figure 32: Breakdown of 1992-93 ACT hospital separations for external causes of injury and poisoning: females**



\* Procedures causing complications refers to medical and surgical procedures causing abnormal reaction or later complication, without misadventure. This category includes such complications as with prostheses, grafts, transplanted organs, cardiac devices etc.

Source: Raw data from the ACT Hospital Morbidity Data Collection 1992-93,  
Performance Information Section, Department of Health and Community Care

### *Length of stay*

Numbers of separations alone will not give a true indication of severity of injury or human and financial cost. It is also important to analyse how long a patient stays in hospital before separation. Overall, females stay longer in hospital after an injury or poisoning (10.4 days compared to 8.1 days for males). External causes which combine substantial average length of stays with large numbers of separations are depicted in Table 29.

**Table 29: Estimated number of ACT hospital separations and average length of stay (ALOS) for selected external causes of injury or poisoning, male and female, ACT, 1992-93**

External cause	Male		Female	
	ALOS	No. of separations	ALOS	No. of separations
Procedures causing complications, without misadventure	13.2	838	12.9	778
Drugs, medications, biological substances causing adverse effects in therapeutic use	10.3	169	11.5	198
Suicide and self-inflicted injury	10.0	93	6.6	137
Motor vehicle accidents	9.4	220	11.7	156
Falls	8.1	551	12.2	561

Source: Raw data from the ACT Hospital Morbidity Data Collection 1992-93,  
Performance Information Section, Department of Health and Community Care

Since the first two categories cover a large variety of causes, no conclusions can be drawn. The last three, which are for specific isolated causes, do reflect substantial prevalence and long periods of stay in hospital.

## *Falls*

Given the data in Table 29, and taking in to consideration an ageing population in the ACT, the incidence of falls can be expected to increase. A report by the National Health and Medical Research Council (November 1993)<sup>11</sup> notes that:

- \* at least one third of people over 65 years of age fall one or more times a year;
- \* the cause of falls are usually multifactoral involving combinations of age-related physiological decline, chronic disease, medication and environmental factors;
- \* the risk factors for men are decreased physical activity, stroke, arthritis of the knees, gait abnormality and increased static sway;
- \* the risk factors for women are muscle weakness, standing systolic blood pressure of less than 110, psychotropic drugs and medication liable to cause postural hypotension;
- \* psychological sequelae, such as fear, occur frequently and may lead to increased dependence;
- \* injuries cause physical, psychosocial and financial costs to the injured person and their carers and financial costs to the community.

In the ACT, falls accounted for 1,112 hospital separations (551 male, 561 female) in 1992-93. The average length of stay was 8.1 days for males and 12.2 days for females. The female rate is higher as it mainly involves elderly female patients with severe fractures. The male rate mainly reflects sporting and work related falls in young, healthy males. Table 30 depicts accidental falls in age categories in the ACT.

**Table 30: Accidental falls by sex by age, ACT, 1992-93**

	0-14 years	15-44 years	45-55 years	55-64 years	65+ years
Male	163	188	43	29	128
Female	128	83	37	59	254

Source: Raw data from the ACT Hospital Morbidity Data Collection 1992-93,  
Performance Information Section, Department of Health and Community Care

Falls are a common problem for older people. Since the causes are multifactoral, preventative measures also need to be multidisciplinary in approach. Medications and environmental dangers are potentially remediable, and impaired balance may respond to rehabilitation. Education programs are important.

## *Developing an injury profile*

Developing an injury profile for the ACT and Australia is not an easy task. Data can be extracted from mortality statistics and hospital events, but not all events caused by injury will be recorded. Injury caused by intentional violence, for example, may be hidden by the victim or masked by consequent

illness (especially in older people). In many cases people treat themselves or seek treatment from outside the hospital system (eg medical practitioner, physiotherapist). As with other states and territories, the ACT needs to address the issue of data collection in order to develop quality baseline data on which to plan future interventions and evaluate services.

### *ACT initiatives*

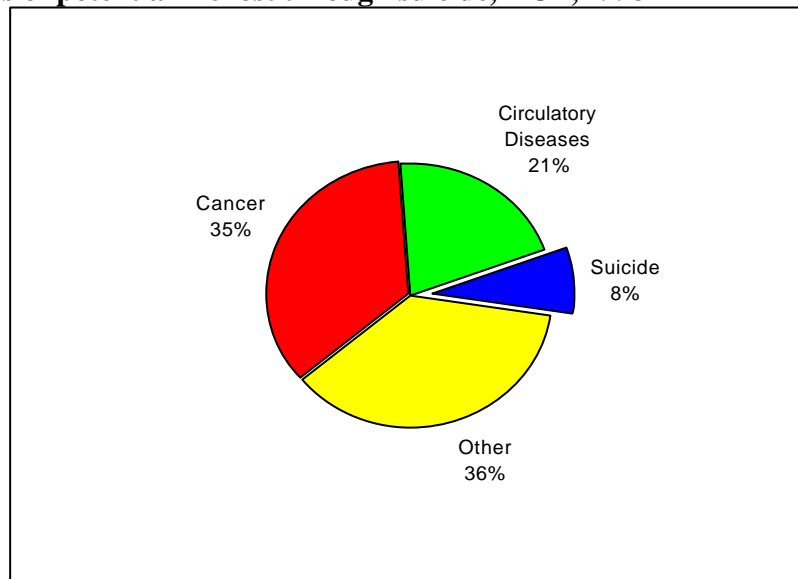
Refinement and expansion of data collections have commenced in the ACT with the establishment of a new data bank in the emergency departments of Woden Valley and Calvary Hospitals. The data collection system is currently being installed and will be compatible with the new NSW data system, thus allowing cross border comparisons. The system development is funded by the Commonwealth through the Ambulatory Care Reform Program and will utilise the National Injury Surveillance data definitions and national emergency definitions currently being developed.

The ACT Health Outcomes Reference Group which is overseeing the implementation of ACT Health Goals and Targets, is targeting injury as a major area for consideration in its deliberations. An expert working group to advise it in the development of a strategic plan for injury services in the Territory is being established.

## 6.5 Suicide

There is considerable concern nationally about the rising rate of suicide, especially in the 15 to 24 year age group. In 1993, suicide was the ninth leading cause of death in Australia and seventh in the ACT.<sup>8</sup> In the 15 to 24 years age group, suicide was the second leading cause of death for males and the third leading cause of death for females. Apart from the anguish this tragedy causes, it also represents a huge waste in potential years of life lost. Figure 33 shows that suicide accounts for 8 per cent of the total years of potential life lost in the ACT (1030 years).

**Figure 33: Years of potential life lost through suicide, ACT, 1993**



\* Standardised to Australian population as at 30 June 1991

Source: ABS, *Causes of Death 1993*, Unpublished data, Catalogue No. 3303.0

It is difficult to track the incidence of suicide attempts (completed and uncompleted), since the reliability and completeness of data are in question:

- \* most suicidal behaviour, especially by females, does not result in death - consequently, a profile based on mortality data is incomplete;
- \* some occurrences reported as from another cause, may in fact be suicide attempts or completions (eg motor vehicle accidents, accidental drug overdoses).

In the ACT in 1993 the suicide death rate was 8.4 per 100,000 population (compared with 11.7 per 100,000 for Australia). This represents 23 male and 4 female (total 27) confirmed deaths from suicide, six of which were for young people between 15 and 24 years of age. These six people were all male and died as a result of poisoning, firearms and jumping from a high place.

It is difficult to identify real increases and decreases in number of deaths, given the small number of deaths. Annual rates can fluctuate substantially as shown in Table 31. It is probably more informative to look for trends over a reasonable period of time.

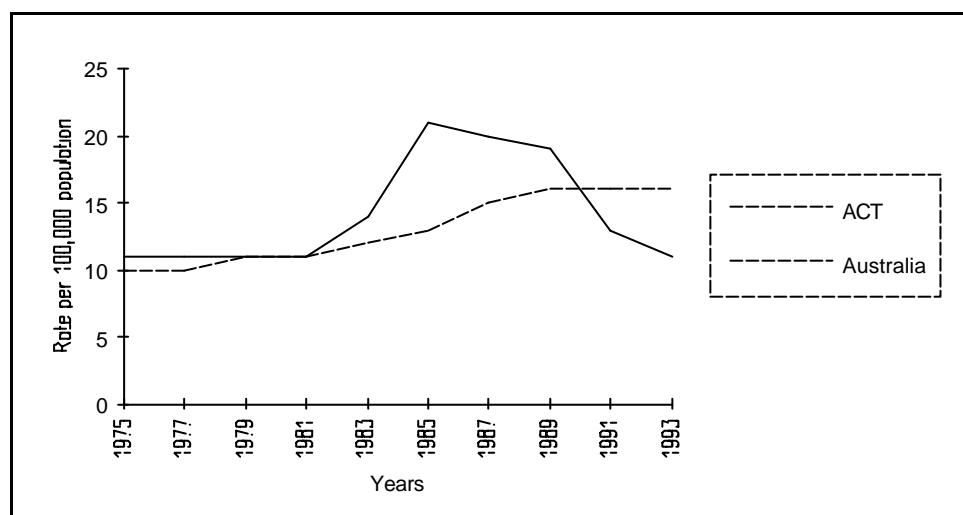
**Table 31: Standardised suicide rates for the ACT and Australia, 1982 to 1993<sup>(a)</sup>**

Year	ACT	Australia
1982	7.1	12.0
1983	12.5	11.4
1984	14.4	11.1
1985	11.9	11.6
1986	12.5	12.4
1987	15.4	13.7
1988	10.4	13.2
1989	13.4	12.4
1990	13.3	12.5
1991	11.5	13.4
1992	10.3	12.9
1993	8.4	11.7

(a) Standardised per 100,000 mid-year 1986 population

Source: ABS, Suicides Australia 1982-1992, Catalogue No. 3309.0

**Figure 34: Comparison of Australian and ACT suicides of persons aged 15-24 years from 1973 to 1993**



(Based on 5 year moving averages)

