ISSN 0816-2972

Indicators of drug use in Western Australia, 1982-1992

Greg Swensen
Elizabeth Unwin

assisted by Susan Jones

Epidemiology Branch

State Health Purchasing Authority

Health Department of Western Australia

Perth, Western Australia

February 1995

OCCASIONAL PAPER/58

Summary

This report provides an overview of the impact of drugs in WA over the period 1982-1992 through the analysis of a wide spectrum of indicators of drug use.

Mortality due to all types of drugs

Over the period 1982-1992 there was a total of 1,612 deaths directly caused by all types of drugs in Western Australia, of which 1,167 (72.4%) were male and 445 (27.6%) were female. By type of drug, alcohol was responsible for 1,015 (63%) of these deaths and drugs other than alcohol were responsible for 597 (37%) of these deaths.

Of the 1,612 deaths caused by all types of drugs, 37 (2.3%) involved 10-19 year olds, 220 (13.6%) involved 20-29 year olds, 247 (15.3%) involved 30-39 year olds, 256 (15.9%) involved 40-49 year olds, 338 (21%) involved 50-59 year olds, 341 (21.1%) involved 60-69 year olds and 172 (10.7%) involved 70 years olds and over. There was one death, due to accidental poisoning by a volatile substance, recorded in the 0-9 years age group.

The study found the age-standardised mortality rate for all types of drug-caused deaths for both sexes peaked in the mid-1980's then declined. The 1992 male and female rates (9.8 deaths per 100,000 person-years, and 4.3 per 100,000, respectively) were lower than the 1982 rates (11.7 per 100,000 and 6.0 per 100,000, respectively).

Mortality due to alcohol

There were 1,015 alcohol-caused deaths, of which 803 (79.1%) were male and 212 (20.9%) were female. Of these deaths, 820 (80.8%) were caused by conditions wholly attributable to alcohol (cardiomyopathy, polyneuropathy, gastritis and liver cirrhosis), 175 (17.2%) were caused by mental disorders (alcoholic psychoses, alcohol dependence and non-dependent alcohol use), and 20 (2.0%) were caused by alcoholic poisoning.

The male age-standardised mortality rate for alcohol-caused deaths peaked (at around 11 per 100,000) in the late 1980s and decreased to 6.8 per 100,000 in 1992. The female age-standardised mortality rate for alcohol-caused deaths peaked in the mid 1980s (3.4 per 100,000) and decreased to 2.0 per 100,000 in 1992. The 1992 age-standardised mortality rates for both sexes were the lowest recorded over the 11-year period.

Mortality due to drugs other than alcohol

There were 597 deaths directly caused by drugs other than alcohol, of which 364 (61%) were male and 233 (39%) were female. By type of drug, as a proportion of all total drug deaths, opiates caused 218 (13.5%) deaths, tranquillisers/sedatives caused 163 (10.1%) deaths, other and unspecified drugs caused 92 (5.7%) deaths, barbiturates caused 61 (3.8%) deaths, and volatile substances caused 23 (1.4%) deaths. There was one death recorded as caused by cocaine and four deaths recorded as caused by psychostimulants.

While age-standardised mortality rates for deaths caused by drugs other than alcohol decreased after peaks in the earlier part of the period, there was no consistent downward trend over the 11-year period. For poisoning deaths, there was no decline in the male age-standardised mortality rate over the 11-year period, but the female rate showed a steady reduction, and, for three out of the last four years, the female rate had remained below 2 per 100,000.

Hospitalisation due to all types of drugs

Over the period 1982-1992, there were 46,233 hospital admissions where the principal diagnosis was drug-related - 28,620 (61.9%) were male and 17,613 (38.1%) were female. Of these admissions, alcohol was responsible for 25,705 (55.6%) admissions and drugs other than alcohol were responsible for 20,528 (44.4%) admissions.

Hospitalisation due to alcohol

Of the 25,705 alcohol-caused admissions, 19,943 (77.6%) were male and 5,762 (22.4%) were female. There were 21,387 (83.2%) admissions caused by mental disorders (alcoholic psychoses, alcohol dependence and non-dependent use), 3,821 (14.9%) admissions caused by conditions wholly attributable to alcohol (cardiomyopathy, polyneuropathy, gastritis and liver cirrhosis), and 497 (1.9%) admissions due to alcoholic poisoning.

Hospitalisation due to drugs other than alcohol

Over the 11-year period there were 20,528 admissions caused by drugs other than alcohol, of which 8,677 (42.3%) were male and 11,851 (57.7%) were female. Of all types of drug related admissions, barbiturates/tranquillisers/sedatives were responsible for 9,652 (20.9%) admissions, opiates were responsible for 3,883 (8.4%) admissions, other and unspecified drugs and drug combinations for 3,038 (6.6%) admissions, anti-depressants were responsible for 2,771 (6.0%) admissions, volatile substances were responsible for 829 (1.8%) admissions, psychostimulants were responsible for 249 (0.5%) admissions, hallucinogens were responsible for 88 (0.2%) admissions, and cocaine was responsible for 18 (<0.1%) admissions.

Public health data

From 1983 to 1992 there were 766 notifications of HIV/AIDS in Western Australia. The highest risk group was 'homosexual males' which accounted for two-thirds (515) of notifications. The second highest risk group until 1989 was 'bisexual males', after which time the number of notifications from intravenous drug users (IDUs) became the second highest risk group. IDUs accounted for 10% (76) of all HIV/AIDS notifications, increasing from one notification in 1985 to a peak of 17 notifications in 1989. Since then the number of notifications from IDUs has been steadily dropping and in 1992 there were seven notifications.

From 1982 to 1992 there were 2,558 notifications of drug addiction - 1,603 (62.7%) males and 955 (37.3%) females. The age group with the highest number of notifications was the 20-29 age group, where there were 1,629 (63.7%) notifications of drug addiction.

From April 1987 to December 1992 approximately 1,550,484 needles and syringes (N&S) were distributed as SS5 Packs or FitPacks to IDUs through retail chemists in Western Australia. The number of N&S distributed in this way nearly doubled between 1988 (the first full year of data) and 1989; more than trebled between 1989 and 1990; increased by 24% between 1990 and 1991; and increased by 33% between 1991 and 1992.

From 1989 to 1992 a total of 1,049,470 N&S were distributed to IDUs in the Perth metropolitan area through Needle and Syringe Exchange Programs (NSEPs) run by the WA Aids Council and the Alcohol and Drug Authority. The total number of N&S distributed through NSEPs more than doubled between 1989 to 1990, and 1990 to 1991. The number distributed in 1992 however showed a fall of 21% compared to the number distributed in 1991.

It was estimated that a combined total number of 2,599,954 N&S were distributed over the period 1989 to 1992 to IDUs through NSEPs and as FitPacks through retail chemists. The daily average number of N&S distributed increased from 161 per day in 1988 (the first full year), to 512 per day in 1989, to 1,455 per day in 1990, to 2,408 per day in 1991 and to 2,549 per day in 1992.

Drug-related telephone calls (ADIS)

Since the Alcohol and Drug Information Service was formed in early 1986, a total of 54,386 drug-related telephone calls were received in this State; 59% (32,104) of the calls related to licit drugs and 41% (22,282) to illicit drugs.

Alcohol-related calls were the subject of the most calls received by ADIS. In the third quarter of 1987 the number of alcohol-related calls increased from about 500 to about 800 calls per quarter, possibly due to the effect of the Health Promotion Services' Drink Safe Campaign, and has remained at this level. In 1992 there were 3,413 (31.6%) alcohol-related calls received by ADIS.

Cannabis-related calls were the second most frequent subject of calls to ADIS. In the period 1987-1989 the number of cannabis-related calls per year remained relatively steady, at 900-1,000 per year. Apart from 1989, when there was a slight drop, the number of cannabis related calls, has been steadily increasing since ADIS began. In 1992, there were 1,906 (17.6%) of cannabis-related calls received by ADIS.

The numbers of calls about tobacco and tranquillisers peaked in the second quarters of 1989 and 1990, possibly due to the QUIT and Minor Tranquilliser campaigns supported by the Health Promotion Services Branch. The reduction in the number of calls recorded as "other licit drugs" after the first quarter of 1989 may be due to a change in coding practices, as it coincides with increases in the number of tranquilliser and tobacco calls.

The number of heroin-related calls has tended to remain fairly constant, at approximately 700-800 calls per year. In 1992, there were 817 (7.6%) of heroin-related calls received by ADIS.

The number of psychostimulant calls was relatively low until the middle of 1988 when there was a marked increase, with increases recorded in each of following years. In 1992, there were 1,498 (13.9%) of psychostimulant -related calls received by ADIS.

Treatment services - methadone

Over the period 1982-1992 the consumption of methadone in WA rose from 2.29 kgs to 4.66 kgs in 1985 and then declined to 2.39 kgs in 1987. However, since 1988 the quantity of methadone consumed each year in this State has steadily increased; especially since 1990. The increase recorded since the 1980s has been due to substantial increases in the size of the treatment population and higher dosage schedules.

Over the period 1973, when methadone was first prescribed in this State, to 1992, there were a total of 2,793 new admissions to methadone treatment in WA. The total number of persons treated with methadone per year in this State over the period 1978 to 1992 has demonstrated substantial increases since the mid 1980s; such that a total of 766 persons participated in the methadone program by the year 1992.

The proportion of new admissions of the annual treatment population peaked in the 1984-1985 period, when 42% of all admissions were new admissions, and apart from an increase in 1988, gradually declined over the remainder of the period, dropping to 21.3% in 1992. Since 1986 the number of new admissions has remained relatively static, at around 150 new admissions per year, with the exception of 1988 when there were 247 new admissions. This data shows the growth in the size of annual total treatment population is due to an increased number of *readmissions*, not *new* admissions, and may indicate that there is a static population of heroin users in this State.

The size of the quarterly methadone treatment population varied over the period 1982 to 1992, from a minimum of 118 persons in the March 1982 quarter to a maximum of 535 persons in the December 1992 quarter. The number of females in methadone treatment has risen steadily over the period from about a third of the quarterly treatment population at the beginning of 1982 to around 42% at the end of 1992. The number of persons aged over 30 years has also increased, showing the increasing age of the treatment population.

Over the period 1986 to 1992, the mean length of stay of the methadone treatment population increased by 75%, from 15.3 to 26.8 months. This was reflected in a reduction in the number of short-stay patients (less than six months) after a peak at the end of 1988, and an increase in the number of persons in treatment for over two years.

Treatment services - residential detoxification programs

Data from the ADA's residential detoxification program at the Central Drug Unit (CDU) shows a downward trend in the number of new admissions, readmissions and total admissions, for both males and females, over the period 1988 to 1992. Males admitted to the CDU were typically in their late 30s, whereas females were typically in their early 30s.

Treatment services - Court Diversion Service

Over the period 1988 to 1992 there were a total of 635 referrals to the Court Diversion Service. There was an average of about 120 admissions per year until 1992 when there was a marked increase in the number of admissions, and by the December 1992 quarter, there were 55 referrals, the largest number recorded in any quarter.

Treatment services - sobering up shelters

Due to the absence of data for six quarters between the March 1991 quarter and the June 1992 quarter, it is not possible to provide comprehensive data on sobering up shelters in the State. The Perth sobering-up centre, operated by the Salvation Army, recorded 943 admissions, of which 234 (24.8%) involved Aborigines, between the time of its inception on 28th May 1990 and the end of December 1992. The South Hedland sobering up shelter, which opened in April 1991, recorded 631 admissions. The other two sobering up shelters, at Halls Creek and Roebourne, which both opened in September 1992, recorded 774 and 275 admissions, respectively. The South Hedland, Halls Creek and Roebourne shelters are all operated by community-based organisation, and their clientele were almost wholly Aboriginal, compared to the Perth shelter.

Alcohol consumption

The annual value and volume of alcohol sold over the period 1988-1992 increased (by 14.1% and 0.9% respectively). The annual value and volume of low alcohol beer, wine (low and high alcohol), and spirits increased, whilst the annual value and volume of high alcohol beer decreased (by 15.4% and 24.9% respectively).

Data from alcohol sales for 1988-1992 show that estimated total per capita absolute alcohol consumption decreased. In 1992, the most recent year for which data is available, 10.58 litres of absolute alcohol per capita were consumed, of which 57.3% came from beer.

Though much of the reduction in per capita alcohol consumption was due to a decrease in the consumption of beer, this was found to have been offset by a more recent an increase in the per capita consumption of both wine and spirits. Australian Bureau of Statistics surveys of alcohol consumption in 1977, 1985 and 1991 provided confirmation that much of the change in alcohol consumption in WA has been as a result of a change in male drinking to lower risk drinking.

The survey data for the period 1985-1991 found that whereas beer consumption was the dominant form of alcohol consumption by males across all age groups, amongst females wine consumption was the dominant form of alcohol consumption, up to the 45-64 age group. Average daily alcohol consumption of males was found to be between 2-3 times higher than the average daily consumption of females and that the highest levels of alcohol consumption in both males and females occurred in the 18-24 age group.

Tobacco consumption

The percentage of adult smokers has decreased over the period 1984-1993 from 30.8% to 25.0%. Although the prevalence of smoking among males has steadily dropped over this period (from 34.4% to 26.0%), there has been some fluctuation in the proportion of female smokers.

Data from 1984-1991 showed that the 18-24 years age group has the highest prevalence of smokers and the lowest proportion of ex-smokers, whereas the over 65 years age group has the lowest prevalence of smokers and the highest proportion of ex-smokers. The proportion of current smokers was lowest in 1991 for both sexes and all age groups. For males the 18-24 years age group had the highest proportion of non-smokers, whereas for females the over 65 years age group had the highest proportion of non-smokers.

Data from 1984-1993 show a large increase in the number of children who take up smoking after the age of 12, when they leave primary school and begin high school - less than 10% of 12 year olds smoked, whereas about a quarter of children aged 14-17 years smoked. In 1991 the proportion of children aged 13-16 years that smoked was less than in 1984, but the proportion of 17 year olds that smoked had steadily increased.

The amount of revenue generated from tobacco franchise licence fees increased markedly over the period 1977 to 1992; by 1992 $108,417,473 was raised by the State government.

Table of contents

SUMMARY i

TABLE OF CONTENTS vi

List of tables viii
List of figures x
List of appendix tables xii
Acknowledgments xv

CHAPTER 1 - INTRODUCTION 1

Mortality data 2
Hospitalisation data 3
Notification-related data 4
Drug-related telephone calls 6
Treatment programs 6
Consumption data 8

CHAPTER 2 - MORTALITY 11

2.1 All drug-caused mortality 11
2.2 Alcohol 14
2.3 Drugs other than alcohol 16
2.4 Drug-caused mortality by cause type (all drugs) 19
2.4.1 Poisoning 19
2.4.2 Mental disorders 21
2.4.3 Conditions wholly attributable to alcohol 22

CHAPTER 3 - HOSPITALISATION 23

3.1 All drug-caused hospitalisation 23
3.2 Alcohol 26
3.3 Drugs other than alcohol 28
3.4 Drug-caused hospitalisation by cause type (all drugs) 31
3.4.1 Poisoning 31
3.4.2 Mental disorders 35
3.4.3 Conditions wholly attributable to alcohol 39

CHAPTER 4 - NOTIFICATION-RELATED DATA 41

4.1 HIV/AIDS in IDUs - notification data 41
4.2 HIV/AIDS in IDUs - drug treatment data 44
4.3 Notifications of drug addiction 45
4.4 Availability of needles and syringes 46

CHAPTER 5 - ALCOHOL AND DRUG INFORMATION SERVICE 49

5.1 Licit drugs 50
5.2 Illicit drugs 53

CHAPTER 6 - USERS OF DRUG TREATMENT SERVICES 56

6.1 Population numbers 56
6.2 Expenditure on drug and alcohol programs 56
6.3 Methadone program 57
6.3.1 Methadone consumption 57
6.3.2 Annual treatment data 57
6.3.3 Quarterly treatment data 60
6.4 Residential detoxification programs, 1986-1992 65
6.5 Court Diversion Service, 1988 - 1992 70
6.6 Primary drug problems of new admissions to ADA programs 71
6.7 Sobering- up centres 73

CHAPTER 7 ALCOHOL CONSUMPTION DATA 74

7.1 Sales of alcoholic beverages 74
7.2 Estimated per capita alcohol consumption 74
7.3 Self-reported alcohol consumption 76
7.3.1 Average daily consumption by sex, 1977, 1985, 1991 77
7.3.2 Average daily consumption by age group and type of beverage, 1985, 1991 79

CHAPTER 8 TOBACCO CONSUMPTION 83

8.1 Smoking prevalence 83
8.2 Tobacco franchise licence fee collections 88

List of tables

Table 2.1: Number and proportion of deaths for all drug-caused mortality, by type of drug and sex, Western Australia, 1982-1992 11