Source: ABS, Unpublished data, Causes of Death

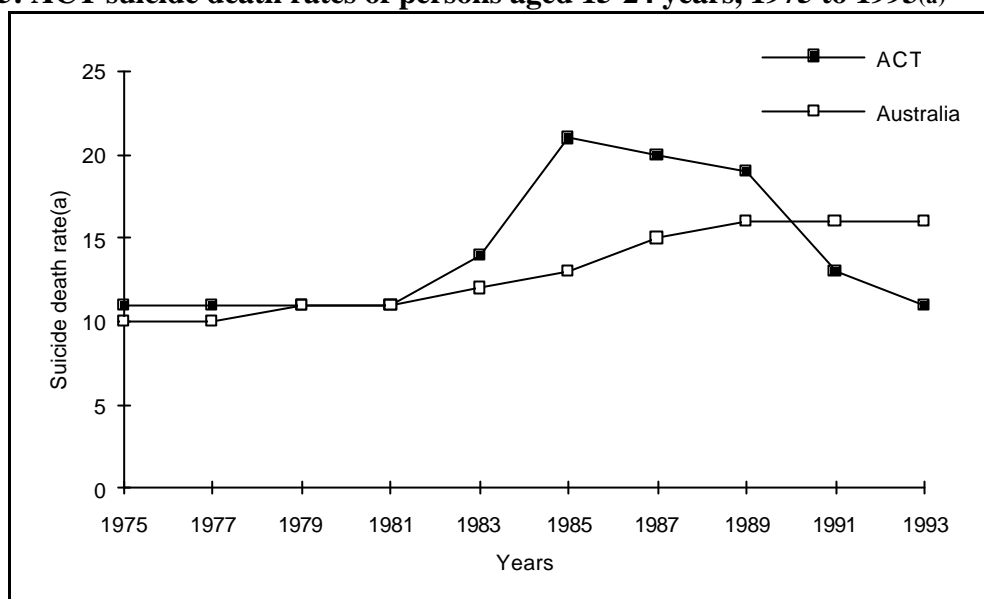
As Figure 34 shows, during the 1970s the suicide rates of *young* people were similar in the ACT and Australia generally. In the 1980s however, the rate for both males and females was noticeably higher in the ACT than for Australia. This may have been due in part to changing reporting practices. In 1968 the World Health Organisation introduced in the Eighth Revision of the International Classification of Diseases, a new category "injury undetermined whether accidentally or purposely inflicted (ICD codes E980-E989)". The use of this new category has fluctuated over time, and in particular during the early 1980s.<sup>39</sup> Given the small numbers in the ACT, this fluctuation in coding practices could have influenced ACT rates more than in the rest of Australia. Since the 1980s, the suicide rates for young males and females in the ACT appear to be trending down. The reverse is happening for Australia as a whole.

The rate of suicide for males is considerably higher than that for females both nationally and in the ACT. In the ACT, males in the 15-24 years age group are nearly four times more likely to complete suicide



than females (refer figure 35). In the period from 1983 to 1993, for instance, 68 males and 18 females in that age group committed suicide.

**Figure 35: ACT suicide death rates of persons aged 15-24 years, 1975 to 1993<sup>(a)</sup>**



(a) rate per 100,000  
 (Based on 5 year moving averages)  
 Source: ABS, Unpublished data, Causes of Death

However, hospital separation data indicate that the percentage of hospital separations for self inflicted injury is higher for females than for males. This suggests that young males and females attempt suicide at much the same rate - males are simply more successful in completing it. Males tend to use more ir retrievable methods such as firearms, hanging or strangulation and jumping from high places, whereas women tend to use less predictable methods such as poisoning and overdosing on pharmaceutical tablets.

Causes for attempting suicide are not easy to define. It is likely that societal pressures and stress, often associated with social isolation and family dysfunction are important triggers. There is also evidence that the majority of suicides are associated with mental illness, with severe depression and schizophrenia having particularly high risk factors. Although difficult to confirm, it is estimated that about 90 per cent of adolescent suicides are preceded by symptoms of mental illness, especially depression.<sup>9</sup>

A recent study<sup>10</sup> conducted in the ACT, where coroners' files on youth suicide (persons under 25 years of age) for the six years from 1985 to 1990 were studied, showed some interesting results which have implications for planning preventative measures. There were 53 suicides in the age range during the period (75.4% male). It was found that:

- \* All but one death due to motor vehicle accidents were given accidental verdicts rather than an open or suicide classification;
- \* There were no suicides of young people under the age of 16;
- \* Of those young people who overdosed, 88.8 per cent did this on prescribed medication;

- \* Overall, carbon monoxide poisoning was the most common method, followed by hanging, gunshot and overdose;
- \* 79.2 per cent had stated their intent to commit suicide before doing it (either in words or by earlier attempts at suicide);
- \* Previous attempts to commit suicide were undertaken by 54.7 per cent of completions;
- \* 54.7 per cent were from intact families, 24.5 per cent from separated or single parent families, 13.4 per cent from step families and 1.8 per cent (1 person) from an intact adoptive family, 5.6 per cent of cases had unknown family status;
- \* In cases where there was evidence, only 11.3 per cent of cases had good family relationships and approximately a quarter had good peer relationships (sample of a quarter of all cases);
- \* In the period before their death, 69.8 per cent of the group were considered by others to be depressed (39.6% had actually been diagnosed by medical practitioners as suffering from emotional or psychiatric problems);
- \* Significant precipitating factors included break-up of boy-girl relationships (33.9% of the group had experienced this), family conflict, separation from or of parents, death of a family member or friend, unexpected information about parents, drug and alcohol problems (32% were said to be heavy uses of alcohol), impairment of physical (18.8%) and mental health, court convictions and charges pending (20% of the males), loss of employment.

More recent data is available, but only for public hospital activity. ACT Public Hospital Morbidity Data Collection 1993-94 indicates that there were 268 events of suicide, attempted suicide and self-inflicted injuries, with very few completed suicides. Females were responsible for 166 of the events. This is consistent with the trend for females to attempt suicide as often as males, but be less likely to complete it. They are, therefore, more likely to require hospitalisation. Table 32 shows the age breakdown for suicide and self-inflicted injuries recorded in public hospitals.

**Table 32: External cause of injury (suicides and self-inflicted injuries) by age group (years), 1993-94**

<b>Age Group (Years)</b>	<b>5-14</b>	<b>15-24</b>	<b>25-34</b>	<b>35-44</b>	<b>45-54</b>	<b>55-64</b>	<b>65+</b>	<b>Total</b>
<b>suicides and self-inflicted injuries</b>	12	98	66	52	24	10	6	268

Source: ACT Public Hospitals Morbidity Data 1993-94

## *Strategies for addressing the problem*

Since the indicators of suicide are mainly preventable (eg depression caused by life events with an inability to handle problems and with no appropriate support systems), there has been an increasing realisation that preventative measures are lacking and are desperately warranted. Recent national initiatives include the development of National Goals, Targets and Strategies for Mental Health in which one of the major goals is to reduce the rate of suicide among people with mental disorders, and the development of a draft National Health and Medical Research Council Strategy for the Prevention of Suicide.

In the ACT, ACT Health Goals and Targets for the Year 2000 have been developed which specifically focus on the reduction of suicide rates as a major target in the injury section.<sup>3</sup> Some of the strategies to be considered include:

- \* increasing psychological resilience to suicide and suicide risk factors;
- \* developing appropriate programs to address the needs of people at risk;
- \* developing a school education program for students and teachers;
- \* increasing the support intervention skills of primary health care practitioners; and
- \* developing hospital emergency and inpatient protocols for the management of attempted suicide including prompt referral for follow-up counselling.

Given that suicide risk is exacerbated or caused by societal conditions, the problem must be addressed by not just the Department of Health and Community Care, but other agencies of government responsible for living and working conditions also. The community sector must also play its part in reducing the risks associated with suicide. The Goals and Targets exercise will involve these interests in the development and implementation of strategies.

## 6.6 Communicable Diseases

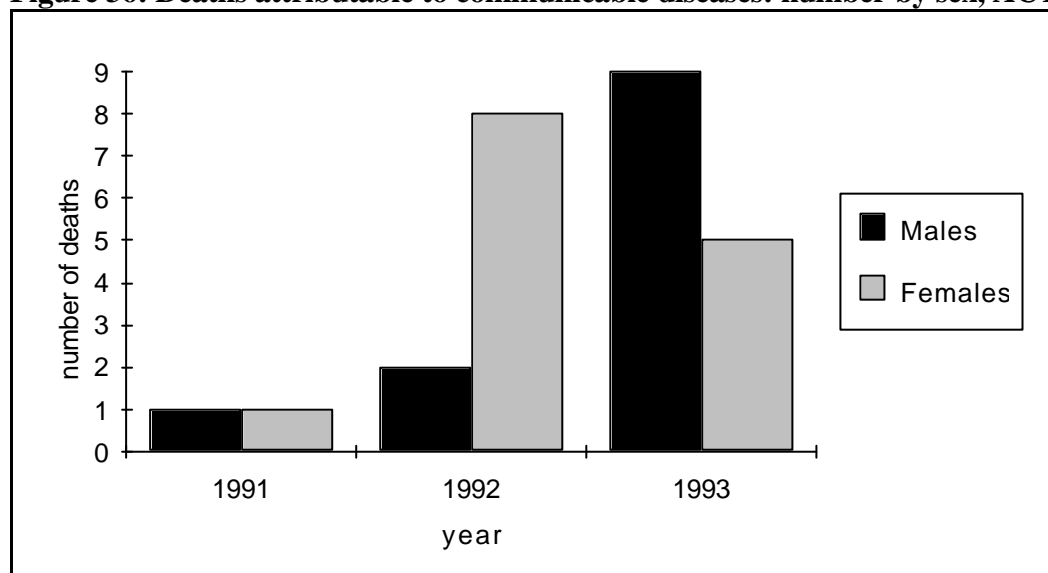
Communicable diseases are those diseases which are spread by direct contact with infectious agents such as droplets in the air (eg measles, rubella), body fluids (eg hepatitis B and C, HIV/AIDS), spores (eg tetanus), food and water (eg cholera, salmonella) and insects (eg malaria).

Results of the National Health Survey 1989-90 indicated that 3.3 per cent of the ACT population reported recent infectious or parasitic disease.

### *Mortality*

The number of deaths caused through infectious and parasitic diseases is fluctuating and very small in the ACT. Table 36 gives details and highlights the inadvisability of coming to any conclusions from data where the sample is so small. All that can be concluded is that death from these causes is insignificant in number in the ACT.

**Figure 36: Deaths attributable to communicable diseases: number by sex, ACT, 1991-93**



Source: ABS *Causes of Death, 1993* and unpublished data, Catalogue No. 3303.0

### *Morbidity*

People suffering from an infectious or parasitic disease are not usually admitted to hospital. Serious cases however, can be admitted and give an indication of the prevalence of serious communicable disease in the community. Infectious and parasitic diseases only accounted for 1.27 per cent of hospital separations (845 separations) in 1992-93. Table 33 gives an indication of how long a person suffering from a communicable disease stayed in hospital in 1992-93. Length of stay is often an indicator of severity of a condition.

**Table 33: Estimated number of ACT hospital separations in 1992-93 for principal diagnosis by sex by length of stay(a).**

Principal Diagnosis:	Sex	Length of Stay (days)								ALOS	*MDN
		0	1	2	3	4-7	8-14	15-34	35+		
Infectious and parasitic diseases	M	77	54	84	51	97	42	15	4	4.5	2
	F	86	55	79	51	95	35	17	3	4.3	2
Intestinal infectious diseases	M	18	19	45	25	38	6	3	0	3.2	2
	F	31	24	40	20	33	5	2	0	2.9	2
AIDS/HIV	M	2	1	1	0	2	0	0	1	8.6	2
	F	0	1	0	0	1	0	0	0	2.5	3

\* Mdn refers to median

Source: Raw data from the ACT Hospital Morbidity Data Collection 1992-93

Performance Information Section, Department of Health and Community Care

It can be seen that treatment for HIV/AIDS in males had the longest average length of stay, but it should be noted that the number of cases is very small. An overall average length of stay of 4.5 days could indicate severity, but not necessarily. Many patients will be admitted for intermittent intravenous drug administration or blood transfusions. Patients have the option of receiving treatment as outpatients or at home if they have appropriate support networks, and therefore will not require hospitalisation.

During 1993-94, the number of *notifiable diseases* reported in the ACT increased by 20 per cent to 1,569.

Table 34 details the communicable diseases reported in 1993-94 and 1994-95 (part year). It can be seen that there was an outbreak of Measles, Rubella and Whooping Cough (Pertussis) in the September quarter of 1993, Rubella in December quarter of 1993, a peak incidence of Hepatitis B in the June quarter of 1994, and a rise in foodborne diseases in the March quarter of 1995.

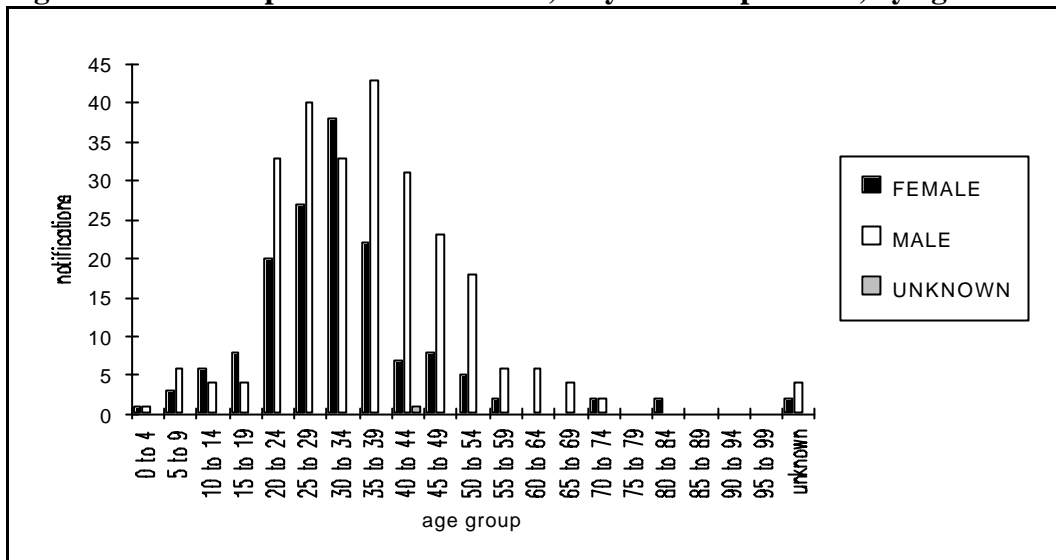
**Table 34: ACT quarterly statistics for communicable diseases 1993-94 and 1994-95**

COMMUNICABLE DISEASES Quarterly statistics ACT	1993-94				93-94 total	1994-95		
	Sept qtr	Dec qtr	Mar qtr	Jun qtr		Sept qtr	Dec qtr	Mar qtr
<b>Vaccine preventable</b>								
Haemophilus influenzae type b	3	4	0	0	7	1	0	0
Measles	115	50	25	14	204	32	43	21
Mumps	0	0	1	2	3	1	1	1
Rubella	34	34	20	9	97	6	16	8
Pertussis	26	13	6	1	46	9	4	13
<b>Foodborne diseases</b>								
Campylobacter	34	55	93	85	267	61	61	115
Cryptosporidium (a)								40
Giardia (a)		10	6	6	22	6	1	3
Salmonella	14	10	16	9	49	8	15	49
Shigella	3	0	6	0	9	0	2	2
Typhoid	0	0	1	0	1	0	0	2
Food Poisoning	2	0	1	3	6	1	5	1
Yersiniosis	0	0	0	0	0	0	0	1
<b>Sexually transmitted</b>								
Chlamydia	15	11	17	31	74	36	9	21
Genital Herpes (a)	14	19	11	14	58	5	19	13
Gonorrhoea	1	3	3	3	10	0	2	3
Syphilis	1	2	4	3	10	3	4	5
<b>HIV/AIDS</b>								
Groups 1, 2 & 3	1	2	0	2	5	1	7	4
Group 4 (AIDS)	6	1	4	4	15	2	8	4
<b>Hepatitis</b>								
Hepatitis A	7	2	10	2	21	2	3	7
Hepatitis B (unspecified)	51	34	40	55	180	41	23	28
Hepatitis B (incident)								1
Hepatitis C (unspecified)	99	107	116	109	431	105	88	108
Hepatitis C (incident)			2	3	5	0	0	1
Hepatitis (unspecified)	0	0	0	0	0	0	0	0
<b>Other Diseases</b>								
Leptospirosis	0	0	0	1	1	0	0	0
Listeriosis	1	0	1	0	2	0	0	1
Hydatid disease	0	0	2	0	2	0	0	0
Legionnaires disease	0	0	0	0	0	0	0	1
Malaria	9	4	7	3	23	10	4	3
Meningococcal inf.	2	0	0	2	4	3	2	0
Ross River virus	0	0	1	0	1	0	0	0
Tuberculosis	2	5	1	8	16	2	4	0
<b>TOTAL</b>	440	366	394	369	1567	335	321	456

(a) These diseases are not notifiable in the ACT. These are voluntary notifications and are likely to be an underestimate of incidence.  
Source: Data from Communicable Diseases Control Section of the Department of Health and Community Care

Figures 37 to 45 detail the communicable diseases notifications received in the ACT from 1991 to 1995.

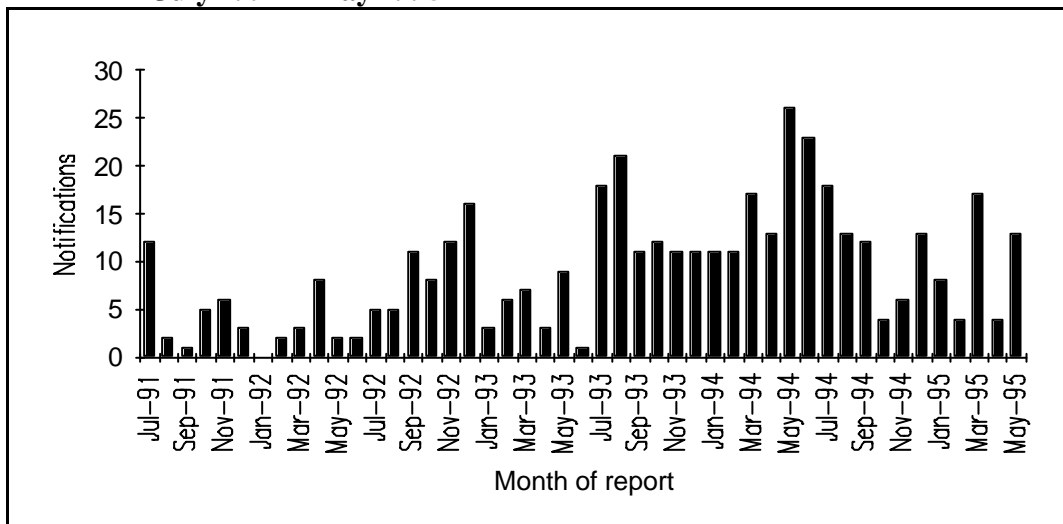
**Figure 37: ACT Hepatitis B notifications, July 1991 - April 1995, by age and sex**



Source: Data from Communicable Diseases Control Section of the Department of Health and Community Care

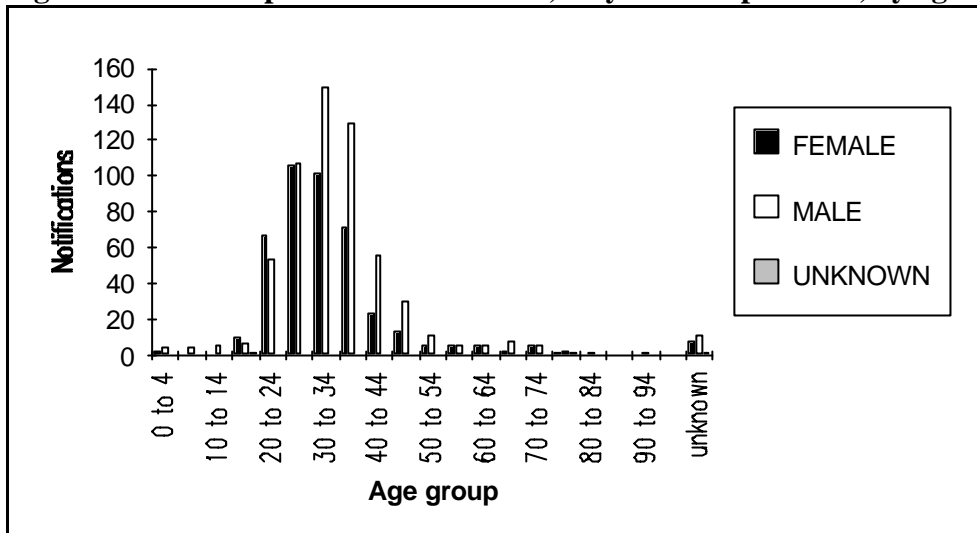
It can be seen from Figure 37 that in the ACT, Hepatitis B, although not large in prevalence, is most prevalent in people aged 20 to 39, especially males. This has implications for preventative strategies, especially in the areas of hygiene, safe sex and drug using practices.