Table 2.2: Age-standardised rates for all drug-caused deaths by sex, Western Australia, 1982-1992 13

Table 2.3: Number and proportion of deaths due to alcohol by specific cause, Western Australia, 1982-1992 14

Table 2.4: Age-standardised rates for alcohol-caused deaths by sex, Western Australia, 1982-1992 15

Table 2.5: Number and proportion of deaths due to drugs other than alcohol, by type of drug and sex, Western Australia, 1982-1992 16

Table 2.6: Age-standardised rates for deaths due to drugs other than alcohol by sex, Western Australia, 1982-1992 18

Table 2.7: Number and proportion of poisoning deaths by type of drug, Western Australia, 1982-1992 19

Table 2.8: Age-standardised rates for deaths due to drug-caused poisoning by sex, Western Australia, 1982-1992 20

Table 2.9: Number and proportion of deaths due to drug-caused mental disorders by type of disorder, Western Australia, 1982-1992 21

Table 2.10: Number and proportion of deaths due to conditions wholly attributable to alcohol, by type of condition and sex, Western Australia, 1982-1992 22

Table 3.1: Number and proportion of all drug-caused hospital admissions, by sex and type of drug, Western Australia, 1982-1992 24

Table 3.2: Age-standardised rates for drug-caused hospital admissions by sex, Western Australia, 1982-1992 25

Table 3.3: Number and proportion of hospital admissions due to alcohol by specific cause, Western Australia, 1982-1992 26

Table 3.4: Age-standardised rates for alcohol-caused hospital admissions by sex, Western Australia, 1982-1992 27

Table 3.5: Number and proportion of hospital admissions due to drugs other than alcohol, by type of drug and sex, Western Australia, 1982-1992 28

Table 3.6: Age-standardised rates for hospital admissions due to drugs other than alcohol by sex, Western Australia, 1982-1992 30

Table 3.7: Number and proportion of hospital admissions due to poisoning, by type of drug and sex, Western Australia, 1982-1992 31

Table 3.8: Number and proportion of hospital admissions due to drug-caused poisoning by intention and sex, Western Australia, 1982-1992 33

Table 3.9: Age-standardised rates for hospital admissions due to drug-caused poisoning by sex, Western Australia, 1982-1992 34

Table 3.10: Number and proportion of hospital admissions due to drug-caused mental disorders by type of disorder and sex, Western Australia, 1982-1992 35

Table 3.11: Male:female rate ratios for hospital admissions due to drug-caused mental disorders, 1982-1992 38

Table 3.12: Number and proportion of hospital admissions due to conditions wholly attributable to alcohol, by type of condition and sex, Western Australia, 1982-1992 39

Table 3.13: Age-standardised rates for hospital admissions due to conditions wholly attributable to alcohol by sex, Western Australia, 1982-1992 40

Table 4.1: Number of HIV/AIDS notifications by risk group Western Australia, 1983-1992 41

Table 4.2: Numbers of tests and HIV positive cases by the methadone treatment program, Western Australia 1986-1992 44
Table 4.3: Estimate numbers of needles and syringes distributed through retail chemists, Western Australia, 1987-1992 46
Table 4.4: Needles/syringes distributed through NSEPs, 1987-1992 47
Table 5.1: Number of drug-related telephone calls to ADIS, 1986-1992 49
Table 5.2: Number of telephone calls to ADIS related to licit drug use, 1986-1992 50
Table 5.3: Number of telephone calls to ADIS related to illicit drug use, 1986-1992 53
Table 6.1: Methadone treatment population by year, Western Australia, 1973-1992 58
Table 6.2: Quarterly methadone treatment population by age group, 1986-1992 63
Table 6.3: Number of admissions to residential detoxification programs by admission type and sex, Western Australia, 1988-1992 65
Table 6.4: Average ages of admissions to residential detoxification programs by sex, Western Australia, 1988-1992 68
Table 6.5: Number of referrals to Court Diversion Service by quarter, Western Australia, 1988-1992 70
Table 7.1: Estimated per capita alcohol consumption, Western Australia, 1968-1992 75
Table 8.1: Smoking prevalence among adults, Western Australia, 1984-1993 83
Table 8.3: Prevalence of people aged 12-17 years who smoked in previous week, Western Australia, 1984-1993 86
Table 8.4: Tobacco franchise licence fee collections, Western Australia, 1977-1992 88

List of figures

Figure 2.1: Number of drug-related deaths by type of drug and age group, Western Australia, 1982-1992 12
Figure 2.2: Age standardised rates for all drug-caused deaths by sex, Western Australia, 1982-1992 13
Figure 2.3: Age-standardised rates for alcohol-caused deaths by sex, Western Australia, 1982-1992 15
Figure 2.4: Number of drug-related deaths by drug type, Western Australia, ... 17
Figure 2.5: Age-standardised rates for deaths due to drugs other than alcohol by sex, Western Australia, 1982-1992 18
Figure 2.6: Number of drug-caused deaths by cause type and age group, Western Australia, 1982-1992 20
Figure 2.7: Age-standardised rates for deaths due to drug-caused poisoning by sex, Western Australia, 1982-1992 21
Figure 3.1: Number of drug-caused hospital admissions by drug type and age group, Western Australia, 1982-1992 24
Figure 3.2: Age-standardised rates for all drug-caused hospital admissions by sex, Western Australia, 1982-1992 25
Figure 3.3: Age-standardised rates for alcohol-caused hospital admissions by sex, Western Australia, 1982-1992 27
Figure 3.4: Number of drug-caused hospital admissions by drug type, Western Australia 1982-1992 29
Figure 3.5: Age-standardised rates for hospital admissions due to drugs other than alcohol by sex, Western Australia, 1982-1992 30
Figure 3.6: Male age-standardised admission rates for drug-caused poisoning by type of drug, Western Australia, 1982-1992 32
Figure 3.7: Female age-standardised admission rates for drug-caused poisoning by type of drug, Western Australia, 1982-1992 32
Figure 3.8: Number of drug-related hospital admissions by cause type and age group, Western Australia, 1982-1992 33
Figure 3.9: Age-standardised admission rates for drug-caused poisoning by sex, Western Australia, 1982-1992 34
Figure 3.10: Age-standardised admission rates for drug-caused mental disorders by year and sex, Western Australia, 1982-1992 36
Figure 3.11: Male age-standardised admission rates for alcohol-caused mental disorders by type of disorder, Western Australia, 1982-1992 36
Figure 3.12: Female age-standardised admission rates for alcohol-caused mental disorders by type of disorder, Western Australia, 1982-1992 37
Figure 3.13: Age-standardised admission rates for alcohol dependence and non-dependent alcohol use, Western Australia, 1982-1992 37
Figure 3.14: Male age-standardised admission rates for mental disorders caused by drugs other than alcohol, by type of disorder, Western Australia, 1982-1992 37
Figure 3.15: Female age-standardised admission rates for mental disorders caused by drugs other than alcohol, by type of disorder, Western Australia, 1982-1992 38
Figure 3.16: Age-standardised admission rates for conditions wholly attributable to alcohol by sex, Western Australia, 1982-1992 40
Figure 4.1: Breakdown of HIV/AIDS notifications by risk group, 1983-1992 42
Figure 4.3: Numbers of notifications of drug addiction by year of notification and age group, Western Australia 1981-1992 45
Figure 6.1: Actual and adjusted per capital ADA expenditure on drug and alcohol services, Western Australia, 1976-1992 57

Figure 6.7: Residential detoxification programs, quarterly treatment population by sex - new admissions, 1988-1992 67
Figure 6.8: Residential detoxification programs, quarterly treatment population by sex - readmissions, 1988-1992 67
Figure 6.9: Residential detoxification programs, quarterly treatment population by sex - all admissions, 1988-1992 67
Figure 6.11: Number of male admissions to ADA programs by primary drug type, Western Australia, 1988-1992 72
Figure 6.12: Number of female admissions to ADA programs by primary drug type, Western Australia, 1988-1992 72
Figure 7.1: Estimated per capita alcohol consumption, Western Australia, 1983-1992 (litres of absolute alcohol, population aged 15 years and older) 75
Figure 7.2: Percentage of all drinkers by level of average daily consumption, Western Australia, 1977, 1985, 1991 77
Figure 7.3: Percentage of male drinkers by level of average daily consumption, Western Australia, 1977, 1985, 1991 78
Figure 7.4 Percentage of female drinkers by level of average daily consumption, Western Australia, 1977, 1985, 1991 79
Figure 7.5: Percentage of all drinkers by type of alcohol and age group, Western Australia, 1985 80
Figure 7.6: Percentage of all drinkers by type of alcohol and age group, Western Australia, 1991 80
Figure 7.7: Percentage of male drinkers by type of alcohol and age group, Western Australia, 1985 81
Figure 7.8: Percentage of male drinkers by type of alcohol and age group, Western Australia, 1991 81
Figure 7.9: Percentage of female drinkers by type of alcohol and age group, Western Australia, 1985 82
Figure 7.10: Percentage of female drinkers by type of alcohol and age group, Western Australia, 1991 82
Figure 8.1: Smoking prevalence (%) among adults by sex, Western Australia, 1984-1993 83
Figure 8.2: Prevalence of current smokers (%) among male adults by age group, Western Australia, 1984-1991 84
Figure 8.3: Prevalence of current smokers (%) among female adults by age group, Western Australia, 1984-1991 85
Figure 8.4 Prevalence of current smokers (%) among male adults by age group, Western Australia, 1984-1991 85
Figure 8.5 Prevalence of ex-smokers (%) among female adults by age group, Western Australia, 1984-1991 86
Figure 8.6 Prevalence of males aged 12-17 years who smoked in previous week, Western Australia, 1984-1993 87
Figure 8.7 Prevalence of females aged 12-17 years who smoked in previous week, Western Australia, 1984-1993 87

List of appendix tables

Table A1.1 ICD9 codes - mortality directly caused by drugs, including alcohol A-1
Table A1.2 ICD9 codes (1979-1987) - hospitalisation directly caused by drugs, including alcohol A-2
Table A1.3 ICD9 CM codes (1988+) - hospitalisation directly caused by drugs, including alcohol A-3
Table A1.4 Examples of the types of drugs responsible for drug-caused mortality and hospitalisation A-4
Table A2.1 Number of male drug-caused deaths by type of drug, Western Australia, 1982-1992 ..... A-5
Table A2.2 Number of female drug-caused deaths by type of drug, Western Australia, 1982-1992 ..... A-6
Table A2.3 Number of drug-caused deaths, persons, by type of drug, Western Australia, 1982-1992 ..... A-7
Table A2.4 Number of male drug-caused deaths, by age group, Western Australia, 1982-1992 ..... A-8
Table A2.5 Number of female drug-caused deaths, by age group, Western Australia, 1982-1992 ..... A-9
Table A2.6 Number of drug-caused deaths, persons, by age group, Western Australia, 1982-1992 ..... A-10
Table A2.7 Number of male alcohol-caused deaths by age group, Western Australia, 1982-1992 ..... A-11
Table A2.8 Number of female alcohol-caused deaths by age group, Western Australia, 1982-1992 ..... A-12
Table A2.9 Number of alcohol-caused deaths, persons, by age group, Western Australia, 1982-1992 ..... A-13
Table A2.10 Number of male deaths caused by drugs other than alcohol, by age group, Western Australia, 1982-1992 ..... A-14
Table A2.11 Number of female deaths caused by drugs other than alcohol, by age group, Western Australia, 1982-1992 ..... A-15
Table A2.12 Number of deaths caused by drugs other than alcohol, persons, by age group, Western Australia, 1982-1992 ..... A-16
Table A2.13 Number of deaths caused by poisoning, persons, by type of drug, Western Australia, 1982-1992 ..... A-17
Table A2.14 Number of deaths caused by drug-related poisoning, persons, by age group, Western Australia, 1982-1992 ..... A-18
Table A2.15 Number of deaths caused by drug-related mental disorders, persons, by type of disorder, Western Australia, 1982-1992 ..... A-19
Table A2.16 Number of deaths caused by drug-related mental disorders, persons, by age group, Western Australia, 1982-1992 ..... A-20
Table A2.17 Number of deaths caused by conditions wholly attributable to alcohol, by condition and sex, Western Australia, 1982-1992 ..... A-21
Table A2.18 Number of deaths caused by conditions wholly attributable to alcohol, persons, by age group, Western Australia, 1982-1992 ..... A-22
Table A3.1 Number of drug-caused hospital admissions (principal diagnosis) by type of drug, males, Western Australia, 1982-1992 ..... A-23
Table A3.2 Number of drug-caused hospital admissions (principal diagnosis) by type of drug, females, Western Australia, 1982-1992 ..... A-24
Table A3.3 Number of drug-caused hospital admissions (principal diagnosis) by type of drug - persons, 1982-1992 ..... A-25
Table A3.4 Number of drug-caused hospital admissions (principal diagnosis) by age group, males, Western Australia, 1982-1992 ..... A-26
Table A3.5 Number of drug-caused hospital admissions (principal diagnosis) by age group, females, Western Australia, 1982-1992 ..... A-27
Table A3.6 Number of drug-caused hospital admissions (principal diagnosis) by age group, persons, Western Australia, 1982-1992 ..... A-28
Table A3.7 Number of alcohol-caused hospital admissions (principal diagnosis) by age group, males, Western Australia, 1982-1992 ..... A-29
Table A3.8 Number of alcohol-caused hospital admissions (principal diagnosis) by age group, females, Western Australia, 1982-1992 ..... A-30
Table A3.9 Number of alcohol-caused hospital admissions (principal diagnosis) by age group, persons, Western Australia, 1982-1992 ..... A-31
Table A3.10 Number of hospital admissions (principal diagnosis) due to drugs other than alcohol by age group, males, Western Australia, 1982-1992 ..... A-32

Table A3.11 Number of hospital admissions (principal diagnosis) due to drugs other than alcohol by age group, females, Western Australia, 1982-1992 ..... A-33
Table A3.12 Number of hospital admissions (principal diagnosis) due to drugs other than alcohol by age group, persons, Western Australia, 1982-1992 ..... A-34
Table A3.13 Number of drug-caused hospital admissions (principal diagnosis) due to poisoning by type of drug, males, Western Australia, 1982-1992 ..... A-35
Table A3.14 Number of drug-caused hospital admissions (principal diagnosis) due to poisoning by type of drug, females, Western Australia, 1982-1992 ..... A-36
Table A3.15 Number of drug-caused hospital admissions (principal diagnosis) due to poisoning by type of drug, persons, Western Australia, 1982-1992 ..... A-37
Table A3.16 Age-standardised rates for drug-caused hospital admissions (principal diagnosis) due to poisoning by type of drug, males, Western Australia, 1982-1992 ..... A-38
Table A3.17 Age-standardised rates for drug-caused hospital admissions (principal diagnosis) due to poisoning by type of drug, females, Western Australia, 1982-1992 ..... A-39
Table A3.18 Number of drug-caused hospital admissions (principal diagnosis) due to poisoning by cause and sex, Western Australia, 1982-1992 ..... A-40
Table A3.19 Number of hospital admissions (principal diagnosis) due to poisoning, by age group, males, Western Australia, 1982-1992 ..... A-41
Table A3.20 Number of hospital admissions (principal diagnosis) due to poisoning by age groups, females, Western Australia, 1982-1992 ..... A-42
Table A3.21 Number of hospital admissions (principal diagnosis) due to poisoning by age group, persons, Western Australia, 1982-1992 ..... A-43
Table A3.22 Number of hospital admissions (principal diagnosis) due to drug-caused mental disorders by type of disorder and drug, males, Western Australia, 1982-1992 ..... A-44
Table A3.23 Number of hospital admissions (principal diagnosis) due to drug-caused mental disorders by type of disorder and drug, females, Western Australia, 1982-1992 ..... A-45
Table A3.24 Number of hospital admissions (principal diagnosis) due to drug-caused mental disorders by type of disorder and drug, persons, Western Australia, 1982-1992 ..... A-46
Table A3.25 Number of drug-caused hospital admissions (principal diagnosis) due to mental disorders by age group, males, Western Australia, 1982-1992 ..... A-47
Table A3.26 Number of drug-caused hospital admissions (principal diagnosis) due to mental disorders by age group, females, Western Australia, 1982-1992 ..... A-48
Table A3.27 Number of drug-caused hospital admissions (principal diagnosis) due to mental disorders by age group, persons, Western Australia, 1982-1992 ..... A-49
Table A3.28 Age-standardised rates for hospital admissions (principal diagnosis) due to drug-caused mental disorders by type of disorder and drug, males, Western Australia, 1982-1992 ..... A-50
Table A3.29 Age-standardised rates for hospital admissions (principal diagnosis) due to drug-caused mental disorders by type of disorder and drug, females, Western Australia, 1982-1992 ..... A-51
Table A3.30 Age-standardised rates for hospital admissions (principal diagnosis) due to drug-caused mental disorders by type of disorder and drug, persons, Western Australia, 1982-1992 ..... A-52
Table A3.31 Number of hospital admissions (principal diagnosis) due to conditions wholly attributable to alcohol by condition and sex, Western Australia, 1982-1992 ..... A-53
Table A3.32 Number of hospital admissions (principal diagnosis) due to conditions wholly attributable to alcohol by age group, males, Western Australia, 1982-1992 ..... A-54
Table A3.33 Number of hospital admissions (principal diagnosis) due to conditions wholly attributable to alcohol by age group, females, Western Australia, 1982-1992 ..... A-55
Table A3.34 Number of hospital admissions (principal diagnosis) due to conditions wholly attributable to alcohol by age group, persons, Western Australia, 1982-1992 ..... A-56
Table A4.1 Number of HIV/AIDS notifications by risk group and year of first diagnosis, Western Australia, 1983-1992 ..... A-57
Table A4.2 Number of notifications of drug addiction by age group and sex, Western Australia, 1982-1992 ..... A-58
Table A4.3 Number of needles/syringes distributed, Western Australia, 1987-1992 ..... A-59
Table A5.1 Number of drug-related telephone calls per quarter, licit drugs, Western Australia, 1986-1992 ..... A-60