**Figure 38: ACT Hepatitis B notifications (including acute and carrier), July 1991 - May 1995**



Source: Data from Communicable Diseases Control Section of the Department of Health and Community Care

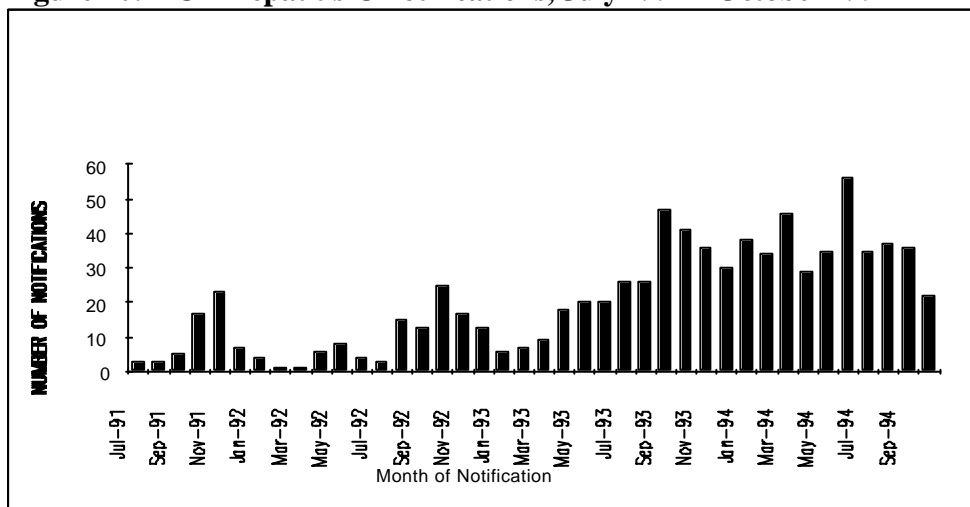
**Figure 39: ACT Hepatitis C notifications, July 1991 - April 1995, by age and sex**



Source: Data from Communicable Diseases Control Section of the Department of Health and Community Care

Figure 39 shows that Hepatitis C has a similar prevalence age pattern as for Hepatitis B, although women peak at ages 25-34 compared to 30-34 for Hepatitis B (ie a longer period of time). Males on the other hand, have a longer peak time for Hepatitis B (20-40 years of age as compared to 30-44 for Hepatitis C). There are significantly more cases of Hepatitis C than Hepatitis B.

**Figure 40: ACT Hepatitis C notifications, July 1991 - October 1994**

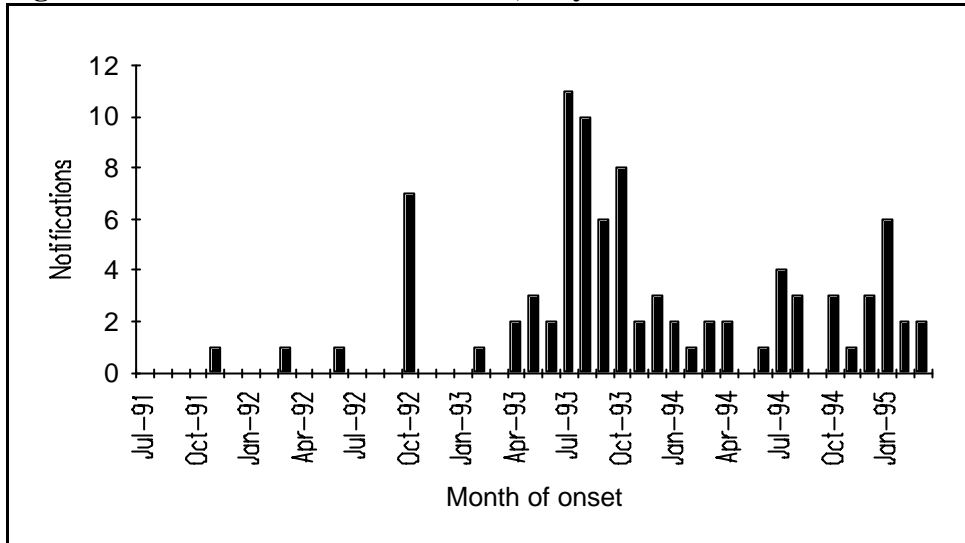


Source: Data from Communicable Diseases Control Section of the Department of Health and Community Care

Figure 40 shows a fluctuating increase in reported cases of Hepatitis C since September 1993. This trend is consistent with the national trend.



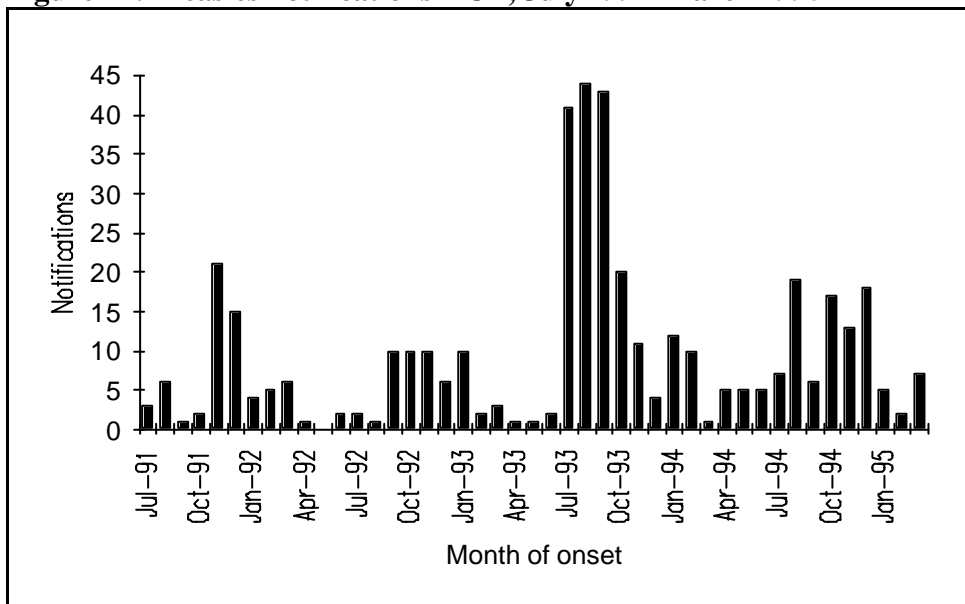
**Figure 41: Pertussis notifications ACT, July 1991-March 1995**



Source: Data from Communicable Diseases Control Section of the Department of Health and Community Care

As shown in Figure 41, Pertussis, commonly known as whooping cough, is rarely reported in the ACT due to previous excellent vaccination coverage. The small rise in incidence in July quarter 1993 was consistent with an Australia wide trend.

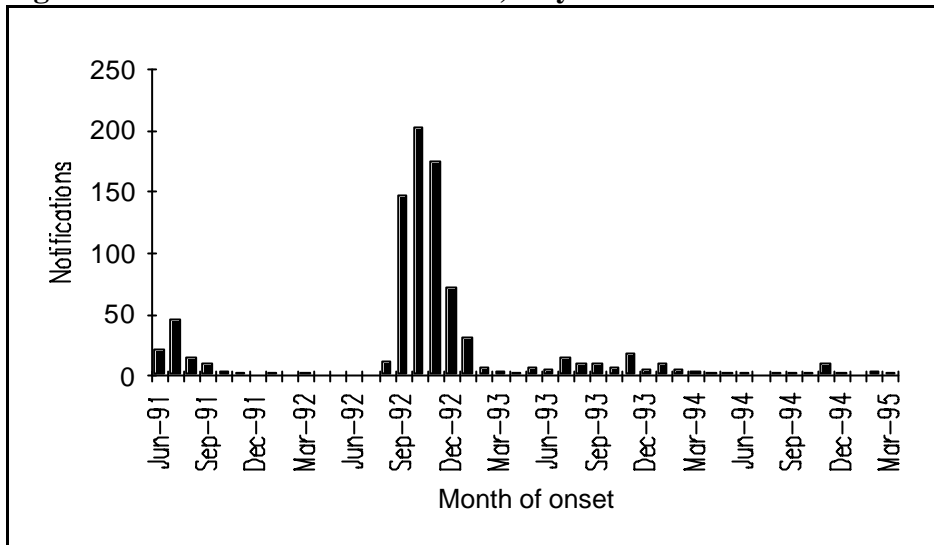
**Figure 42: Measles notifications ACT, July 1991-March 1995**



Source: Data from Communicable Diseases Control Section of the Department of Health and Community Care

The outbreak of measles in July quarter 1993, as shown in Figure 42, is consistent with the Australian increases.

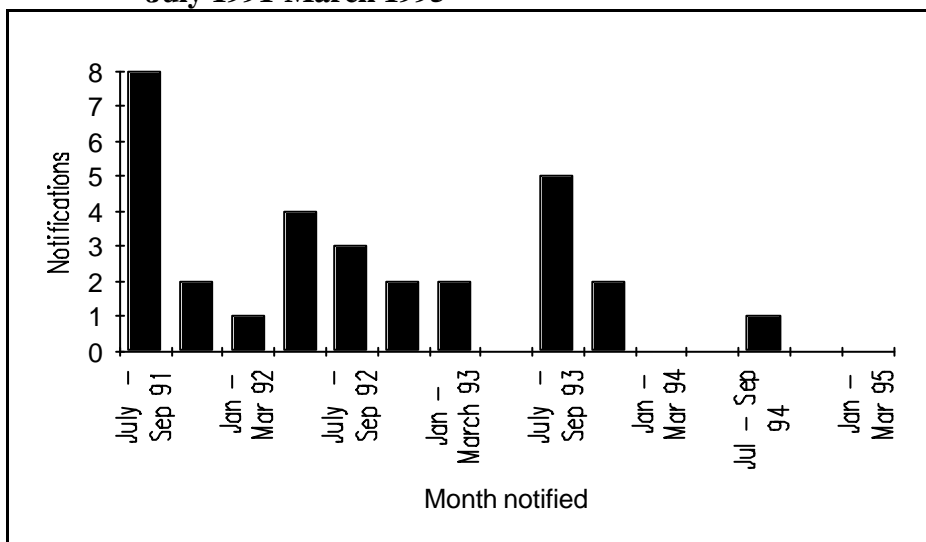
**Figure 43: Rubella notifications ACT, July 1991-March 1995**



Source: Data from Communicable Diseases Control Section of the Department of Health and Community Care

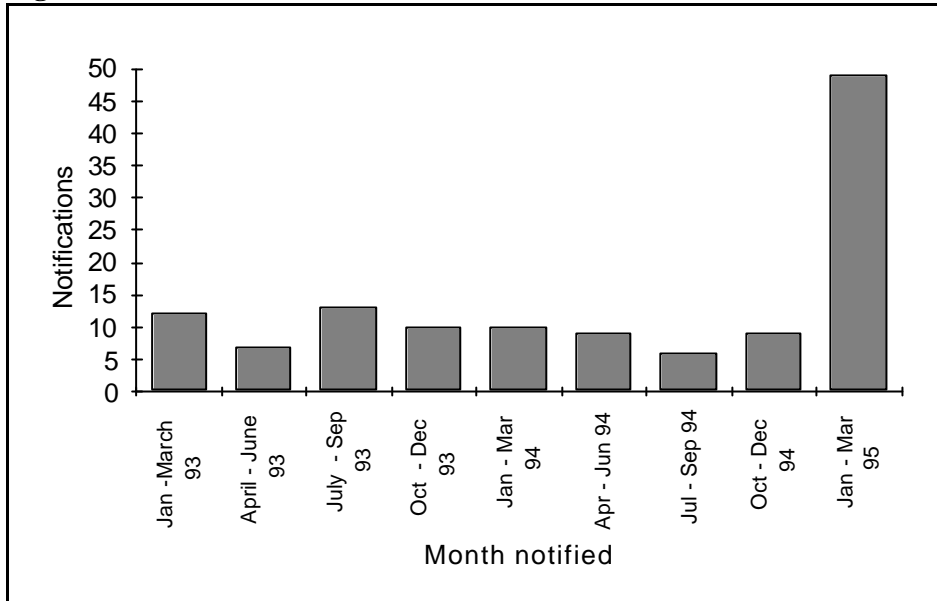
The outbreak of rubella in September quarter 1992 (Refer Figure 43) was considerably higher in the ACT than in other states and territories. This may partly be due to inconsistent reporting in other jurisdictions since some states do not have reporting requirements as stringent as the ACT's, difficulties with accurate diagnoses and/or the fact that the Department sent a letter to general practitioners reminding them of their responsibilities with regard to reporting. Nevertheless, the rise in incidence would have given major reason for concern, if the trend had continued.

**Figure 44: Haemophilus Influenzae Type B (HIB) notifications ACT, July 1991-March 1995**



Source: Data from Communicable Diseases Control Section of the Department of Health and Community Care

**Figure 45: ACT Salmonella notifications 1993-1995**



Source: Data from Communicable Diseases Control Section of the Department of Health and Community Care

The outbreak of the rare Bredeney type Salmonella (Refer Figure 45) was consistent with an outbreak in NSW, Victoria and Queensland. After much investigation, the cause was still unable to be isolated.

Table 35 outlines the rates of notifiable diseases in the ACT compared with the national rate, based on data for the 1993 calendar year. It can be seen that all diseases with the exception of measles, rubella and haemophilus influenza type b have a lower rate of incidence in the ACT than for Australia as a whole.

**Table 35: Communicable disease rates (a), ACT and Australia, 1993-94**

Disease	ACT	Australia
Tuberculosis	5.4	6.1
Shigella	1.3	4.0
Syphilis	1.0	12.9
Meningococcal infection	1.7	2.2
Gonorrhoea	5.1	15.7
Hepatitis A	5.4	11.6
Salmonella	14.5	26.8
Chlamydia	17.9	36.5
Pertussis (whooping cough)	15.2	22.8
Measles	61.7	25.8
Rubella	48.5	21.8
Haemophilus influenza type B (Hib)	3.0	2.3

(a) rates per 100,000 population

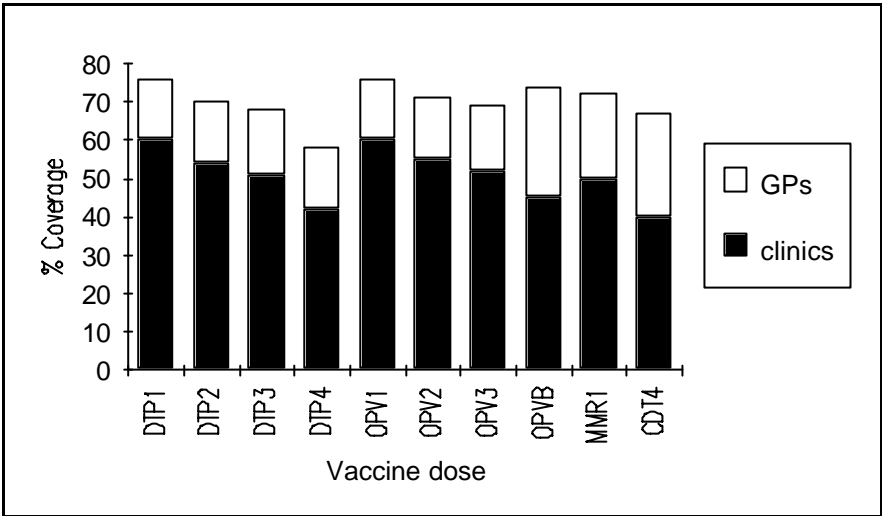
Source: ACT Department of Health Annual Report 1993-94

It is disturbing to note that, with the exception of pertussis, childhood vaccine preventable diseases (measles and rubella) in the ACT had a higher incidence rate than for Australia generally.

The Communicable Diseases Control Section of the Department of Health and Community Care has operated a central vaccine register since July 1993 to monitor the levels of vaccinations in the Territory. It is the only state or territory to have such a register.

The ACT has the highest vaccine uptake of all states and territories for children entering school in 1994, but from Figure 46 it can be seen that the coverage for all vaccines is below the optimum of 100 per cent.

**Figure 46: Number of ACT children (0-5 years) and estimated vaccine coverage for vaccines administered by Departmental Clinics and general practitioners, 1993-94**



DTP covers diphtheria, tetanus and pertussis vaccines, OPV covers oral polio vaccines, MMR covers measles, mumps and rubella vaccines, CDT covers combined diphtheria and tetanus vaccines  
 Source: ACT Department of Health Annual Report 1993-94

The Department is collaborating with the Commonwealth Department of Human Services and Health through the National Childhood Immunisation Committee to implement Commonwealth initiatives aimed at increasing the immunisation coverage for children from birth to 16 years of age. One such initiative is the National Immunisation Education Campaign which began an intensive three month media campaign on 16 October 1995. It is targeting TV, radio, women's magazines, milk carton advertising and bus advertising.

## 6.7 Asthma

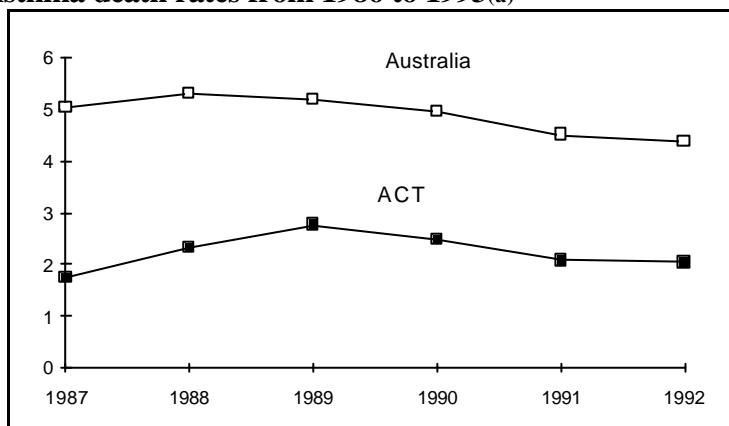
Asthma can be described as a paroxysmal (a severe attack or one increasing in violence) disorder of respiration with laboured breathing, a feeling of constriction in the chest, and coughing.<sup>30</sup> It is a major cause of morbidity in the community, especially among children and can be a long-term condition which frequently leads to hospitalisation. Asthma death rates and hospital morbidity rates are not as high as those for cancer and heart disease, but asthma morbidity appears to be as high, if not higher in the ACT than in other states and territories and therefore needs to be examined.

One of the major concerns regarding asthma is the inability to provide an accurate picture of asthma morbidity in the community. Mortality and hospital morbidity provide indicators for asthma, but the data refer to acute episodes only and do not provide a true reflection of incidence or prevalence of asthma in the community.

### *Mortality*

There were 9 asthma deaths in the ACT in 1993.<sup>8</sup> The small numbers cause annual rates to fluctuate. Accordingly, rather than looking at isolated years, it is more meaningful to look at trends over time. Figure 47 shows that, over the last few years, the ACT rates have been consistently lower than national rates.