Table A5.2 Number of drug-related telephone calls per quarter, illicit drugs, Western Australia, 1986-1992 ..... A-61
Table A6.1 Expenditure by Alcohol and Drug Authority on drug and alcohol services, 1976-1992 ..... A-62
Table A6.2 Annual methadone consumption (kgs), Western Australia and Australia, 1982-1992 ..... A-63
Table A6.3 Numbers of people on methadone treatment program by sex and admission status, Western Australia, 1982-1992 ..... A-64
Table A6.4 Numbers of people on methadone treatment program by length of stay, Western Australia, 1986-1992 ..... A-65
Table A6.5 Number of new admissions to ADA programs by primary drug type and sex, Western Australia, 1988-1992 ..... A-66
Table A6.6 Number of new admissions to ADA programs by primary drug type by age group, Western Australia, 1988-1992 ..... A-67
Table A6.7 Admissions to sobering-up shelters by Aboriginality, Western Australia, 1990-1992 ..... A-68
Table A7.1 Annual sales by type of alcohol, Western Australia, 1988-1992 ..... A-69
Table A7.2 Distribution of average daily alcohol consumption (%) by age group, level of consumption and year of survey, persons, Western Australia, 1977-1991 ..... A-70
Table A7.3 Distribution of average daily alcohol consumption (%) by age group, level of consumption and year of survey, males, Western Australia, 1977-1991 ..... A-71
Table A7.4 Distribution of average daily alcohol consumption (%) by age group, level of consumption and year of survey, females, Western Australia, 1977-1991 ..... A-72
Table A7.5 Average daily alcohol consumption (mls absolute alcohol) by type of alcohol, age group and year of survey, persons, Western Australia, 1985-1991 ..... A-73
Table A7.6 Average daily alcohol consumption (mls absolute alcohol) by type of alcohol, age group and year of survey, males, Western Australia, 1985-1991 ..... A-74
Table A7.7 Average daily alcohol consumption (mls absolute alcohol) by type of alcohol, age group and year of survey, females, Western Australia, 1985-1991 ..... A-75
Table A8.1 Smoking prevalence (%) among adults by age group, smoking status and year of survey, Western Australia, 1984-1991 ..... A-76

Acknowledgments

The production of this report has involved valuable assistance by the following individuals in the Health Services Statistics and Epidemiology Branch of the Health Department of Western Australia:

- Dr Neil Thomson, Director, Epidemiology Branch, State Health Purchasing Authority, for encouragement in continuing the publication of this report series, for editorial assistance and guidance on the structure and content of the report.

- Peter Somerford and Martin Roberts for extracting hospitalisation and mortality data from the Health Department's mainframe computer databases.

- Leon Kaplanis, Lim Tan and Angie Papalia, Information Services, Alcohol and Drug Authority, for providing data analyses of admissions to ADA programs.

- Kiong Tan, Intergovernmental Relations and Revenue Policy Division, State Treasury, for providing tobacco franchise licence collection data.

- Laura Fisher, Health Promotion Services Branch, Health Department of WA, for providing tobacco prevalence tables from HPS surveys of smoking.

- Bob Moyle, Manager, Drugs of Dependence, Environmental Health Branch, Health Department of WA, for providing notifications of drug addiction data.

- Cheryl Regan, Drug Treaties and Monitoring Section, Drugs of Dependence Branch, Department of Health, Housing and Community Services

Chapter 1 - Introduction

The object of this report is to provide time series data on key indicators of drug use[1] in Western Australia over the period 1982-1992. The impetus for the utilisation of indicators of drug use stems from the National Campaign Against Drug Abuse (NCADA) in 1985, when it was recognised that there was a need for a set of standardised national comparative measures of drug-related problems, through the establishment of the National Drug Abuse Data System (NDADS). With the cessation of the Commonwealth's funding of the NDADS at 30 June 1993, the WA Drug Data Collection Unit (WADDCU), this State's component of the NDADS, the responsibility for the production of indicators of drug use was absorbed by the Epidemiology Branch of the Health Department of Western Australia (HDWA).

The methodology of this report is to enumerate and analyse information extracted from data systems maintained by HDWA (eg Western Australian mortality records, the Hospital Morbidity Data System (HMDS), the Infectious Diseases Register and the Register of Drug Notifications); statistics published by the Australian Bureau of Statistics (ABS); monthly and quarterly statistical tabulations produced by the Alcohol and Drug Authority (ADA); alcohol sales data collected by the Office of Racing and Gaming, Liquor Licensing Division and monthly sales data and distribution data of needles and syringes (N&S) provided to injecting drug users (IDUs).

There are important limitations on the information contained in this report as health and social problems caused by drug use tend to manifest only after the passage of a period of time. Also, as some of the data systems used for the compilation of this report - such as statistics from ADA inpatient and outpatient programs, and telephone calls recorded the Alcohol and Drug Information Service (ADIS) are likely to over-represent the dependent and/or chronic spectrum of the drug abusing population, some of the indicators in this report could present a distorted picture of some of the effects of drug use.

To overcome these shortcomings it would be necessary to utilise direct and indirect indicators of drug use by use of both statistical and descriptive data, encompassing the widest possible variety of agencies, detailed information about patterns of drug use from the spectrum of dependent as well as recreational drug users, and to employ as many different methods as possible, so as to accurately quantify the scope of the problem.

The emphasis of this report is the presentation of information in a descriptive fashion, without making any tests of statistical significance of the findings. This will enable policy makers, researchers, key agencies, secondary school students and the large number of students enrolled in professional courses that include addiction studies at tertiary institutions to have a better understanding of the magnitude and scope of problems caused by all forms of drug use, and thus make more informed judgements about problems caused by drug use in Western Australia.

The collation of indicators in this kind of report is time consuming and costly, as often the data are inaccessible, not well organised or not available in computerised databases. However, without the compilation of this kind of data responses to problems caused by drug use will be poorly conceived and ultimately resources may be wasted.

> *"There is broad agreement that data available on the extent and nature of illegal drug use in Australia are inadequate for policy formulation, planning, of service provision, and evaluation of intervention strategies. In addition, the absence of comprehensive data in which confidence can be placed concerning their reliability and validity, contributes to a climate of debate about drug matters characterised by claims about, for example, the number of heavy users of heroin, which owes more to ideology, emotion and institutional advantage than to accurate measurement ... The result is a debate which is often irrational and ill-informed, with consequent policy which may do more damage than it prevents".*[2]

---

[1] The term 'use', adopted in this report in preference to the terms 'abuse' or 'misuse', is in accordance with recommendations by Edwards G, Arif A, Hodgson R. "Nomenclature and classification of drug and alcohol-related problems: a shortened version of a WHO memorandum". ***British Journal of Addiction***; 1982: 3-20.

[2] Wardlaw G. "The importance of drug use indicators research". In Wardlaw G (ed.) ***Epidemiology of Illegal Drug Use In Australia 1988 - Proceedings of the First National Drug Indicators Conference May 1988***. Canberra: Australian Institute of Criminology, 1989: 347.

This report includes information about both licit and illicit drugs and while it is primarily concerned with indicators of the direct effects of drug use from a health-oriented perspective, it is supplemented with accessible data from other data systems. To quantify all the consequences of drug use it would have been necessary to have mounted a complex and large study, by the application of sets of age and sex specific aetiologic fractions to hospitalisation and mortality data as well as other methodologies, in order to have indicators of both the direct and indirect effects of drug use.

The following contain an analysis of indicators based on mortality data, hospital inpatient (ie hospitalisation) data, data from notifications and other public health measures, data based on clients who have attended treatment programs, and alcohol and tobacco consumption data. Data in each chapter are contained in tables and wherever possible figures have been included to illustrate important trends. Tables for all figures are included in either each chapter or in Appendix A. It should be noted that figures may not be readily compared as different scales have been used on the Y axis because of some marked differences in the ranges of values between charts.

The crime and imprisonment data contained in the previous editions of the drug indicators reports have been excluded. This change has been necessary for two reasons because:

- the ABS has replaced its series of reports summarising court statistics, and
- the Crime Research Centre has since 1990 produced an annual statistical series, Crime and justice statistics for Western Australia, which contains arrest, conviction and imprisonment data.

An overview of some of the sources of data used for this report and a description of difficulties involved with their use and interpretation follows.

Mortality data

The ABS codes all causes of death in Western Australia as a single underlying cause. The ABS coding conforms with the 9th Revision of the International Classification of Diseases (ICD9), which since 1979 has applied at the four digit level in Australia.[3]

The set of ICD9 codes concerned with drug (other than alcohol or tobacco) mortality distinguish between the cause as being either due to a mental disorder, a medical condition or an external cause (ie poisoning). The meaning of these codes is that the cause of death may be due to either dependent or non-dependent drug use or a drug-caused psychosis, a medical condition directly caused by drug use, suicide, accidental drug use, assault by poisoning (ie death caused by someone else administering the drug), or undetermined as to whether death was caused accidental or due to suicide (Appendix Table A1.1, page A-1).

It is to be noted that mortality due to the adverse effects of therapeutic drug use, E-codes 930-949, is excluded from this report as it is not considered to be closely related to drug use. As a number of specific forms of drug-taking are not adequately differentiated by some ICD9 codes (eg assault by poisoning (E9620), drug psychoses (292), the code E9503 (suicide) and the code E9803 (undetermined external cause)), it has been necessary to obtain additional information to identify the individual drugs involved in these cases.

Because the major focus of the report is the identification of mortality by type of drug involved and analysis of age and sex specific trends, and because of space limitations, a breakdown of cause-specific mortality has not been included in this report.

The set of the five medical conditions directly caused by alcohol (alcoholic polyneuropathy, alcoholic cardiomyopathy, alcoholic gastritis and alcoholic liver disease) and their associated ICD9 codes (Table A1.1) are those conditions with an aetiologic fraction of 1.00 in the set of 43 conditions in the Holman and Armstrong study of drug-caused mortality and hospitalisation in Australia.[4]

---

[3] *Manual of the International Classification of Diseases, Injuries and Causes of Death, Ninth Revision*. Geneva: World Health Organisation, 1977.

[4] Holman CDJ & Armstrong BK. *The Quantification of Drug Caused Mortality In Australia 1988, Part 1*. Canberra: Australian Government Publishing Service, 1990, pp. 188-189.

The list of causes in Table A1.1 underestimate the total number of deaths caused by drugs, as they only account for mortality directly caused by drugs (ie conditions with an actiological fraction of 1.00). The application of aetiologic fractions would be necessary to compute the total number of deaths directly and indirectly caused by all drugs (ie alcohol, tobacco and illicit drugs). As none of conditions caused by tobacco smoking, except tobacco use,[5] have an aetiological fraction of 1.00, smoking mortality has not been quantified in this report.[6]

Hospitalisation data

The hospitalisation statistics in this report are derived from the Western Australian Hospital Morbidity Data System which includes all short stay hospitals in Western Australia, including the former Federal Veteran's Affairs Hospital (now known as the Hollywood Private Hospital), but excludes psychiatric hospitals. The HMDS is derived from the summary sheet (HA22) of the medical record of hospital inpatients. At the time of writing there were 113 hospitals included in this system (91 public, 22 private including two free-standing day surgery centres). The HA22, which is completed at separation, allows for a number of levels of coding (ie the principal condition, an underlying cause, other conditions present and operations/procedures).

The HMDS was implemented in all short-stay hospitals on 1 January 1971. All separations from the hospitals are included, with the exception of boarders. The HDWA assumed full responsibility for the HMDS from 1 January 1981. All aspects of coding, data collection, editing and data retrieval is handled by the Health Statistics Branch in the HDWA.

As the set of hospitalisation codes is a dynamic one and is revised in response to changing conditions, this has meant there have been revisions in the set of codes used in this State for coding drug-related hospitalisation. The first set of codes used for the period 1979 - 1987 (Table A1.2, page A-2), enabled coding at the four digit level and was based on the 9th Revision International Classification of Diseases (ICD9).[7] The most recent set of codes in use since 1988 (Table A1.3, page A-3), permits coding to the five digit level and is based on 9th Revision International Classification of Diseases-Clinical Modification (ICD9-CM).[8] The codes used in Appendix Tables A1.2 and A1.3 distinguish between drug-related in-patient stays that have an external cause and those are due to a medical condition or mental disorder (ie drug dependence and non-dependent use).

It should be noted that although it is possible through ICD9-CM codes to differentiate at the five digit level the form of dependent and non-dependent drug use (ie unspecified (0), continuous (1), episodic (2) and in remission (3)), this breakdown has not been included in this report. It is not possible to obtain valid measures of some types of drug use as some codes are not drug specific or do not encompass some forms of drug-taking (eg poisoning or non-dependent volatile substance use), or some codes only apply to drug-taking that involves drugs with specific medical uses (eg codes for poisoning by or accidental cocaine use are specific to local anaesthetics).

Coding is done according to the principal condition which best characterised the period of hospitalisation. There are 17 ICD9-CM chapters and 565 items relating to disease type in the Basic Tabulation list. There is a Supplementary Classification of ICD9-CM, the E-codes, which relates to the external cause of injury and poisoning. If any of the conditions given result from an accident, poisoning or violence then the external cause and the place of occurrence is noted. Thus, the E-code could relate to other than the principal condition treated.

Adverse conditions resulting from the proper administration of a substance, which are not coded as a poisoning by the ICD9-CM, have been excluded from this report.

---

[5] No deaths were recorded as due to this condition, ICD9 code 305.1.

[6] Holman CDJ & Armstrong BK. ***The Quantification of Drug Caused Mortality In Australia 1988, Part 2.*** Canberra: Australian Government Publishing Service, 1990, pp. 346-347.

[7] ***Manual of The International Statistical Classification of Diseases, Injuries, and Causes of Death, Ninth Revision.*** Geneva: World Health Organisation, 1977.

[8] ***International Classification of Diseases, Ninth Revision -Clinical Modification.*** Ann Arbor, Michigan: Commission of Professional and Hospital Activities, 1989.

Mental disorders

Drug dependence (drug addiction) is classified by the ICD9-CM as a chronic mental and physical condition related to the patient's pattern of taking a drug or combination of drugs. It is characterised by behavioural and psychological responses, including a compulsion to take the drug to experience its psychic effects or to avoid the discomfort of its absence, an increased tolerance, and an inability to stop use of the drug even with strong incentives. Such individuals often experience physical signs of withdrawal when there is any sudden cessation of drug use.

Non-dependent drug use is classified by the ICD9-CM as problem drug-taking and includes those patients who take drugs to excess but have not reached a stage of dependence. It represents the use of the drug in a maladaptive pattern that may adversely affect social functioning or physical and/or mental health. It may include drug-related conditions such as those associated with alcohol use.

Poisoning

Conditions caused by drugs, medicinal substances, and other biological substances are classified as poisoning only when the substance involved is not used in accordance with a physician's instructions. Such use is often described by terms such as:

- wrong medication given or taken,
- wrong dosage given or taken,
- medication given or taken by the wrong person,
- intoxication (other than cumulative effect), or
- overdose.

A diagnosis of poisoning (ie ICD9-CM codes 960-979) is applied if the admission was the result of an error made in drug prescription or in the administration of the drug by physician, nurse, patient, or other person (or) if an overdose of a drug was intentionally taken or administered and resulted in drug toxicity (or when) a non-prescribed drug or medicinal agent was taken in combination with a correctly prescribed and properly administered drug.

Use of E Codes with poisoning code

Chronic conditions related to alcohol or drug use or dependence are not classified as poisoning, but are assigned codes for both the condition and the use or dependence. However, an acute condition due to an overdose of a drug, such as heroin, is classified as a poisoning, with an additional code assigned for the acute manifestation, the dependence, or the use, with optional E codes assigned for the circumstances of the episode. For example, acute pulmonary oedema due to an overdose of heroin is classified as poisoning due to heroin, with an additional code assigned for acute pulmonary oedema and an optional E code assigned for the circumstances. There are four sets of E codes are used by the ICD9-CM:

- accidental poisoning (E850-E858),
- suicide or attempt and self-inflicted injury (E950.0-E950.5),
- assault by poisoning (E962.0), and
- undetermined (E980.0-E980.5).

Notification-related data

Transmission of the human immunodeficiency virus (HIV) is associated with injecting drug use. The incidence of this disease can be established by analysis of information supplied by law to the HDWA (both HIV infection and AIDS have been notifiable diseases under the Health Act since January 1985). Notification occurs through classification as being both notifiable diseases (Health Act, Section 3) and dangerous infectious diseases (Health Act, Section 248).

HIV notifications

Since the early 1980s HIV has been recognised in populations of injecting drug users (IDUs) who have become infected through re-use of non-sterile injection equipment contaminated with the virus or through unprotected sexual contact with individuals already infected with HIV. Though the majority of HIV infection in Australia has occurred as a result of unprotected sexual contact between males, more recently its incidence has started to increase amongst populations of IDUs.

All HIV and AIDS notifications incorporate basic information about the person being notified (eg sex, date of birth, Aboriginality and postcode of residence) plus further details depending on clinical status.

It should be noted that the rates of HIV infection among IDUs in Australia are very low in comparison to a number of other countries.[9] As there is a high risk of HIV infection being transmitted between IDUs through needle sharing, or between IDUs and their partners through sexual contact, a greater awareness has developed that the highest priority of drug treatment programs has to be to reduce HIV risk factors rather than focus exclusively on abstinence. This change in emphasis has been implemented through measures such as HIV testing of IDUs to raise awareness, education programs to change high risk behaviour and attitudes, and increased access to sterile injection equipment.

Notifications of drug addiction

As part of the public health measures to monitor the use of drugs, all medical practitioners in this State are required by law to provide the Executive Director of Public Health with specific information about individuals whom they believe are 'drug addicts'. The registers of notifications of drug addiction by medical practitioners can be a valuable indicator of illicit and licit drug use. Addiction to drugs is a 'prescribed condition of health' under section 289B of the Health Act. The Drugs of Addiction Notification Regulations 1980 require any medical practitioner to notify the Executive Director of Public Health if the doctor knows or suspects an individual is a 'drug addict'. It is to be noted that a significant number of notifications pertain to persons who are new admissions to the methadone program.

In their present form the Regulations permit an individual's name to be on a confidential register. Names are removed after five years from the Register if there is no further contact with the Health Department either directly or indirectly in relation to the use of drugs of addiction. There are a small number of persons registered as medical addicts, whose addiction arose as a consequence of being prescribed a drug of addiction over an extended period of time for the treatment of a medical condition.

It is difficult to know the extent to which the notifications of addiction are representative of the total population of drug users. As it is likely that individuals who come to the notice of the medical profession do so only after they have abused drugs long enough to have experienced adverse effects on their health, demographic information from a notification system will be biased towards older and more dependent drug users. Improvements in doctors' skill, pressure from regulatory agencies and increased awareness by medical practitioners may also affect the reporting rates of notification.

Distribution of needles and syringes

Access to sterile injection equipment to reduce the transmission to uninfected individuals of HIV as well as other infectious diseases, such as hepatitis B and C, is a fundamental principle of the State's HIV/AIDS prevention strategy. There have been two major initiatives in this State to improve access to sterile injection equipment and increase IDUs knowledge of safer practices:

- a joint initiative between the Pharmaceutical Council of WA and the HDWA for retail pharmacies to sell new needles and syringes (N&S); and

---

[9] Wodak A. To take up arms against a sea of drugs: AIDS, injecting drug users and drug policy. In Australian Academy of Sciences. ***HIV Infection and AIDS, Proceedings of the 1991 Annual General Meeting of the Australian Academy of Science.*** Canberra, Australian Academy of Science, 1991.

- an outreach Needle and Syringe Exchange Program (NSEP) sponsored by the West Australian AIDS Council (WAAC) to distribute clean injection equipment in the Perth metropolitan area and collect used N&S for disposal.

From June 1987 to June 1992 retail pharmacists sold the SS5 Pack, which contained AIDS preventive literature, a swab, five sterile 1 ml syringes and needles, a condom and lubricant and a rigid syringe disposal container. Since July 1992 retail pharmacists have sold the FitPack, an integrated dispenser and disposal container with 5 N&S.

The WAAC, in conjunction with the Beaufort 565 Sauna, started the first NSEP program in WA in July 1987 whereby IDUs were able to exchange used injection equipment for new injection equipment. In June 1988 the WAAC started a Drug Outreach Program targeted at recreational drug users, by setting up a NSEP from a van. The PSST (Practise Safe Sex Today) van provides a mobile needle exchange (as well as a one-to-one contact with IDUs), is a source of preventive literature, distributes condoms, makes referral to appropriate agencies and provides information about HIV assessment. The van operates at scheduled pre-determined sites in the Perth inner-city area, where most of its N&S are distributed, as well as from discreet locations in a number of suburbs.

N&S provided through WAAC programs are sold at near cost price, and unlike other programs distribute a wide variety of sizes and types of injection equipment to consumers. Whereas the cost of the FitPack is fully borne by consumers, other programs are able to partially subsidise the cost of N&S from the jointly funded (50:50) Commonwealth/State AIDS initiative.

The ADA has supported increased access to N&S from the Central Drug Unit, its only 24-hour facility. This service started in March 1989 and provides FitPacks, which at the time of writing were available at no cost. A disposal bin is located at the site for the return of used N&S. This service operates from midnight to 7 am, seven days per week.

Trials of N&S vending machines by the ADA and WAAC have been unsuccessful due to problems with unreliability of equipment, inadequate design and vandalism.

The quantity of N&S distributed through these programs underestimates the total sale of needles and syringes to IDUs by chemists as loose N&S may also be legitimately sold on request. There is no information on such sales nor on the proportion of N&S purchased by diabetics as opposed to IDUs.

Drug-related telephone calls

The Alcohol and Drug Information Service (ADIS) has operated since June 1986 and is a 24-hour State-wide service funded by the National Campaign Against Drug Abuse (NCADA), and operated by the ADA. The object of ADIS is to provide confidential counselling and referral on alcohol and other drug problems for drug users, their relatives and friends and information to students, health and welfare workers and the general public. Non-identifying data are routinely collected on each call, such as type of drug mentioned, status of the caller (eg user, friend etc), age and sex of caller, outcome of the call, etc. ADIS provides a 008 service for non-metropolitan callers.

It shall be noted that the number of calls to ADIS may be affected by health promotion campaigns (eg the Drinksafe initiative, the Minor Tranquilliser campaign, the AIDS Campaign and the QUIT campaign) and possibly seasonal factors, particularly in relation to cannabis-related telephone calls.

Treatment programs

Limited data are available about the characteristics of the people using treatment services in this State. The ADA's methadone program has maintained a comprehensive statistical system since the beginning of 1986 that provides data on both a monthly and quarterly basis about the size, status and demographic characteristics of its treatment population. More limited data are available about the methadone treatment population since the inception of treatment in 1973. The other source of ADA data, in relation to residential detoxification

programs, only provides information about characteristics of the treatment population obtained at the time of an admission. This system has only been in operation since the June quarter 1988.

At present data are not available on non-government programs (NGOs), who provide a variety of residential and non-residential programs and self-help groups for individuals and families with difficulties due to the use of alcohol and other drugs. Similar problems exist in relation to attendances at fee-for-service programs and specialist drug programs, such as those provided for women attending King Edward Memorial Hospital and the Perth Women's Centre.

At the time of writing, WADaisy, as a computerised data collection system developed by the ADA, had not been implemented, it was not possible to directly determine the characteristics of treatment populations attending NGOs in this State. The other source of information about attendances at treatment programs is from the second Clients of Treatment Service Agencies (COTSA) survey, conducted on 25 March 1992.[10]

The results of this survey require adjustment to quantify the total size of the population attending treatment programs in this State, as attendances for methadone treatment on the day of the COTSA survey were recorded only for the 24 individuals who received methadone as well as some other form of service, such as counselling. Methadone clients who on census day only received a methadone dose were excluded from the survey.

There were 510 persons who were enrolled in the Western Australian methadone program on 31 March 1992. As the 24 clients would have already been counted in the 510 persons enrolled in methadone treatment, it is estimated an additional 486 persons received only a methadone dose on the day of the COTSA survey. An adjustment to the COTSA results to include these 486 persons, means that 988 persons attended treatment programs in March 1992, in this State.

Methadone program

Methadone has been dispensed as a linctus (ie syrup formulation in a 20 ml cordial mixture) to participants in the WA program since 1978; prior to this time it was provided as tablets. As the cost of methadone linctus is borne by the Commonwealth through the Pharmaceutical Benefits Scheme, Australia-wide methadone consumption data are available from the Commonwealth.

Though methadone has been prescribed as a treatment for the treatment of opiate addiction in WA since late 1973, there are limited data available about the size of the treatment population for the period between 1973 and 1977 as general practitioners and private specialists prescribed methadone to drug users. Since 1978 only the ADA has been solely authorised in this State to prescribe and provide methadone (the previous system had resulted in widespread diversion of methadone tablets to the illicit drug market and was also responsible for a number of deaths of drug users[11]). This means that data on the size of the *annual* methadone treatment population are available only for the period since 1978.

Central Drug Unit

Since June 1991, the ADA has operated a single residential detoxification unit for licit and illicit drug users at its purpose-built premises, the Central Drug Unit (CDU), in Moore Street, East Perth. Prior to June 1991 the ADA provided separate facilities for licit and illicit drug users. For illicit drug users, inpatient facilities were provided as the Aston Hospital (a former ADA detoxification facility in West Perth for licit and illicit drug suers), which in May 1986 became the CDU. In January 1989, the CDU moved to the East Perth site. Before 1991, when services were relocated to East Perth, users of licit drugs, such as alcohol and prescription drugs, received treatment services at the ADA's Carrellis Centre, in Mount Lawley.

---

[10] Chen R, Mattick RP, Baillie A. ***Clients of Treatment Service Agencies, March 1992 Census Findings***. Canberra, Australian Government Publishing Service, 1994.

[11] Swensen G. Opioid drug deaths in Western Australia: 1974-1984. ***Australian Drug & Alcohol Review***, 1988: 181-185.

Court Diversion Service

The Court Diversion Service (CDS), a cooperative service between the ADA, the courts, the Ministry of Justice and a number of NGOs, has operated since February 1988. The CDS provides the courts with sentencing options when dealing with drug offenders by directing them, as a condition of bail, to a drug treatment program. The court may take into account progress achieved through treatment at the post-conviction stage of the court process. The CDS has emphasised an inpatient detoxification mode of treatment, prior to admission to a residential program conducted by one of the NGOs.

Sobering-up centres

Alcohol users make demands on community resources in a number of ways, for not only are police resources used to deal with them when they are intoxicated, but alcohol-related injuries are responsible for admissions to hospitals. Additionally, the incidence of alcohol-related domestic violence is responsible for the involvement of further community resources to deal with the consequences for those affected.

The object of sobering-up centres is to prevent the consequences to the family and other parts of the community while at the same time ensuring that the drinker him/herself is being cared for. On the basis of experience in other jurisdictions that police may be more willing to pick up persons who are intoxicated in public when there is an appropriate facility to care for them, it is expected that in the longer term there will be an overall reduction in the some of the indicators of alcohol-related harm.

The impetus for establishing sobering-up centres stemmed from the work of the Royal Commission Into Aboriginal Deaths In Custody. The ADA received $600,000 in the 1989-90 financial year from the Aboriginal and Torres Strait Islander Commission (ATSIC) to establish four sobering-up centres in Perth, Port Hedland, Halls Creek and Fitzroy Crossing. The Perth centre, operated by the Salvation Army, was opened on 28 May 1990. The South Hedland centre, which opened in April 1991, the Halls Creek[12] and Roebourne centres, which opened in September 1992, are all run by community-based organisations. These non-metropolitan sobering-up shelters, in comparison to the Perth sobering-up shelter, cater largely for Aboriginal peoples.

The centres were to be set up on a community-based management model with the emphasis on a welfare rather than medical approach (ie to only provide an overnight stay), so as to protect people when they are vulnerable due to intoxication.[13]

It is believed that sobering-up centres reduce the negative consequences of drinking on the individual, their family, affected service agencies, and the community in general. For instance, in the last year prior to decriminalisation of public drunkenness, there were a total of 13,519 arrests for public drunkenness in WA.[14] Even though this represents a very large number of people going into police lockups, it probably represents only a proportion of the total number of persons who were drunk in public but were not detained by the police.

Consumption data

It is essential that alcohol and other drug consumption data are available. At the time of writing only alcohol and tobacco consumption data were readily available; though it is hoped that in future issues of this report State prescription drug consumption data will be available from the Commonwealth.

Alcohol consumption data

The excessive use of alcohol imposes a heavy burden on both individuals and the community through accidents on the road and at work, lost productive capacity through illness and absenteeism, alcohol-related crime, and illnesses requiring inpatient hospital treatment. These costs are both tangible and intangible and

---

[12] Midford RG, Daly A, Holmes, M. "The care of public drunks in Halls Creek: a model for community involvement". ***Health Promotion Journal of Australia***; 1994: 5-8.

[13] Cf Daly A & Midford R. Social welfare program evaluation in traditionally oriented Aboriginal communities. In ***Australasian Evaluation Society International. Conference 1992: Proceedings, Vol. 1***. St Kilda: Australasian Evaluation Society, 1992.

[14] The Acts Amendment (Detention of Drunken Persons) Act 1989 was passed in December 1989 and proclaimed on 27 April 1990.

difficult to quantify. A recent NCADA study found that in 1988 the economic cost of excessive alcohol use in Australia totalled $6,027.4 million. [15]

A National Health and Medical Research Council publication provides detailed arguments in favour of reducing the excessive use of alcohol. [16] Measures have been devised in this State to reduce the costs of alcohol-related harm, for instance, the Health Promotion Service Branch's Drinksafe Campaign, and Random Breath Testing (RBT) by the Police Department.

An assumption of many alcohol harm-reduction measures is the concept of a single-distribution theory of alcohol consumption, what is usually described as the control-of-consumption approach. This approach postulates that regulation of alcohol consumption is fundamental to reducing alcohol-related harm because of a causal relationship between availability, average consumption, the proportion of heavy drinkers, and the prevalence of heavy damage. Together these four variables are referred to as the Ledermann string.[17]

Two sources of information are used in this report to infer alcohol consumption in WA. The first, from records of annual sales data of alcoholic beverages provided by the Liquor Licensing Division of the Office of Racing and Gaming (ORG), contains data that can be manipulated to estimate the per capita consumption of specific types of alcoholic beverages. The second, from the analysis of self-report data from representative surveys, provides age and sex patterns of consumption of specific types of alcohol.

Liquor licensing data

In 1988 the Liquor Licensing Division of the ORG established a computerised system to collate returns of sales of alcohol suppliers. Though the principal function of the system is administrative and for the more efficient collection of licensing fees, it also provides an accurate breakdown of alcohol sales in this State.

As ORG sales data have only been available since 1988 there are some difficulties in the estimation of alcohol consumption prior to 1988. At the time of writing the data for the period 1985-1987 had not been estimated, nor extracted from records of returns held by the Liquor Licensing Division of ORG.

Estimated consumption data for the period 1968-1984 were published in a 1988 Health Department of WA publication.[18] There are problems with the accuracy of this estimation of alcohol consumption in WA for the 1968-1984 period, including:

- the lack of published data from licensing bodies;
- spirit consumption was based on Australian rates;
- beer and wine consumption was dependent on locally published data (eg sales of WA wine from the ABS and annual reports of the Swan Brewery).

As alcohol consumption is based on records of volume of sales of alcohol, it is necessary to apply conversion factors, to estimate the volume of absolute alcohol consumed. The conversion factors for beer and alcohol have been derived by taking account of the Health (Food Standards) Regulations 1987, which stipulates the permissible range of ethanol (ie absolute alcohol) content of alcohol products in WA[19] and the Australian Bureau of Statistics conversion factor for spirits.