**Figure 47: ACT Asthma death rates from 1986 to 1993<sup>(a)</sup>**



(a) Based on 3yr moving averages.

Source: Causes of Death Australia, ABS Publications Catalogue No. 3303.0, *Unpublished data*

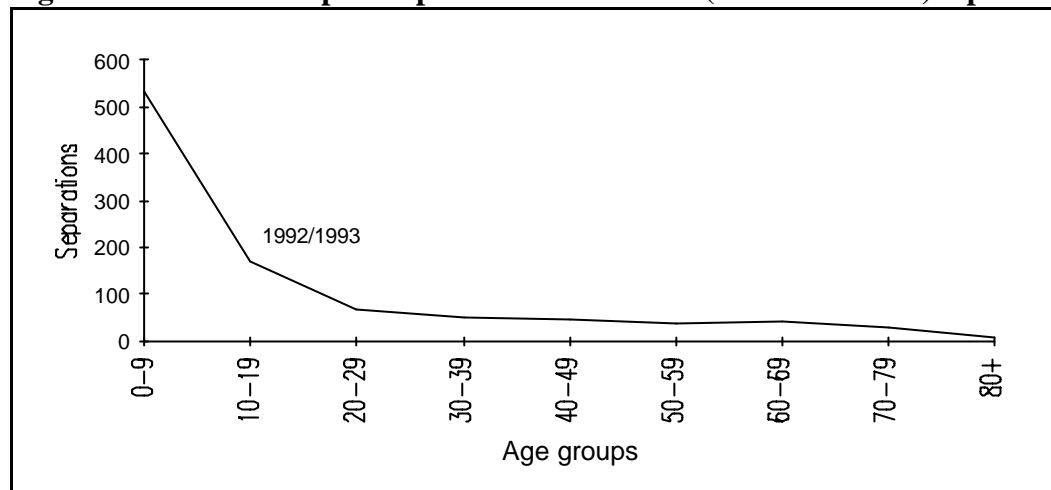
Estimated Resident Population by Sex and Age, States and Territories of Australia, ABS Publications No. 3201.0

### *Morbidity*

#### *(a) Hospital morbidity*

There were 977 separations in ACT hospitals for the period 1992-93. Figure 48 shows that of these separations, in the 0-9 age group there were 534 (54.7%), and in the 10-19 age group there were 169 (17.3%). That is, the majority of acute asthma conditions are experienced by children and teenagers.

**Figure 48: 1992-93 Hospital separations for asthma (ICD-9 code 493) inpatients by age.**



Source: Unpublished 1991/92 and 1992/93 hospital morbidity data collections.

The figures in Figure 48 include all patients treated in ACT hospitals including those living in the South East Region of NSW.

*(b) Other sources of morbidity data*

In the 1989-90 National Health Survey, 9.7 per cent of ACT residents were self-reported asthmatics compared to 8.5 per cent nationally<sup>38</sup>. ACT numbers were second only to Queensland where 10.2 per cent of the population self-reported asthma. Even after adjustment for age and sex of the ACT population<sup>20</sup>, the numbers were still shown to be higher than that of the national average. (Refer Table 36). Unfortunately, the 1989-90 survey does not provide information for the total population as those surveyed were 18 years of age and over. This means that we have no measure of asthma prevalence for non-acute conditions for those in our population aged between 0-17.

**Table 36: 1989-90 ABS National Health Survey, age-sex standardised ratios for ACT residents.**

Description	Age-sex standardised ratios	Comments
<b>Long-term conditions<sup>(a)</sup></b>		
Respiratory Diseases	127.0	* Had highest age-sex standardised ratio for states and territories
Asthma	117.2	* Higher than Australian average, however not as great as QLD (118.4)

(a) refers to medical conditions which have lasted at least 6 months or which are expected to last 6 months or more.

Source: 1989-90 National Health Survey as cited in Glover G and Woollacott T, *A Social Health Atlas*.

\* significantly different to Australia, with Australia as reference = 100.0.

## *ACT initiatives*

Asthma information is available through consultation with GPs and Woden Valley Hospital's Asthma Education Program being run by the Thoracic Medicine Department. Woden Valley Hospital offers a 'Living with Asthma' course for adults and parents of children with asthma. Other related programs are detailed in Chapter 5.

In addition, the ACT Asthma Association provides information over the telephone, counselling, literature and on-going information and education through seminars, newsletters, library resources, school visits and information booths at public venues. The ACT Asthma Association also supports the National Policy on Asthma for Schools.<sup>3</sup>

The ACT Government in its *ACT Health Goals and Targets for the Year 2000* and The National Asthma Campaign with their document *National Asthma Strategy- Goals and Targets* are working towards addressing better prevention and management of asthma morbidity.<sup>3</sup> The National Asthma Campaign is also encouraging general practitioners to work out more detailed care plans for patients and pharmaceutical companies are using guidelines provided through the campaign to produce health promotional type materials.

The ACT Health Outcomes Reference Group, which is overseeing the implementation of health goals and targets in the Territory, has decided to treat the development and implementation of asthma strategies as a major priority in its deliberations. An expert working group with representatives from all interested areas will be established to advise it.

## 6.8 Diabetes Mellitus

Diabetes Mellitus, usually referred to as diabetes, is a condition in which the body is unable to properly use glucose or sugar which is required for basic cell and organ function. It occurs when the pancreas is unable to produce sufficient insulin, or the insulin produced is unable to work effectively. Insulin is a hormone which normally circulates in the blood and assists the passage of glucose into the bloodstream and body cells. The most common types of diabetes mellitus are:

- . Juvenile, insulin dependent diabetes;
- . Mature-age onset non-insulin dependent diabetes;
- . Gestational diabetes (first diagnosed when a woman is pregnant).

Diabetes is a condition of considerable public health significance in that it affects at least half a million Australians, is associated with significant human and financial cost to the community and its prevalence is likely to increase significantly as the population ages. People from low socio-economic backgrounds and those from certain racial groups such as Aboriginal and Torres Strait Islander people are more likely to be affected than the general population. The condition is theoretically amenable to prevention and early intervention, as are the complications associated with the condition.<sup>26</sup> The majority of sufferers can manage their diabetes with diet therapy, weight control and regular exercise, although some need oral hypoglycaemic tablets or insulin. There are therefore, considerable implications for health planners and service delivery.

There are no accurate statistics available to gauge the exact number of diabetes cases nor the number of deaths caused by diabetes, in the ACT or Australia. The Australian Bureau of Statistics Population Survey Monitor results indicate the prevalence to be 3.8 per cent of all adults and 8.2 per cent of people aged 55 years and over.<sup>37</sup>

### *Mortality*

It should be noted that some deaths identified as deaths from other causes (eg heart attack), actually are attributable to diabetes mellitus. As data collection becomes more precise, these statistics will be recorded more accurately.

There were 14 known deaths caused by diabetes mellitus in the ACT in 1993 (7 males, 7 females). This equates to 1.3 per cent of all deaths in the ACT. In Australia, there were 2.1 per cent of all deaths caused by diabetes mellitus (1,278 males and 1,290 females).<sup>27</sup> It is reasonable that the ACT should have less diabetes deaths when you consider that the ACT has a relatively high socio-economic disadvantage score (1,071 compared to 1,000 for Australia) and that it has a very small Aboriginal and Torres Strait Islander population. If you consider the standardised, cause specific death rates however, it can be seen that males in the ACT have slightly higher, but not statistically significant, death rate from diabetes than Australian males on the whole (Refer Table 37).



**Table 37: Standardised diabetes mellitus death rates average for three years around census years 1981 and 1991, ACT and Australia (a)**

		ACT	Australia
Males	1981	0.15	0.13
	1991	0.16	0.15
Females	1981	0.09	0.11
	1991	0.08	0.11

(a) rate per 1,000 population

Source: ABS & NCEPH, *Trends in Mortality*, ABS Catalogue No. 3313.0

Estimated years of potential life lost (YPLL) from diabetes death is 167 years or 8% of total YPLL in the ACT in 1993.<sup>27</sup>

### Morbidity

Diabetes is a chronic condition which rarely warrants hospitalisation. General practitioners generally attend to the care and treatment of patients with diabetes.

A project which commenced in 1995 and funded by the Commonwealth Department of Human Services and Health is being undertaken by the ACT Division of General Practice. It aims to strengthen the role of GPs in the care of people with diabetes, to identify diabetes knowledge and risk factors in the local area and to develop best practice protocols for health gain across the public health continuum. It will establish a central database of diabetics which will assist in developing a more accurate profile of diabetes incidence and treatment in the ACT.

In the meantime, hospital separation data as depicted in Figure 49, assists in determining acute morbidity caused by diabetes in the Territory.

**Figure 49: ACT hospital separations, 1992-93, for principle diagnosis of diabetes mellitus**



NB. excludes hyperglycemia (ICD-9 790.6), neonatal diabetes (775.1) and nonclinical diabetes (790.2)

Source: Raw data from the ACT Hospital Morbidity Data Collection, 1992-93

Performance Information Section, Department of Health and Community Care

Of the 351 separations depicted in Figure 49, 86 (or 24.5%) of them were for gestational diabetes (64) and complications of pregnancy due to diabetes (22). Since these diagnoses are exclusively affecting women, the peak for women of child bearing age is considerably higher than for men. Male separations do not, in fact have an identifiable peak, although there is a slight increase in cases in the 55-64 year range. With the exception of women in the child bearing ages, men and women have roughly the same incidence of hospital separations for diabetes.

The average length of stay in hospital was 9.2 days for males and 9.9 days for females in 1992-93.

Serious clinical complications which can be caused by diabetes include adult blindness, chronic kidney failure, coronary heart disease and stroke.

### *Strategies for addressing the problem*

The ACT Health Goals and Targets for the Year 2000 document outlines some specific goals for improving diabetes services:

- \* to reduce the prevalence of non-insulin dependent diabetes;
- \* to achieve early diagnosis of diabetes so that early intervention can assist in reducing the prevalence and severity of diabetes-related complications; and
- \* to obtain accurate baseline data about the prevalence and health outcomes associated with diabetes.