---

[15] Collins DJ & Lapsley HM. *Estimating the Economic Costs of Drug Abuse In Australia. Monograph Series No. 15.* Canberra: Australian Government Publishing Service, 1991.

[16] National Health & Medical Research Council. ***Is There A Safe Level of Daily Consumption of Alcohol for Men and Women - Recommendations Regarding Responsible Drinking Behaviour, 2nd Ed.*** Canberra: Australian Government Publishing Service, 1992.

[17] Cf Ravn I. The control-of-consumption approach to alcohol abuse prevention. I. A Reconceptualisation. ***International Journal of Addictions***, 1987, 22: 813-23.

[18] Health Department of WA. ***Drinksafe- Alcohol and Health In Western Australia, A Resource Book.*** Perth, Health Promotion Services Branch, Health Department of WA, 1988.

[19] Alcohol content is defined as the volume (mls) of ethanol per litre of alcohol measured at 20 degrees Celsius.

Tobacco consumption data

Tobacco smoking has been recognised as being indirectly responsible for a large proportion of all drug-related hospitalisation and mortality. Unlike some other forms of drug use, most diseases resulting from smoking are not apparent until after a considerable lapse of time.

It has been found, by application of aetiologic fractions, that tobacco was responsible for 74% of all deaths due to all types of drugs in this State, and that over the period 1981-1991, was responsible for an average of 1,405 deaths per year.[20]

However, as extremely limited information is available about the consumption of tobacco products, most of the indicators of use in this area are derived from prevalence surveys, which have been conducted by the Australian Bureau of Statistics and Health Promotions Services Branch, and national surveys under the auspices of the Anti-Cancer Council of Victoria.

---

[20] Swensen, G. ***Mortality Attributable to Drug Use in Western Australia 1981-1991***. Perth, Health Services Statistics & Epidemiology Branch, 1993.

Chapter 2 - Mortality

This chapter analyses deaths wholly attributable to drugs, ie those deaths for which the use of drugs is totally responsible. As drugs are a component cause in some conditions which lead to death, for example road injuries, this analysis underestimates the total number of drug-caused fatalities. The analyses of mortality are based on:

- all drug-caused mortality;
- alcohol-caused mortality;
- mortality due to drugs other than alcohol; and
- drug-related mortality by cause.

Drug-related mortality by cause includes poisoning (commonly referred to as 'drug overdoses'), mental disorders (psychoses, dependence, and non-dependent use caused by alcohol and other drugs), and conditions wholly attributable to alcohol (alcoholic cardiomyopathy, alcoholic polyneuropathy, alcoholic gastritis, and alcoholic liver cirrhosis).

2.1 All drug-caused mortality

Overview

The causes of mortality due to drugs include:

- mental disorders induced by alcohol and other drugs;
- poisoning caused by alcohol and other drugs; and
- conditions wholly attributable to alcohol (alcoholic cardiomyopathy, alcoholic polyneuropathy, alcoholic gastritis, and alcoholic liver cirrhosis).

In the 11-year period 1982-1992 there were 1,612 deaths directly caused by drugs in Western Australia, of which 1,167 (72.4%) were male and 445 (27.6%) were female.

For deaths due to opiates, volatile substances, alcohol, barbiturates, and other or unspecified drugs a higher proportion occurred in males than in females. Tranquillisers and sedatives, and anti-depressants, on the other hand, were responsible for a greater proportion of deaths in females (Table 2.1; Appendix Tables A2.1 to A2.3, pages A-5 to A-7).

Table 2.1: Number and proportion of deaths for all drug-caused mortality, by type of drug and sex, Western Australia, 1982-1992

Type of drug	Males		Females		Persons
	Number of deaths	% of deaths by sex	Number of deaths	% of deaths by sex	Number of deaths
Opiates	154	70.6	64	29.4	218
Barbiturates	33	55.0	28	45.0	61
Tranquillisers/sedatives	79	48.5	84	51.5	163
Anti-depressants	14	40.0	21	60.0	35
Volatile substances	22	95.7	1	4.3	23
Alcohol	803	79.1	212	20.9	1,015
Other/unspecified	59	64.1	33	35.9	92

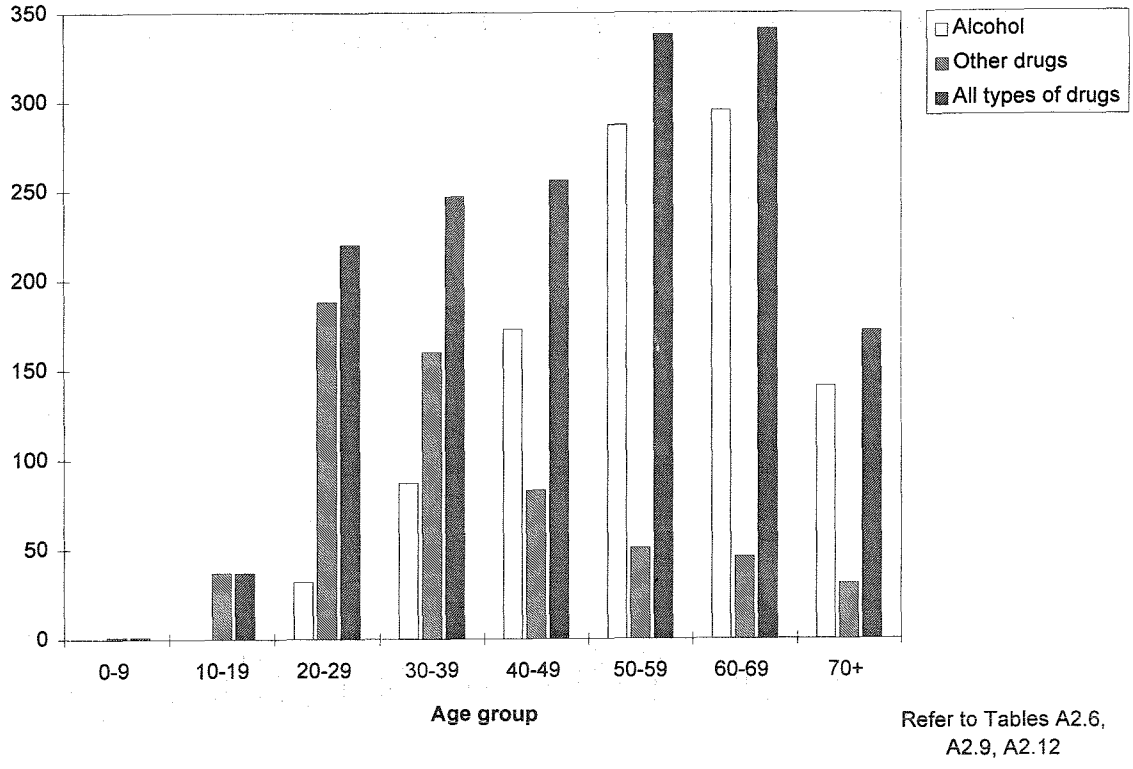
Source: Health Department of Western Australia, Mortality Database

Distribution of deaths

A breakdown of the number of deaths by age group (Figure 2.1; Appendix Tables A2.4 to A2.6, pages A-8 to A-10) found:

- the number of deaths for all types of drug increased with age to 60-69 year olds;
- the number of alcohol-caused deaths increased with age to 60-69 year olds;
- the number of deaths from drugs other than alcohol was highest in the 20-29 years age group; and
- there was one death among 0-9 year olds caused by accidental volatile substance poisoning.

Figure 2.1: Number of drug-related deaths by type of drug and age group, Western Australia, 1982-1992



Refer to Tables A2.6, A2.9, A2.12

Age-standardised rates

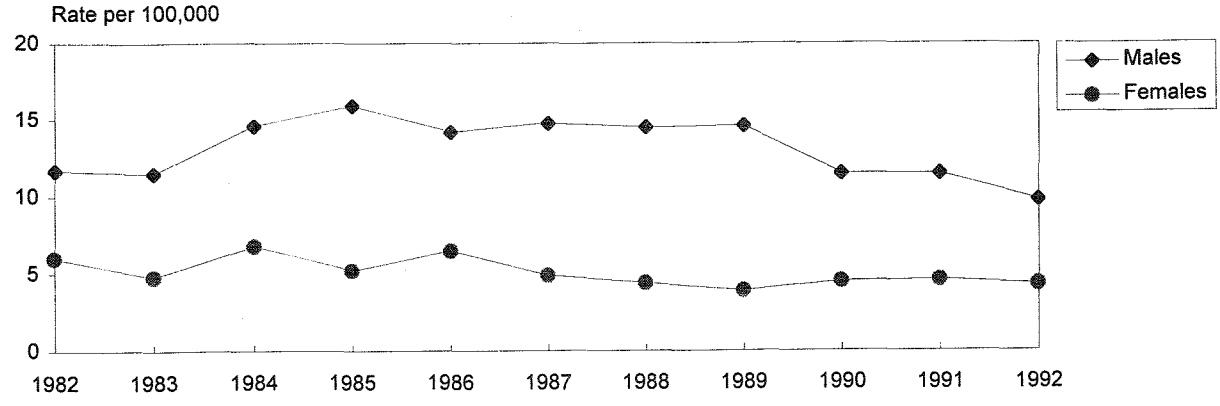
The age-standardised death rates for males increased in 1984 from 11.5 to 14.6 deaths per 100,000 person-years and remained at over 14 deaths per 100,000 until 1990 when the rate dropped again. The highest age-standardised death rate for males occurred in 1985 (15.9 deaths per 100,000) and the lowest rate in 1992 (9.8 per 100,000). For females, the age-standardised death rate has remained relatively stable - the highest rate was in 1984 (6.8 per 100,000) and the lowest in 1989 (3.9 per 100,000). The male:female rate ratios (the age-standardised rate for males divided by that for females) were lowest in 1982 (2.0), peaked in 1989 (3.7), and have been falling since (Figure 2.2; Table 2.2).

Table 2.2: Age-standardised rates for all drug-caused deaths by sex, Western Australia, 1982-1992

	Males	Females	Persons	Male:female rate ratio
1982	11.7 (1.3)	6.0 (1.0)	8.8 (0.8)	2.0
1983	11.5 (1.3)	4.8 (0.8)	8.2 (0.8)	2.4
1984	14.6 (1.4)	6.8 (1.0)	10.6 (0.9)	2.1
1985	15.9 (1.5)	5.2 (0.9)	10.5 (0.8)	3.1
1986	14.2 (1.4)	6.5 (0.9)	10.3 (0.8)	2.2
1987	14.8 (1.4)	4.9 (0.8)	9.9 (0.8)	3.0
1988	14.5 (1.3)	4.4 (0.7)	9.3 (0.8)	3.3
1989	14.6 (1.3)	3.9 (0.7)	9.2 (0.7)	3.7
1990	11.5 (1.1)	4.5 (0.7)	7.9 (0.7)	2.6
1991	11.5 (1.1)	4.6 (0.7)	8.0 (0.7)	2.5
1992	9.8 (1.0)	4.3 (0.7)	7.0 (0.6)	2.3

Source: Health Department of Western Australia, Mortality Database
Note: Figures in brackets are the standard errors.

Figure 2.2: Age standardised rates for all drug-caused deaths by sex, Western Australia, 1982-1992



Refer to Table 2.2

2.2 Alcohol

Overview

The causes of mortality due to alcohol include:

- mental disorders induced by alcohol;
- alcohol poisoning; and
- conditions wholly attributable to alcohol (alcoholic cardiomyopathy, alcoholic polyneuropathy, alcoholic gastritis, and alcoholic liver cirrhosis).

In the 11-year period 1982-1992 there were 1,015 deaths in Western Australia directly caused by alcohol, of which 803 (79.1%) were male and 212 (20.9%) were female.

There were 820 (80.8%) deaths caused by conditions wholly attributable to alcohol (alcoholic cardiomyopathy, alcoholic polyneuropathy, alcoholic gastritis, and alcoholic liver cirrhosis), 175 (17.2%) deaths caused by mental disorders (alcoholic psychoses, alcohol dependence, non-dependent alcohol use), and 20 (2.0%) deaths due to alcohol poisoning.

The three major causes of deaths due to alcohol, alcoholic liver cirrhosis, alcohol dependence, and alcoholic cardiomyopathy, were together responsible for nearly 95% of all alcohol-caused mortality in Western Australia over the period 1982-1992 (Table 2.3).

Table 2.3: Number and proportion of deaths due to alcohol by specific cause, Western Australia, 1982-1992

Type of cause	Number of deaths	% of total deaths due to alcohol
Conditions		
Alcoholic liver cirrhosis	700	69.0
Alcoholic cardiomyopathy	119	11.7
Alcoholic gastritis	1	0.1
Mental disorders		
Alcohol dependence	141	13.9
Alcoholic psychosis	28	2.8
Alcohol use	6	0.6
Poisoning		
Alcohol poisoning	20	2.0
Total	**1015**	**100.0**

Source: Health Department of Western Australia, Mortality Database
Note: There were no deaths due to alcoholic polyneuropathy

Distribution of deaths

A breakdown of the number of alcohol-caused deaths by age group (Figure 2.1, page 12; Appendix Tables A2.7 to A2.9, pages A-11 to A-13) found:

- the number of deaths increased with age to 60-69 year olds. This age group were responsible for 295 (29%) cases;
- the lowest number of deaths, 32 (3.2%) cases, involved 20-29 year olds; and
- there were no alcohol-caused deaths reported in people aged less than 20 years.

Age-standardised rates

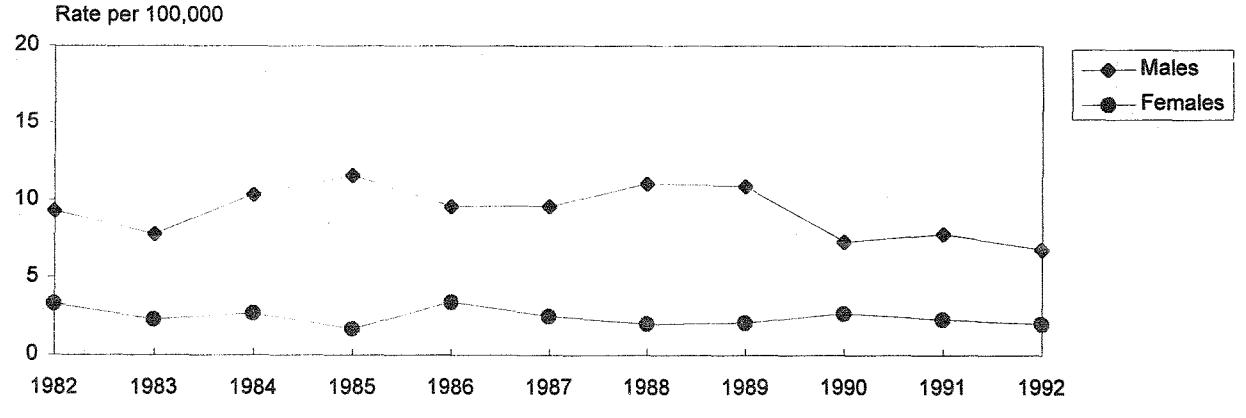
The age-standardised death rate for alcohol-caused deaths in males was highest between 1984 and 1989. The rate has been falling since and the lowest rate occurred in 1992 (6.8 deaths per 100,000 person-years). For females, the age-standardised death rates were lower - the highest rate (3.4 per 100,000) occurred in 1986. The lowest male:female rate ratio, 2.7, occurred in 1990; the highest, 6.8, occurred in 1985 (Figure 2.3; Table 2.4).

Table 2.4: Age-standardised rates for alcohol-caused deaths by sex, Western Australia, 1982-1992

	Males	Females	Persons	Male:female rate ratios
1982	9.3 (1.2)	3.3 (0.7)	6.2 (0.7)	2.8
1983	7.8 (1.1)	2.3 (0.6)	5.0 (0.6)	3.4
1984	10.4 (1.2)	2.7 (0.6)	6.5 (0.7)	3.9
1985	11.6 (1.3)	1.7 (0.5)	6.6 (0.7)	6.8
1986	9.6 (1.1)	3.4 (0.7)	6.5 (0.7)	2.8
1987	9.6 (1.1)	2.5 (0.6)	6.0 (0.6)	3.8
1988	11.1 (1.2)	2.0 (0.5)	6.5 (0.6)	5.6
1989	10.9 (1.1)	2.1 (0.5)	6.5 (0.6)	5.2
1990	7.3 (0.9)	2.7 (0.6)	4.9 (0.5)	2.7
1991	7.8 (0.9)	2.3 (0.5)	5.0 (0.5)	3.4
1992	6.8 (0.9)	2.0 (0.5)	4.4 (0.5)	3.4

Source: Health Department of Western Australia, Mortality Database
Note: Figures in brackets are the standard errors.

Figure 2.3: Age-standardised rates for alcohol-caused deaths by sex, Western Australia, 1982-1992



Refer to Table 2.5

2.3 Drugs other than alcohol

Overview

The causes of mortality due to drugs other than alcohol include:

- drug-induced mental disorders; and
- poisoning.

Examples of drugs for each drug category are shown in Appendix Table A1.4, page A-4.

In the 11-year period 1982-1992 there were 597 deaths directly caused by drugs other than alcohol in Western Australia, of which 364 (61.0%) were male and 233 (39.0%) were female.

There are a number of differences in the proportions of male and female deaths according to drug type (Table 2.5; Appendix Tables A2.1 to A2.3, pages A-5 to A-7).

- For males, opiates were responsible for the greatest proportion of drug-caused deaths (42.3%) followed by tranquillisers and sedatives (21.7%).
- For females, tranquillisers and sedatives were responsible for the greatest proportion of drug-caused deaths (36.1%) followed by opiates (27.5%).
- Anti-depressants were responsible for a greater proportion of drug-caused deaths in females than in males (9.0% compared with 1.1%).
- Volatile substances were responsible for a greater proportion of drug-caused deaths in males than in females (6.0% compared with 0.4%).

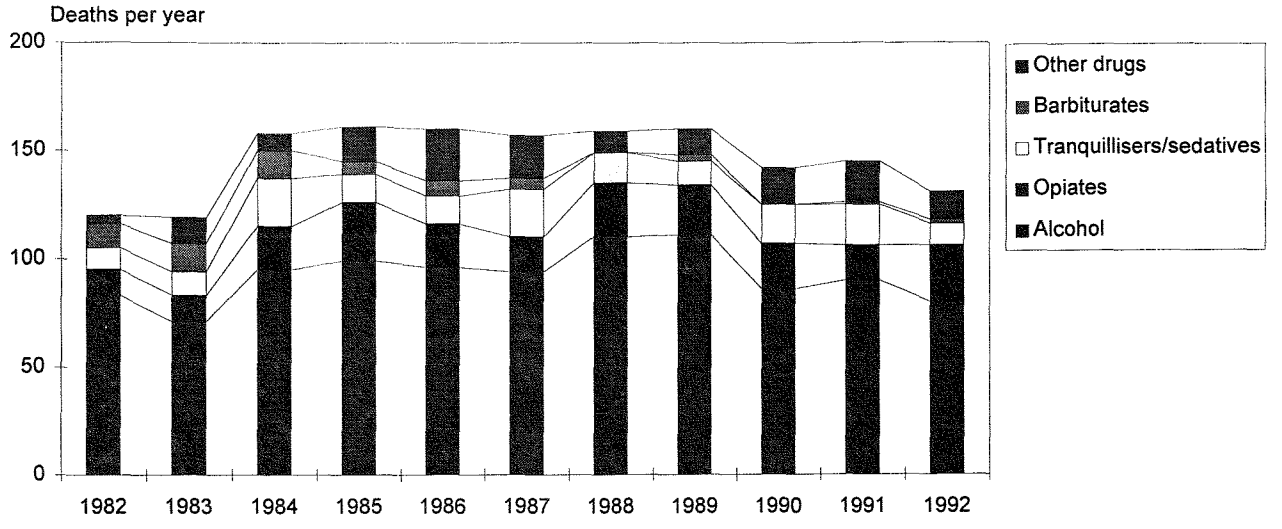
Table 2.5: Number and proportion of deaths due to drugs other than alcohol, by type of drug and sex, Western Australia, 1982-1992

Type of drug	Males		Females		Persons
	Number of deaths	% of deaths by drug type	Number of deaths	% of deaths by drug type	Number of deaths
Opiates	154	42.3	64	27.5	218
Barbiturates	33	9.1	28	12.0	61
Tranquillisers/sedatives	79	21.7	84	36.1	163
Anti-depressants	14	1.1	21	9.0	35
Cocaine	0	0.0	1	0.4	1
Psychostimulants	3	0.8	1	0.4	4
Volatile substances	22	6.0	1	0.4	3
Other/unspecified drugs	59	16.2	33	14.2	92
All drug types	364	100.0	233	100.0	597

Source: Health Department of Western Australia, Mortality Database

The annual number of deaths due to drugs other than alcohol rose in 1984 and remained high until 1989, when numbers declined. Opiates largely contributed to this increase - in 1982 there were 37 deaths, 12 (32.4%) of which were opiate-caused, whereas in 1992 there were 51 deaths, 26 (51.0%) of which were opiate-caused (Figure 2.4).

Figure 2.4: Number of drug-related deaths by drug type, Western Australia, 1982-1992



Other drugs group consists of anti-depressants, cocaine, psychostimulants, hallucinogens, volatile substances and other/unspecified

Refer to Table A2.3

There are a number of significant points about deaths due to drugs other than alcohol:

- there was only one death due to cocaine - this occurred in 1990 and was coded 'assault by poisoning';
- there were four deaths due to the use of psychostimulants, one in 1990 and three in 1991; and
- there were no deaths due to the use of hallucinogens or cannabis.

Distribution of deaths

A breakdown of the number of deaths due to drugs other than alcohol by age group (Figure 2.1; page 12; Appendix Tables A2.10 to A2.12, pages A-14 to A-16) found:

- the highest number of deaths, 188 (31.5%) cases, involved 20-29 year olds;
- the lowest number of deaths, 31 (5.2%) cases, involved 70 year olds and above; and
- there was one death among 0-9 year olds caused by accidental volatile substance poisoning.

Age-standardised rates

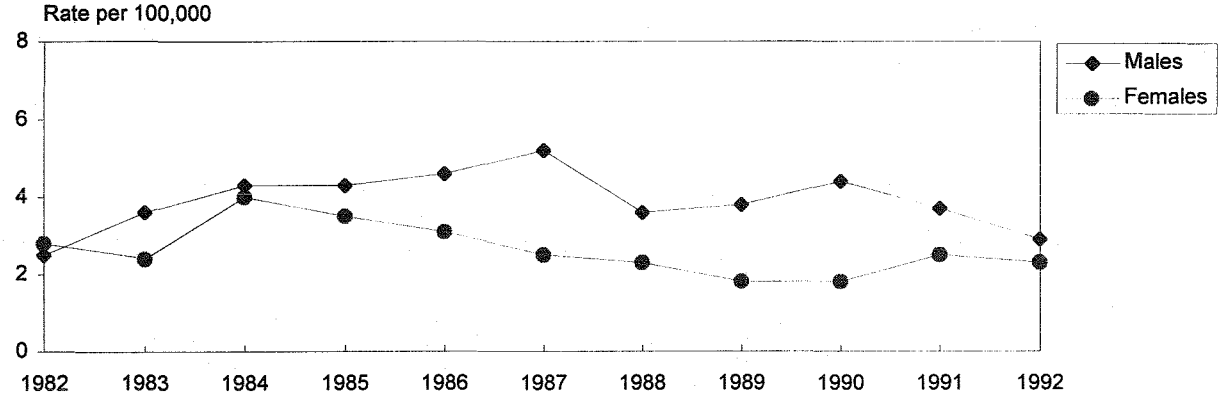
Age-standardised death rates for males increased steadily until they reached a peak in 1987 (5.2 deaths per 100,000 person-years) and then decreased again. For females, death rates peaked in 1984 (4.0 per 100,000) have decreased steadily since apart from a slight increase in recent years. The lowest male:female rate ratio, 0.9, occurred in 1982; the highest, 2.4, occurred in 1990 (Figure 2.5; Table 2.6, page 18).

Table 2.6: Age-standardised rates for deaths due to drugs other than alcohol by sex, Western Australia, 1982-1992

	Males	Females	Persons	Male:female rate ratios
1982	2.5 (0.6)	2.8 (0.6)	2.7 (0.4)	0.9
1983	3.6 (0.7)	2.4 (0.6)	3.0 (0.5)	1.5
1984	4.3 (0.7)	4.0 (0.7)	4.1 (0.5)	1.1
1985	4.3 (0.7)	3.5 (0.7)	3.9 (0.5)	1.2
1986	4.6 (0.7)	3.1 (0.6)	3.9 (0.5)	1.5
1987	5.2 (0.8)	2.5 (0.6)	4.1 (0.5)	2.1
1988	3.6 (0.6)	2.3 (0.6)	2.9 (0.4)	1.6
1989	3.8 (0.6)	1.8 (0.5)	2.8 (0.4)	2.1
1990	4.4 (0.7)	1.8 (0.5)	3.1 (0.4)	2.4
1991	3.7 (0.7)	2.5 (0.5)	2.8 (0.4)	1.5
1992	2.9 (0.6)	2.3 (0.5)	2.7 (0.4)	1.3

Source: Health Department of Western Australia, Mortality Database
Note: Figures in brackets are the standard errors.

Figure 2.5: Age-standardised rates for deaths due to drugs other than alcohol by sex, Western Australia, 1982-1992



Refer to Table 2.8

2.4 Drug-caused mortality by cause type (all drugs)

2.4.1 Poisoning

Poisoning cases can be sub-divided according to whether the cause of the poisoning was accidental, due to suicide, or undetermined as to whether due to suicide or accidental. However, because of the relatively small numbers of poisoning deaths the data are not divided into these groups for mortality.

Overview

In the 11-year period 1982-1992 there were 490 deaths due to drug-caused poisoning in Western Australia, of which 284 (58.0%) were male and 206 (42.0%) were female.

Tranquillisers and sedatives were responsible for a third of drug-caused deaths due to poisoning, and opiates for about a quarter of such deaths (Table 2.7; Appendix Table A2.13, page A-17).

Table 2.7: Number and proportion of poisoning deaths by type of drug, Western Australia, 1982-1992

Type of drug	Number of deaths	% of total deaths due to poisoning
Opiates	126	25.7
Barbiturates	60	12.2
Tranquillisers/sedatives	163	33.3
Anti-depressants	35	7.1
Cocaine	1	0.2
Psychostimulants	4	0.8
Volatile substances	4	0.8
Alcohol	20	4.1
Other/unspecified	77	15.7
All types of drugs	490	100.0

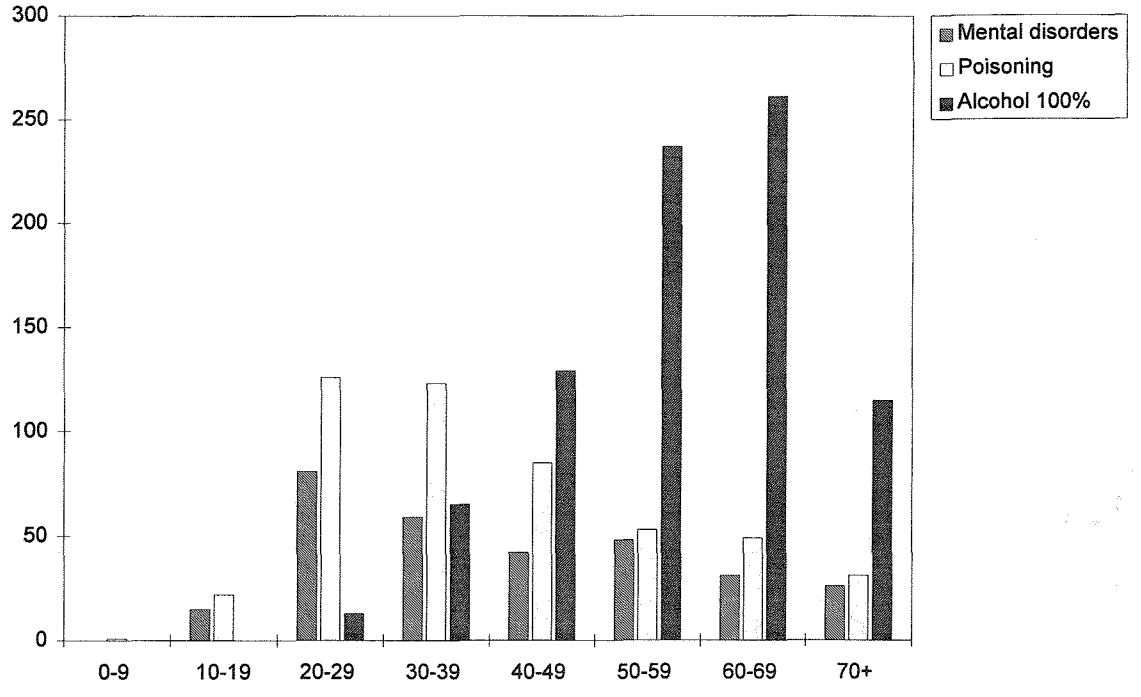
Source: Health Department of Western Australia, Mortality Database

Distribution of deaths

A breakdown of the number of drug-caused deaths by cause type and age group (Figure 2.6 page 20; Appendix Table A2.14, page A-18) found that for poisoning deaths:

- the highest number of deaths, 126 (25.7%) cases, involved 20-29 year olds;
- the lowest number of deaths, 22 (4.5%) cases, involved 10-19 year olds; and
- there was one death among 0-9 year olds caused by accidental volatile substance poisoning.

Figure 2.6: Number of drug-caused deaths by cause type and age group, Western Australia, 1982-1992



Refer to Tables A2.14, A2.16, A2.18

Age-standardised rates

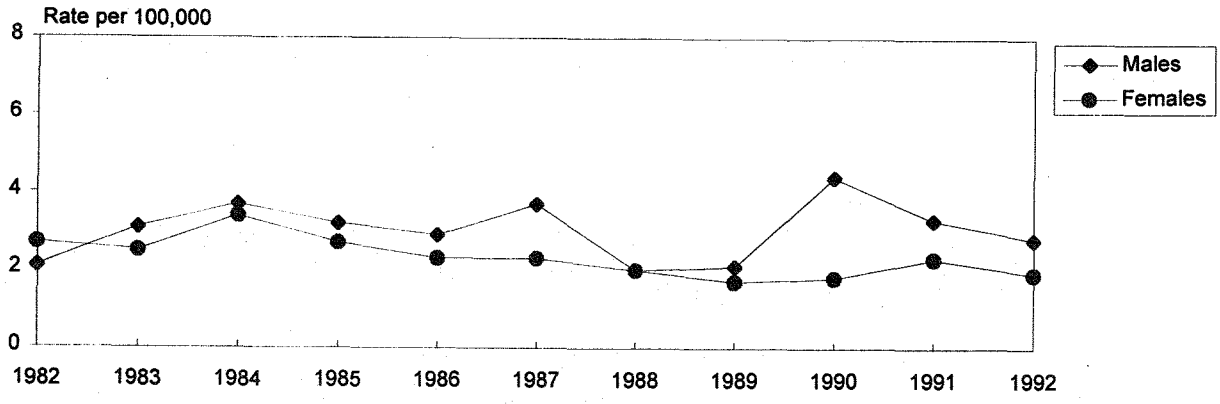
The trend in age-standardised death rates for males showed two peaks, in 1987 and 1990 (3.7 and 4.4 deaths per 100,000 person-years respectively). Since 1990 male rates have fallen. For females, the rate peaked in 1984 (3.4 per 100,000) and has steadily fallen since, apart from a slight rise in 1991. The lowest male:female rate ratio, 0.8, occurred in 1982; the highest, 2.4, occurred in 1990 (Figure 2.7, page 21; Table 2.8).

Table 2.8: Age-standardised rates for deaths due to drug-caused poisoning by sex, Western Australia, 1982-1992

	Males	Females	Persons	Male:female rate ratios
1982	2.1 (0.5)	2.7 (0.6)	2.4 (0.4)	0.8
1983	3.1 (0.6)	2.5 (0.6)	2.8 (0.4)	1.2
1984	3.7 (0.7)	3.4 (0.7)	3.5 (0.5)	1.1
1985	3.2 (0.6)	2.7 (0.6)	2.9 (0.4)	1.2
1986	2.9 (0.6)	2.3 (0.6)	2.6 (0.4)	1.3
1987	3.7 (0.7)	2.3 (0.5)	3.0 (0.4)	1.6
1988	2.0 (0.5)	2.0 (0.5)	2.0 (0.3)	1.0
1989	2.1 (0.5)	1.7 (0.5)	1.9 (0.3)	1.2
1990	4.4 (0.7)	1.8 (0.5)	3.1 (0.4)	2.4
1991	3.3 (0.6)	2.3 (0.5)	2.8 (0.4)	1.4
1992	2.8 (0.5)	1.9 (0.5)	2.4 (0.4)	1.5

Source: Health Department of Western Australia, Mortality Database
Note: Figures in brackets are the standard errors.

Figure 2.7: Age-standardised rates for deaths due to drug-caused poisoning by sex, Western Australia, 1982-1992



Refer to Table 2.11

2.4.2 Mental disorders

Drug-caused mental disorders include psychoses, dependence, and non-dependent use caused by alcohol and other drugs.