A working party to address the issues will be established as part of the ACT Goals and Targets and health outcomes process. Membership will include experts, departmental officers, non-government organisational people and consumers.

## 6.9 Alcohol and Other Drugs

It is widely recognised throughout Australia and overseas that the legally available drugs, especially alcohol and tobacco, cause the most harm to the community. The World Health Organisation identifies smoking as the single greatest preventable cause of ill-health and premature death in the developed world.<sup>31</sup>

The economic cost of drug abuse in Australia in 1988 has been estimated at more than \$14 billion per year (42% for alcohol, 47% for tobacco and 11% for illicit drugs).<sup>28</sup> A reassessment for tobacco use in 1994 indicates that its cost has risen by one third since 1988. Problems associated with drug abuse place heavy demands on health and community services. Most hospital admissions for drug related causes are due to tobacco and alcohol use.<sup>29</sup> Social problems related to drug abuse include risk of losing employment, risk to relationships and other psycho-social problems, financial difficulties and legal problems often related to criminal charges.

Recent figures on ACT drug use and abuse are limited, but the National Health Survey 1995-96 is currently underway and results will be available next year. The last National Health Survey in 1989-90 indicated that ACT residents smoked more, and drank alcohol at a moderate or high rate compared to the rest of Australia. It should be noted that 82 per cent of ACT residents in fact drank at low risk levels.<sup>33</sup> A comparison of school students from the ACT and NSW in an ACT Government survey, indicated a higher level of weekly alcohol use among ACT students.<sup>32</sup> A worrying ACT and national trend is that the prevalence of under-age drinking has increased in past years, for both genders.

It has been estimated that 15 per cent of deaths from all causes and 75 per cent of drug related deaths are attributable to tobacco use. Cancer and ischemic heart disease account for 35 per cent and 26 per cent of tobacco related deaths respectively.<sup>28</sup> This, of course, does not begin to measure the years of potential life lost from premature death. The prevalence of smokers in the ACT is similar to the rest of Australia with 37 per cent of males and 24 per cent of females smoking.<sup>34</sup>

Information on illicit drug use in the ACT is limited. The National Drug Household Survey 1993 found that a very small percentage of the ACT population reported ever having used illicit drugs, with the exception of cannabis. Males had a similar or higher use of illicit drugs than females, with the highest prevalence of use occurring in the 20-34 age group. Cannabis use is fairly wide spread, especially in people under 30 years of age. Regular cannabis use is most common in males aged 20-24 years of whom 22 per cent use the drug weekly.<sup>35</sup>

With innovative new restrictions on tobacco sales and smoking, and programs targeted at minimalising harm from drug use, it will be interesting to see how the ACT fares in the 1995-96 Survey.

A major concern is the way people use drugs. The dangers involved in contracting communicable diseases through inappropriate use of needles for instance, is particularly worrying. NSW research estimates that approximately 60 per cent of intravenous drug users become infected with hepatitis B or C within two years.<sup>36</sup>

The Alcohol and Drug Service of the Department of Health and Community Care aims to minimise harm related to the use of alcohol and other drugs through such services as information, education, community development, early intervention and treatment. It is also responsible for drug policy development to ensure that the Department is offering appropriate and timely services and participates in national drug policy and implementation reform.

Service delivery activity for the Territory is outlined in Table 38.

**Table 38: ACT Alcohol and Drug Service activity, 1992-94**

<b>Units</b>	<b>1992-93</b>	<b>1993-94</b>
<b>Detoxification Unit</b>		
Number of admissions	636	709
Occupied bed days	3,392	3,519
Occasions of service	333	334
<b>Methadone Program</b>		
Number of clients	273	(ave) 301
Reviews	331	390
Urine tests	1,711	2,353
Take away doses	9,110	24,474
<b>Hospital Unit</b>		
Outpatients	4,119	3,582
<b>Community Unit</b>		
Education programs	233	199
Counselling	1,106	4,436
<b>24 Hour Crisis Line</b>	744	799
<b>Drugs of Dependence Act</b>		
New referrals	34	19
Ongoing clients	33	17
Assessments completed	24	18
Treatment recommended	20	12
Treatment orders issued	17	7
Treatment orders completed	5	9
<b>Grant Recipients</b>		
Number of projects funded	21	20
Number of agencies funded	11	10

Source: ACT Department of Health Annual Report 1993-94

### *ACT initiatives*

As part of the development of ACT Health Goals and Targets for the Year 2000, the issue of drug and alcohol use was addressed, with the result that goals and targets for alcohol and drugs were developed.<sup>3</sup> Goals are to increase co-ordination, communication and consultation within the alcohol and drug sector, reduce the uptake of all drugs and minimise the harms associated with drug use. The implementation process of attaining those goals has begun and will continue over the next few years. An ACT Drug Strategy 1995-97 which incorporates these goals has been published.<sup>31</sup>

An Alcohol and Drug Service Grants Program provides \$1.5 million to non-government agencies to provide a range of alcohol and other drug interventions in the areas of training, health promotion, counselling, therapeutic communities, half-way houses and detoxification.

In addition to the initiatives described in Chapter 5 of this publication (ACT programs to improve health status), and the on-going maintenance and improvement of counselling, education, health promotion, detoxification, treatment and methadone programs, the following activities are some of the major actions being taken to address the problems associated with drug and alcohol use:

- \* researching and developing a service specifically for young people with alcohol and other drug problems;
- \* establishing a permanent sobering-up place for people found intoxicated to the extent they may be in danger to themselves or others in public places;
- \* expanding the methadone program to include a wider range of community options;
- \* promoting the labelling of alcoholic beverage containers with standard drinks information; and
- \* establishing pilot programs to enhance appropriate services. Programs under consideration include a heroin distribution trial and a subsidised nicotine patch trial.

The Alcohol and Drug Service liaises constantly with many other agencies, both government and non-government, in its endeavours to reduce the harm caused by alcohol and other drugs. These *include* such agencies as the Australian Federal Police, the Department of Education and Training, the Department of Urban Services, ADDinc, ADFACT, and the Salvation Army.

## References

1. Australian Bureau of Statistics, *Australian Capital Territory in Focus*, 1994
2. Fritschi L, Coates M, Shadbolt B, Taylor R: *Cancer in the Australian Capital Territory 1982-91*, 1994
3. ACT Department of Health, *ACT Health Goals and Targets for the Year 2000*, 1994
4. Giles GG, Marks R, Foley P, *Incidence of non-melanocytic skin cancer treated in Australia*, British Medical Journal 1988; 296:13-17
5. Reizenstein P, Modan B, Kuller L, *The Quandary of Cancer Prevention*, Journal of Clinical Epidemiology, Vol 47; 575-581, 1994
6. Australian Institute of Health and Welfare, *Australia's Health 1994: the fourth biennial health report of the AIHW*
7. Briscoe N, *Youth Suicide in the ACT*, ACT Department of Health, 1994
8. Australian Bureau of Statistics, unpublished data, *Causes of Death, Australia, 1993*, Catalogue No. 3303.0
- 8(a) Australian Bureau of Statistics, *Causes of Death, Australia, 1993*, Catalogue No. 3303.0
9. Better Health Outcomes for Australians: *National Goals, Targets and Strategies for Better Health Outcomes Into the next Century*, Commonwealth Department of Human Services and Health, 1994
10. McKenna J, Edwards J, Williamson J, *Youth Suicide in the Australian Capital Territory*, Australian Family Physician, Vol 22, No 4; 513-522, April 1993
11. NHMRC, *Falls and the Older Person*, November 1993
12. Tippett V, Elvy G, Hardy J, Raphael B, *Mental Health in Australia: A review of current activities and future directions*, Department of Human Services and Health, 1994
13. Reark Research Pty Ltd, *Community Attitudes to Mental Illness: a report of qualitative research*, 1993 (for the Department of Health, Housing, Local Government and Community Services)
14. Henderson AS, et al, *A survey of dementia in the Canberra population: experience with ICD-10 and DSM-III-R*, Psychological Medicine, 24; 473-482, 1994
15. ACT Health, *Mental Health Services Strategic Plan*, 1993
16. *National Mental Health Report, 1994*, Department of Human Services and Health
17. National Injury Surveillance and Prevention Project: *Final Report*, 1991
18. Delbridge A, Bernard JRL, Editors, *The Macquarie Concise Dictionary, 2nd Edition*. 1988
19. Australian Institute of Health and Welfare, *Morbidity from Cardiovascular Disease in Australia*
20. Glover J, Woollacott T, *A Social Health Atlas. ABS Catalogue No. 4385.0*, 1992.
21. National Heart Foundation and Australian Institute of Health. *Risk Factor Prevalence Study. Survey No. 3 1989. Cities Analysis.*
22. Edouard T d'Espaignet, Australian Institute of Health and Welfare: *Mortality Series Number 2: Trends in Australian mortality, Diseases of the circulatory system: 1950-1991.*
23. Department of Human Services and Health, *Cardiovascular health in Australia: A review of current activities and future directions.*
24. Waters A, Bennett S, Australian Institute of Health & Welfare. *Cardiovascular Disease Series Number 1: Risk factors for cardiovascular disease. A summary of Australian data.* 1995.
25. Anderson CS, Jamrozik KD, Burvill PW, et al. *Ascertaining the true incidence of stroke: experience from the Perth Community Stroke Study, 1989-90.* The Medical Journal of Australia; 158: 80-84. 1993.
26. Nutbeam D, Thomas M, Wise M, *National Action Plan - Diabetes to the Year 2000 and Beyond*, Australian Diabetes Society (Diabetes Australia), Canberra, 1993
27. Unpublished data: Health Surveys Section, ABS. *Causes of Death, Australia*, Catalogue No. 3303.0
28. Collins D, Lapsley H, *Estimating the Economic Costs of Drug Abuse in Australia*, 1991, cited in *National Drug Strategic Plan 1993-97*, Australian Government Publishing Service, 1993
29. Department of Human Services and Health, *Statistics on Drug Abuse in Australia, 1992*
30. Editors, Delbridge A., Bernard J.R.L. *The Macquarie Concise Dictionary, 2nd Edition*. 1988
31. ACT Government, *ACT Drug Strategy 1995-97*, 1995
32. Alcohol and Drug Service, *ACT Alcohol and Drug Use Survey of Secondary School Students*, 1991, AGPS, Canberra
33. ABS, *National Health Survey: Alcohol Consumption*, 1989, Catalogue No. 4380.0
34. ABS, *National Health Survey: Tobacco*, 1989, Catalogue No. 4380.0
35. Department of Human Services and Health, *National Drug Household Survey*, 1993, AGPS, Canberra
36. Drug and Alcohol Directorate, *NSW Drug Strategy 1993*, State Health Publication No. (DAD) 93-109
37. ABS, *Population Survey Monitor*, February 1994, Catalogue No. 4103.0
38. Australian Bureau of Statistics: *1989-90 National Health Survey Asthma and Other Respiratory Conditions, Australia*, Catalogue No. 4373.0