Overview

In the 11-year period 1982-1992 there were 302 deaths due to drug-caused mental disorders in Western Australia, of which 234 (77.5%) were male and 68 (22.5%) were female.

Drug dependence was responsible for nearly 90% of deaths due to drug-caused mental disorders - alcohol dependence being responsible for nearly half such deaths, and dependence on drugs other than alcohol for over 40% (Table 2.9; Appendix Table A2.15, page A-19).

Table 2.9: Number and proportion of deaths due to drug-caused mental disorders by type of disorder, Western Australia, 1982-1992

Type of mental disorder	Number of deaths	% of deaths due to mental disorders
Alcohol psychoses	28	9.3
Alcohol dependence	141	46.7
Other drug dependence	127	42.1
Non-dependent alcohol use	6	2.0
All types of mental disorders	302	100.0

Source: Health Department of Western Australia, Mortality Database

Distribution of deaths

A breakdown of the number of drug-caused deaths due to mental disorders by age group (Figure 2.6, page 20; Appendix Table A2.16, page A-20) found:

- the highest number of deaths, 81 (26.8%) cases, involved 20-29 year olds; and
- the least frequent number of deaths, 15 (5.0%) cases, involved 10-19 year olds.

2.4.3 Conditions wholly attributable to alcohol

Conditions wholly attributable to alcohol include alcoholic cardiomyopathy, alcoholic polyneuropathy, alcoholic gastritis, and alcoholic liver cirrhosis.

Overview

In the 11-year period 1982-1992 there were 820 deaths due to conditions wholly attributable to alcohol in Western Australia, of which 649 (79.1%) were male and 171 (20.9%) were female.

Alcoholic liver cirrhosis was responsible for most of the deaths due to conditions wholly attributable to alcohol in both sexes. Alcoholic cardiomyopathy was responsible for a greater proportion of deaths due to conditions wholly attributable to alcohol in males than females (Table 2.10; Appendix Table A2.17, page A-21).

Table 2.10: Number and proportion of deaths due to conditions wholly attributable to alcohol, by type of condition and sex, Western Australia, 1982-1992

Type of condition	Males		Females		Persons
	Number of deaths	% of deaths by type of condition	Number of deaths	% of deaths by type of condition	Number of deaths
Cardiomyopathy	105	16.2	14	8.2	119
Gastritis	1	0.2	0	0.0	1
Liver cirrhosis	543	83.7	157	91.8	700
All conditions	649	100.0	171	100.0	820

Source: Health Department of Western Australia, Mortality Database

Distribution of deaths

A breakdown of the number of deaths due to conditions wholly attributable to alcohol by age group (Figure 2.6, page 20; Appendix Table A2.18, page A-22) found:

- the highest number of deaths, 261 (31.8%) cases, involved 60-69 year olds;
- the lowest number of deaths, 13 (1.6%) cases, involved 20-29 year olds; and
- there were no deaths due to conditions wholly attributable to alcohol in people aged less than 20 years.

Chapter 3 - Hospitalisation

This chapter analyses hospital admissions wholly attributable to drugs, ie those admissions for which the use of drugs is totally responsible, for example 'drug overdoses'. As drugs are a component cause in some conditions which lead to hospitalisation, for example road injuries, this analysis will underestimate the total number of drug-caused admissions. The analyses of hospitalisation are based on the principal diagnosis and include:

- all drug-caused hospitalisation;
- alcohol-caused hospitalisation;
- hospitalisation due to drugs other than alcohol; and
- drug-related hospitalisation by cause.

Drug-related hospitalisation by cause includes poisoning (commonly referred to as 'drug overdoses'), mental disorders (psychoses, dependence, and non-dependent use caused by alcohol and other drugs), and conditions wholly attributable to alcohol (alcoholic cardiomyopathy, alcoholic polyneuropathy, alcoholic gastritis, and alcoholic liver cirrhosis).

3.1 All drug-caused hospitalisation

Overview

The causes of hospitalisation due to drugs include:

- mental disorders induced by alcohol and other drugs;
- poisoning caused by alcohol and other drugs; and
- conditions wholly attributable to alcohol. (alcoholic cardiomyopathy, alcoholic polyneuropathy, alcoholic gastritis, and alcoholic liver cirrhosis).

In the 11-year period 1982-1992 there were 46,233 hospital admissions directly caused by drugs in Western Australia, of which 28,620 (61.9%) were male and 17,613 (38.1%) were female.

For hospital admissions due to hallucinogens, volatile substances, alcohol, and other or unspecified drugs a higher proportion occurred in males than in females. Opiates, barbiturates/tranquillisers/sedatives, anti-depressants, and psychostimulants, on the other hand, were responsible for a higher proportion of hospital admissions in females (Table 3.1, page 24; Appendix Tables A3.1 to A3.3, pages A-23 to A-25).

Table 3.1: Number and proportion of all drug-caused hospital admissions, by sex and type of drug, Western Australia, 1982-1992

Type of drug	Males		Females		Persons
	Number of admissions	% of admissions by sex	Number of admissions	% of admissions by sex	Number of admissions
Opiates	1,448	37.3	2,435	62.7	3,883
Barbiturates/tranquillisers/sedatives	3,676	38.1	5,976	61.9	9,652
Anti-depressants	938	33.9	1,833	66.1	2,771
Psychostimulants	114	45.8	135	54.2	249
Hallucinogens	58	65.9	30	34.1	88
Volatile substances	596	71.9	233	28.1	829
Alcohol	19,943	77.6	5,762	22.4	25,705
Other/unspecified drugs	1,843	60.7	1,195	39.3	3,038

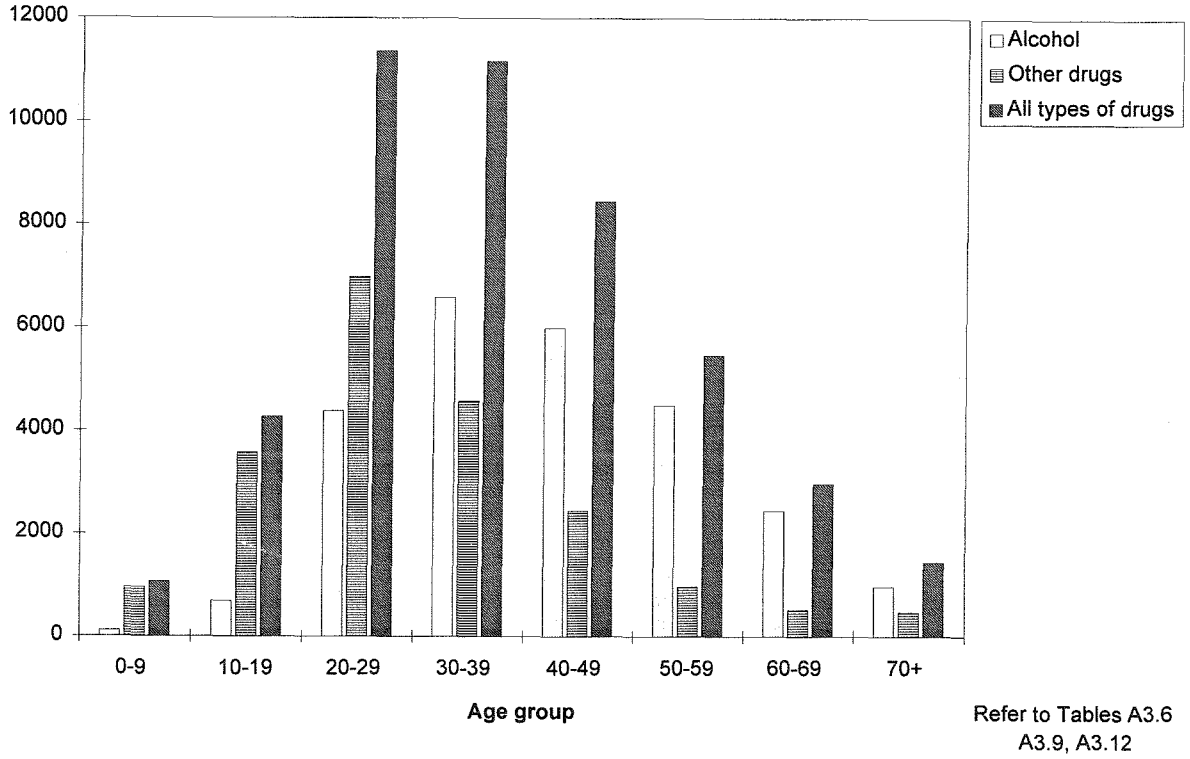
Source: Health Department of Western Australia, Mortality Database
Note: In this study, the principal diagnosis only was used to assess whether an admission was drug-caused.

Distribution of hospital admissions

A breakdown of the number of hospital admissions by drug type and age group (Figure 3.1; Appendix Tables A3.4 to A3.6, pages A-26 to A-28) found:

- the number of hospital admissions due to all drugs was highest in the 20-29 year age group;
- the number of hospital admissions due to alcohol was highest in the 30-39 year age group; and
- the number of hospital admissions due to drugs other than alcohol was highest in the 20-29 year age group.

Figure 3.1: Number of drug-caused hospital admissions by drug type and age group, Western Australia, 1982-1992



Refer to Tables A3.6 A3.9, A3.12

Age-standardised rates

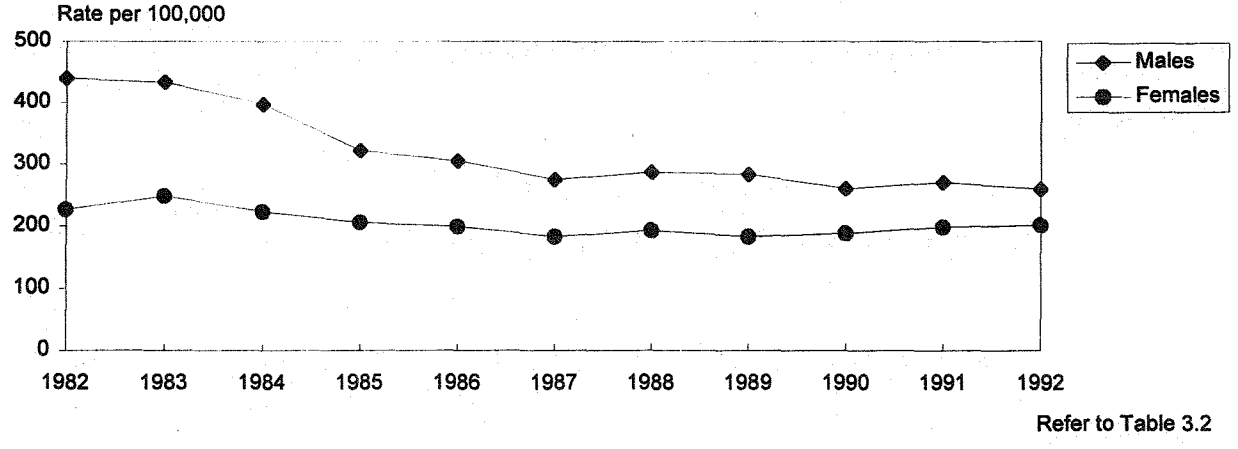
Age-standardised admission rates for males have shown a marked decrease - from 440 hospital admissions per 100,000 person-years in 1982 to 259 per 100,000 in 1992. For females, the rate has remained relatively steady with only a small decrease apparent over the period. The highest male:female rate ratio (the age-standardised rate for males divided by that for females), 1.9, occurred in 1982. Since then the rate ratios have been falling steadily, and the lowest rate ratio, 1.3, occurred in 1992 (Figure 3.2; Table 3.2).

Table 3.2: Age-standardised rates for drug-caused hospital admissions by sex, Western Australia, 1982-1992

	Males	Females	Persons	Male:female rate ratio
1982	440 (8.0)	227 (5.9)	335 (5.0)	1.9
1983	433 (7.8)	248 (6.0)	342 (4.9)	1.7
1984	397 (7.4)	223 (5.6)	311 (4.7)	1.8
1985	322 (6.5)	206 (5.4)	265 (4.2)	1.6
1986	305 (6.2)	199 (5.2)	253 (4.1)	1.5
1987	275 (5.8)	183 (4.9)	229 (3.8)	1.5
1988	287 (5.9)	193 (5.0)	241 (3.9)	1.5
1989	283 (5.7)	183 (4.7)	233 (3.7)	1.5
1990	260 (5.4)	188 (4.8)	225 (3.6)	1.4
1991	270 (5.5)	198 (4.9)	234 (3.7)	1.4
1992	259 (5.3)	201 (4.8)	230 (3.6)	1.3

Source: Health Department of Western Australia, Hospital Morbidity Data System
Note: In this study, the principal diagnosis only was used to assess whether an admission was drug-caused. Figures in brackets are the standard errors.

Figure 3.2: Age-standardised rates for all drug-caused hospital admissions by sex, Western Australia, 1982-1992



Refer to Table 3.2

3.2 Alcohol

Overview

The causes of hospitalisation due to alcohol include:

- mental disorders induced by alcohol;
- alcohol poisoning; and
- conditions wholly attributable to alcohol (alcoholic cardiomyopathy, alcoholic polyneuropathy, alcoholic gastritis, and alcoholic liver cirrhosis)

In the 11-year period 1982-1992 there were 25,705 hospital admissions in Western Australia directly caused by alcohol, of which 19,943 (77.6%) were male and 5,762 (22.4%) were female.

There were 21,387 (83.2%) hospital admissions caused by mental disorders (alcoholic psychoses, alcohol dependence, non-dependent alcohol use), 3,821 (14.9%) hospital admissions caused by conditions wholly attributable to alcohol (cardiomyopathy, polyneuropathy, gastritis, liver cirrhosis), and 497 (1.9%) hospital admissions due to alcohol poisoning.

The three major causes of hospital admissions due to alcohol were alcohol dependence, alcoholic psychosis and non-dependent alcohol use. Together, these causes were responsible for over 80% of all alcohol-caused hospitalisation in Western Australia over the period 1982-1992 (Table 3.3).

Table 3.3: Number and proportion of hospital admissions due to alcohol by specific cause, Western Australia, 1982-1992

Type of cause	Number of admissions	% of admissions
Conditions		
Alcoholic liver cirrhosis	2,316	9.0
Alcoholic gastritis	1,158	4.5
Alcoholic cardiomyopathy	191	0.7
Alcoholic polyneuropathy	156	0.6
Mental disorders		
Alcohol dependence	15,305	59.5
Non-dependent alcohol use	3,268	12.7
Alcoholic psychosis	2,814	10.9
Poisoning		
Alcohol poisoning	497	1.9
Total	25,705	100.0

Source: Health Department of Western Australia, Hospital Morbidity Data System
Note: In this study, the principal diagnosis only was used to assess whether an admission was drug-caused.

Distribution of hospital admissions

A breakdown of the number of alcohol-caused hospital admissions by age group (Figure 3.1; page 24; Appendix Tables A3.7 to A3.9, pages A-29 to A-31) found:

- the highest number of hospital admissions, 6,587 (25.6%) cases, involved 30-39 year olds; and
- the lowest number of hospital admissions, 112 (0.4%) cases, involved 0-9 year olds.

Age-standardised rates

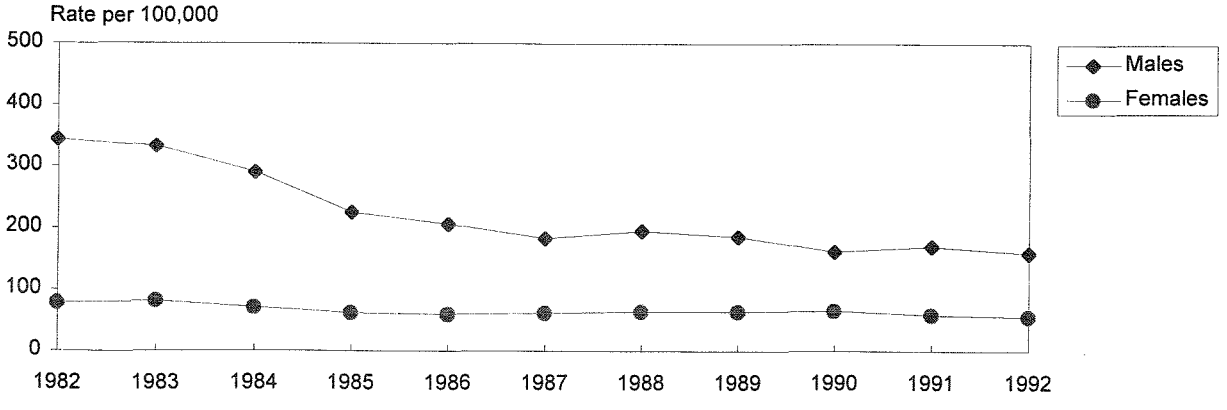
Age-standardised hospitalisation rates for males have shown a marked decrease - from 344 hospital admissions per 100,000 person-years in 1982 to 159 per 100,000 in 1992. For females, the rate has remained relatively stable between 56 and 82 per 100,000. The highest male:female rate ratio, 4.4, occurred in 1982; the lowest, 2.5, occurred in 1990 (Figure 3.3; Table 3.4).