39. Ruzicka LT, Choi CY, *Suicide Mortality in Australia, 1970-1991*, Journal of Aust. Population Assoc., Vol 10, No 2, 1993
40. Australian Bureau of Statistics: *1989-90 National Health Survey Cardiovascular and related conditions, Australia*, Catalogue No. 4372.0
41. Australian Bureau of Statistics: *1989-90 National Health Survey Alcohol Consumption, Australia*, Catalogue No. 4381.0
42. Australian Bureau of Statistics: *1989-90 National Health Survey Smoking, Australia*, Catalogue No. 4382.0
43. Australian Bureau of Statistics: *1989-90 National Health Survey Exercise, Australia*, Catalogue No. 4383.0
44. Australian Bureau of Statistics: *1993 Demography Australian Capital Territory*, Catalogue No. 3311.8

## 7. GLOSSARY

*Age-sex standardisation* - demographic technique for adjusting for the effects of age and sex between populations which allows comparisons between populations.<sup>4</sup>

*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.<sup>4</sup>

*Age-sex standardised ratio* - The expected number of events is given by calculating the number of events which would have occurred if the rates for each age/sex group in a given population (the standard) were applied to the population of interest.<sup>5</sup>

*Age-specific birth rates* - the number of births per thousand women of a specific age group in the population.<sup>4</sup>

*Aged dependency rate* is the number of persons aged 65 and over per 100 population aged 15 to 64 years.<sup>4</sup>

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

*Child dependency rate* is the number of children aged 0 to 14 years per 100 population aged 15 to 64 years.<sup>4</sup>

*Crude birth rate* is the number of live births per 1,000 population in a given year.<sup>4</sup>

*Crude death rate* is the number of deaths per 1,000 population (unless otherwise stipulated) in a given year.<sup>4</sup>

*Dementia* is a syndrome caused by brain disease in which the person experiences confused thought and behaviour, most prevalent in people of old age.<sup>3</sup>

*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.<sup>4</sup>

*Incidence* refers to the number of instances of illness commencing, or of persons falling ill, during a given period in a specified population.<sup>1</sup>

*Ischaemic heart disease* is coronary heart disease.

*Median* is a measure of central tendency. It refers to the point between the upper and lower halves of the set of measurements.<sup>1</sup>

*Mortality* is the relative number of deaths, or death rate, as in a district or community.<sup>2</sup>

*Morbidity* is the proportion of sickness in a locality.<sup>2</sup>



*Neoplasm* is a diverse group of diseases characterised by the proliferation and spread of abnormal cells.<sup>2</sup> They may be malignant or benign. Malignant neoplasms are called cancers.

*Pertussis* (whooping cough) is a childhood communicable disease.

*Potential Years of Life Lost (PYLL)* is a measure of the relative impact of various diseases and lethal forces on society. PYLL highlights the loss to society as a result of youthful or early deaths. The figure for PYLL due to a particular cause is the sum, over all persons dying from that cause, of the years that these persons would have lived had they experienced normal life expectation.<sup>1</sup>

*Prevalence* refers to the number of instances of a given disease or other condition in a given population at a designated time.<sup>1</sup>

*Relative survival ratio* for (eg cancer) patients is the ratio between the proportion of (cancer) patients surviving five years and the proportion of an age and sex matched population surviving five years.

*Schizophrenia* is a psychotic disorder characterised by distortions of thinking, speech and perception, which is usually accompanied by inappropriate or "blunted" emotions.<sup>3</sup>

*Sex differentials* are the differences in rates between males and females.<sup>1</sup>

*Socio-economic disadvantage score* summarises information available from a number of variables related to education, occupation, family structure, ethnicity, housing conditions and costs, and economic resources.<sup>4</sup> If interpreted carefully, it can assist in interpreting trends and predicting health risks in a population.

*Standardised death rate* is the overall death rate that would have prevailed in a standard population, in this case the 1991 Australian population, if it had experienced at each stage the death rates of the population being studied.<sup>4</sup>

*Statistically significant* infers that it can be concluded on the basis of statistical analysis that it is highly probable.

## References

1. Last J, *A Dictionary of Epidemiology*, IEA, 1988
2. Delbridge A, Bernard JRL, *The Macquarie Concise Dictionary, 2nd Edition*, 1988
3. Sumich H, Hunt C, Andrews G, (*Clinical Research Unit for Anxiety Disorders*) - produced for the Mental Health Workbook Project, 1994
4. Australian Bureau of Statistics definitions.
5. Glover J, Woollacott T. *A Social Health Atlas. ABS Catalogue No. 4385.0*, 1992.

# APPENDIX 1

## Methodologies

### *Years of potential life lost - ABS definition*

Estimates of years of potential life lost (YPLL) were calculated for deaths of persons aged 1 to 75 years based on the assumption that deaths occurring between ages 0 and 76 years are considered untimely.

$$YPLL = \sum_x (D_x (76 - A_x))$$

$A_x$  = Adjusted age at death. As age at death is only available in completed years the midpoint of the reported age was chosen (eg. age at death 34 years was adjusted to 34.5)

$D_x$  = Registered number of deaths at age  $x$  due to a particular cause of death

YPLL was standardised for age using the following formula:

$$YPLL_s = \sum_x (D_x (76 - C_x))$$

where the correction factor  $C_x$  is defined for age  $x$  as:

$$C_x = \frac{N_{xs}}{N_s} \cdot \frac{1}{N_x} \cdot N$$

$N$  = Number of persons aged 1-75 years in the 1993 population

$N_x$  = Number of persons aged  $x$  years in the 1993 population

$N_{xs}$  = Number of persons aged  $x$  years in the standard population

$N_s$  = Number of persons aged 1-75 years in the standard population

The Australian population at 30 June 1991 was chosen as the standard population.

Estimates of YPLL by cause of death, as presented in Table 17 indicate the number of years lost due to specific causes on the assumption that up to exact age 76 years the decedent would not have died from any other cause. YPLL therefore should not be used as a measure of gains in years of life expectancy should a cause of death be eliminated or reduced.

### *Rates*

Rates per 100,000 are calculated as follows:

Rate =  $N/P \cdot 100,000$  (where  $N$  = number of events and  
 $P$  = population at risk of experiencing the event).

**Reference:** Australian Bureau of Statistics. *1993 Causes of Death Australia. Catalogue No. 3303.0.*

# APPENDIX 2

## Explanatory Notes

### *Change in name of Health Department*

Over the past few years the ACT has had several changes of name and some functions of its health department. In the document, particularly in references, the following names have been used:

- . ACT Health
- . ACT Department of Health
- . ACT Department of Health and Community Services

The current name for the department is ACT Department of Health and Community Care.

### *Limitations in using hospital separation data*

The hospital data will assist in developing an illness profile if care is taken to take account of its limitations. It should be noted that hospital separation data:

- does not necessarily denote the number of admissions in a particular year. Since a separation is when a patient returns home, transfers to another institution or dies, this event may occur in the next year (eg admitted on 29 June 1992, separated on 2 July 1992. This person would be recorded as an admission in the 1991-92 year and as a separation in the 1992-93 year);
- will not reflect the severity of illness - for example, one patient separated after an asthma episode, may be comparatively well compared to another, but will be ill enough to require admission. Length of stay data will assist in identifying the severity of the condition;
- will not register the people experiencing severe illness who chose not to go to hospital - this will be particularly relevant in cases of injury where a person visits a private clinic/surgery for treatment;
- does not separate repeated separations by one patient - if one patient has repeated admissions for a particular chronic condition (eg. end stage renal disease where a person may be admitted three times a week for dialysis), each admission and separation are recorded separately. Conclusions regarding the frequency of a condition in the population must therefore be taken with care.
- does not take into account policy or political changes (eg. through new technology, a patient may not need admission to a hospital, but have the same level of condition which warranted hospitalisation before the technology was utilised; if there is a visiting medical officer withdrawal of services for political or other reasons, admissions and, therefore separations, will be reduced).

Hospital morbidity data presented is for 1992-93 rather than for 1993-94. This will ensure that results are not influenced by the visiting medical officer strike towards the end of 1993.

## *Calculations*

The following protocol has been used throughout this document:

- Where tables, charts, figures and numbers were simply extracted from other publications the methods used for calculations can be found in those publications.
- The methods used by the authors for calculating rates etc. are found in Appendix 1 "Methodologies".

## *Cardiovascular disease*

The authors have refrained from using the term cardiovascular disease. Various Commonwealth documents use the term interchangeably with circulatory disease whereas other states and territories have used the term to mean heart disease. Therefore, the terms circulatory diseases (or diseases of the circulatory system) and heart disease have been used instead to avoid confusion.

The term cardiovascular disease has been used twice.

- once as defined by the 1989-90 National Health Survey.<sup>1</sup> That definition included hypertension, heart disease (coronary, heart attack, coronary thrombosis, etc.), arteriosclerosis (hardening of the arteries), cerebrovascular, other circulatory diseases including thrombosis and ill-defined heart conditions (ie irregular heart beat and palpitations). The definition excluded varicose veins and haemorrhoids.
- once in context of the National Health Goals and Targets where it has been defined as referring to all circulatory diseases although the focus has been on heart disease.

## **References**

1. Australian Bureau of Statistics: *1989-90 National Health Survey Cardiovascular and related conditions, Australia*, Catalogue No. 4372.0.