Table 3.4: Age-standardised rates for alcohol-caused hospital admissions by sex, Western Australia, 1982-1992

	Males	Females	Persons	Male:female rate ratios
1982	344 (7.0)	79 (3.5)	214 (4.0)	4.4
1983	333 (6.8)	82 (3.5)	210 (3.9)	4.1
1984	290 (6.3)	71 (3.2)	182 (3.5)	4.1
1985	225 (5.4)	62 (2.9)	145 (3.1)	3.6
1986	206 (5.1)	60 (2.8)	135 (2.9)	3.5
1987	183 (4.7)	62 (2.8)	124 (2.8)	3.0
1988	195 (4.8)	64 (2.8)	131 (2.8)	3.0
1989	186 (4.6)	64 (2.8)	126 (2.7)	2.9
1990	162 (4.3)	66 (2.8)	114 (2.6)	2.5
1991	170 (4.3)	59 (2.6)	115 (2.5)	2.9
1992	159 (4.1)	56 (2.5)	107 (2.4)	2.9

Source: Health Department of Western Australia, Hospital Morbidity Data System
Note: In this study, the principal diagnosis only was used to assess whether an admission was drug-caused. Figures in brackets are standard errors.

Figure 3.3: Age-standardised rates for alcohol-caused hospital admissions by sex, Western Australia, 1982-1992



Refer to Table 3.5

3.3 Drugs other than alcohol

Overview

The causes of hospitalisation due to drugs other than alcohol include:

- drug-induced mental disorders; and
- poisoning.

Examples of drugs for each drug category are shown in Appendix Table A1.4, page A-4.

In the 11-year period 1982-1992 there were 20,528 hospital admissions directly caused by drugs other than alcohol in Western Australia, of which 8,677 (42.3%) were male and 11,851 (57.7%) were female. The annual number of hospital admissions due to drugs other than alcohol increased by over 20% during the 11-year period, from 1,675 in 1982 to 2,192 in 1992.

There were a number of differences in the proportions of male and female hospital admissions according to drug type (Table 3.5; Figure 3.4, page 29).

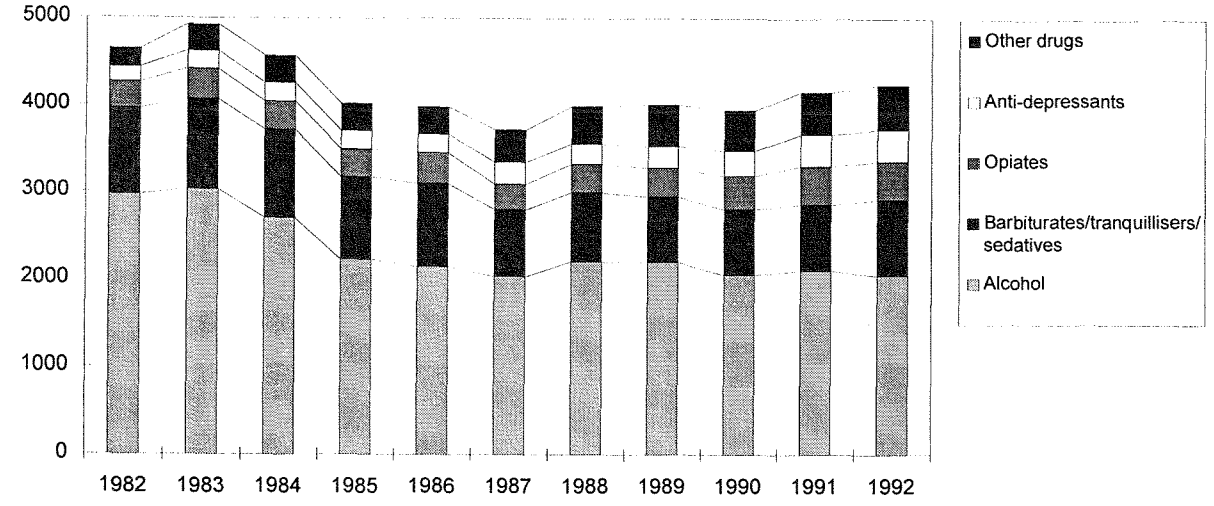
- For males, barbiturates, tranquillisers and sedatives were responsible for the greatest proportion of drug-caused hospital admissions (42.4%) followed by other or unspecified drugs (21.2%).
- For females, barbiturates, tranquillisers and sedatives were responsible for the greatest proportion of drug-caused hospital admissions (50.4%) followed by opiates (20.5%).
- Anti-depressants were responsible for a greater proportion of drug-caused hospital admissions in females than in males (15.5% compared with 10.8%).
- Volatile substances were responsible for a greater proportion of drug-caused hospital admissions in males than in females (6.9% compared with 2.0%).

Table 3.5: Number and proportion of hospital admissions due to drugs other than alcohol, by type of drug and sex, Western Australia, 1982-1992

Type of drug	Males		Females		Persons
	Number of admissions	% of admissions by drug type	Number of admissions	% of admissions by drug type	Number of admissions
Opiates	1,448	16.7	2,435	20.5	3,883
Barbiturates/tranquillisers/sedatives	3,676	42.4	5,976	50.4	9,652
Anti-depressants	938	10.8	1,833	15.5	2,771
Cocaine	4	0.0	14	0.1	18
Psychostimulants	114	1.3	135	1.1	249
Hallucinogens	58	0.7	30	0.3	88
Volatile substances	596	6.9	233	2.0	829
Other/unspecified drugs	1,843	21.2	1,195	10.1	3,038
All drug types	8,677	100.0	11,851	100.0	20,528

Source: Health Department of Western Australia, Hospital Morbidity Data System
Note: In this study, the principal diagnosis only was used to assess whether an admission was drug-caused.

Figure 3.4: Number of drug-caused hospital admissions by drug type, Western Australia 1982-1992



Other drugs group consists of cocaine, psychostimulants, hallucinogens, volatile substances and other/unspecified

Refer to Table A3.3

Distribution of hospital admissions

A breakdown of the number of hospital admissions due to drugs other than alcohol by age group (Figure 3.1, page 24; Appendix Tables A3.10 to A3.12, pages A-32 to A-34) found:

- the highest number of hospital admissions, 6,981 (34.0%) cases, involved 20-29 year olds; and
- the lowest number of hospital admissions, 477 (2.3%) cases, involved 70 year olds and above.

Age-standardised rates

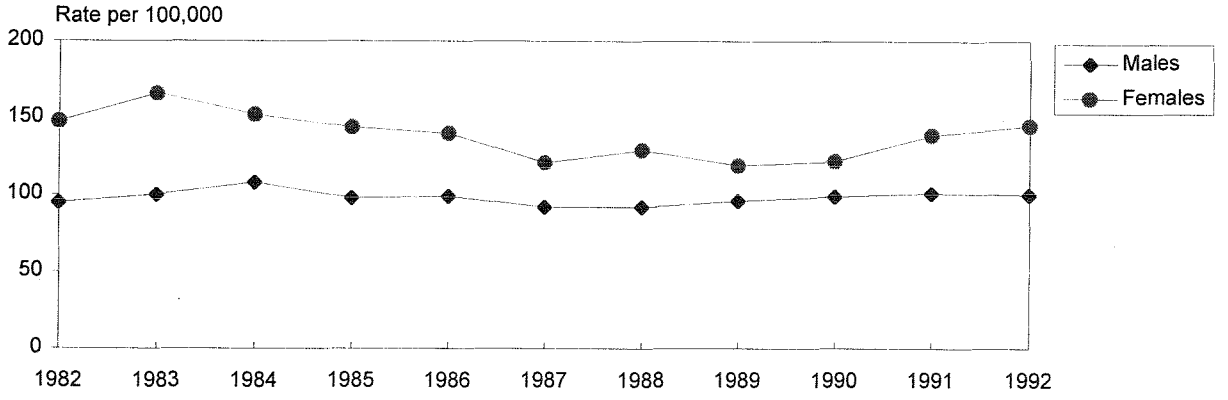
The age-standardised rates for hospital admissions due to drugs other than alcohol are greater for females than males. The male rates have remained stable at around 100 admissions per 100,000 person-years. The female rates have fluctuated but no real trends are apparent. The male:female rate ratios remained steady over the 11-year period in the range 0.6 to 0.8 (Figure 3.5; Table 3.6, page 30).

Table 3.6: Age-standardised rates for hospital admissions due to drugs other than alcohol by sex, Western Australia, 1982-1992

	Males	Females	Persons	Male:female rate ratios
1982	95 (3.8)	148 (4.7)	121 (3.0)	0.6
1983	100 (3.8)	166 (4.9)	132 (3.1)	0.6
1984	108 (3.9)	152 (4.7)	129 (3.0)	0.7
1985	98 (3.7)	144 (4.5)	121 (2.9)	0.7
1986	99 (3.6)	140 (4.3)	119 (2.8)	0.7
1987	92 (3.4)	121 (4.0)	106 (2.6)	0.8
1988	92 (3.4)	129 (4.1)	110 (2.6)	0.7
1989	96 (3.4)	119 (3.8)	108 (2.6)	0.8
1990	99 (3.4)	122 (3.9)	110 (2.6)	0.8
1991	101 (3.4)	139 (4.2)	119 (2.7)	0.7
1992	100 (3.4)	145 (4.2)	123 (2.7)	0.7

Source: Health Department of Western Australia, Hospital Morbidity Data System
Note: In this study, the principal diagnosis only was used to assess whether an admission was drug-caused. Figures in brackets are standard errors.

Figure 3.5: Age-standardised rates for hospital admissions due to drugs other than alcohol by sex, Western Australia, 1982-1992



Refer to Table 3.8

3.4 Drug-caused hospitalisation by cause type (all drugs)

3.4.1 Poisoning

Poisoning cases can be sub-divided according to whether the cause of the poisoning was accidental, due to suicide, or undetermined as to whether due to suicide or accidental.

Overview

In the 11-year period 1982-1992 there were 16,988 hospital admissions due to drug-caused poisoning in Western Australia, of which 6,539 (38.5%) were male and 10,449 (61.5%) were female.

The three types of drugs responsible for the greatest proportion of drug-caused hospital admissions due to poisoning in both sexes were tranquillisers, opiates, and anti-depressants (Table 3.7; Appendix Tables A3.13 to A3.15, pages A-35 to A-37). Together these three drugs were responsible for over 75% of admissions for males and 85% of admissions for females.

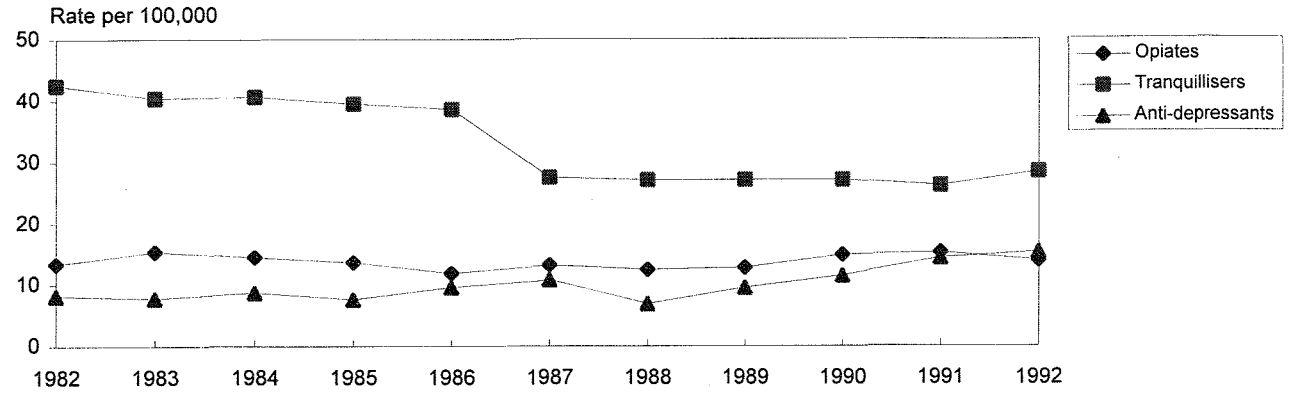
Table 3.7: Number and proportion of hospital admissions due to poisoning, by type of drug and sex, Western Australia, 1982-1992

Type of drug	Males		Females		Persons
	Number of admissions	% of admissions by drug type	Number of admissions	% of admissions by drug type	Number of admissions
Opiates	1,238	18.9	2,288	21.9	3,526
Barbiturates	119	1.8	192	1.8	311
Sedatives	520	8.0	810	7.8	1,330
Tranquillisers	2,872	43.9	4,780	45.7	7,652
Anti-depressants	938	14.3	1,833	17.5	2,771
Cocaine	3	0.0	12	0.1	15
Psychostimulants	66	1.0	103	1.0	169
Hallucinogens	37	0.6	17	0.2	54
Volatile substances	468	7.2	195	1.9	663
Alcohol	278	4.3	219	2.1	497
All types of drugs	6,539	100.0	10,449	100.0	16,988

Source: Health Department of Western Australia, Hospital Morbidity Data System
Note: In this study, the principal diagnosis only was used to assess whether an admission was drug-caused.

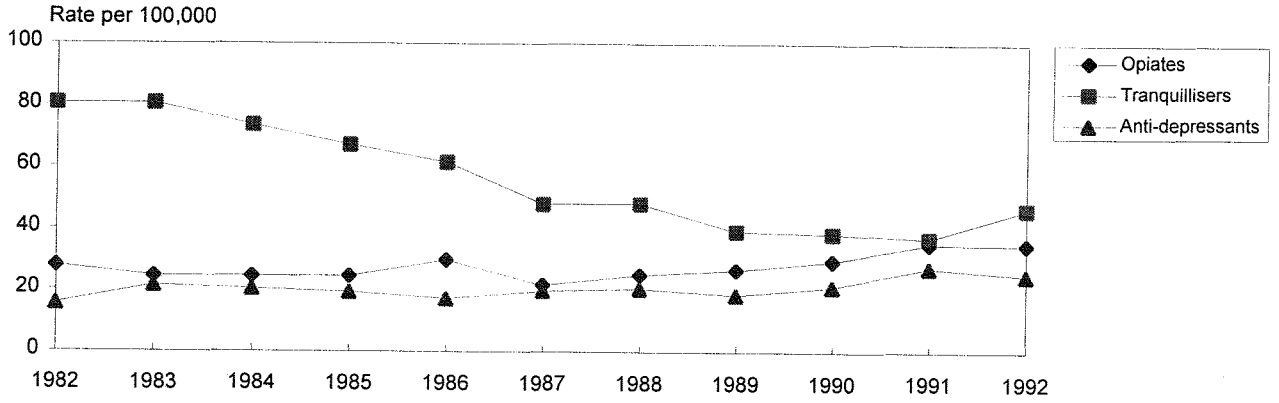
The age-standardised rates for the top three types of drugs responsible for hospital admissions due to poisoning are greater for females than males (Figures 3.6 and 3.7, page 32; Appendix Tables A3.16 and A3.17, pages A-38 and A-39).

Figure 3.6: Male age-standardised admission rates for drug-caused poisoning by type of drug, Western Australia, 1982-1992



Refer to Table A3.16

Figure 3.7: Female age-standardised admission rates for drug-caused poisoning by type of drug, Western Australia, 1982-1992



Refer to Table A3.17

Intention of poisoning

Attempted suicides[21] were responsible for most of the hospital admissions due to drug-caused poisoning, accounting for over 80% of male admissions and over 90% of female admissions. Accidental poisoning was the next most common cause of drug-related poisoning resulting in hospitalisation. Accidental poisoning accounted for 13.4% of male hospital admissions due to drug-caused poisoning, more than double the proportion for females (Table 3.8, page 33; Appendix Table A3.18, page A-40).

[21] Includes attempted and successful suicides.

Table 3.8: Number and proportion of hospital admissions due to drug-caused poisoning by intention and sex, Western Australia, 1982-1992

Intention of poisoning	Males		Females		Persons
	Number of admissions	% of admissions by intention	Number of admissions	% of admissions by intention	Number of admissions
Accidental	873	13.4	632	6.0	1,505
Suicide	5,435	83.1	9594	91.8	15,029
Undetermined	231	3.5	223	2.1	454
All causes	6,539	100.0	10,449	100.0	16,988

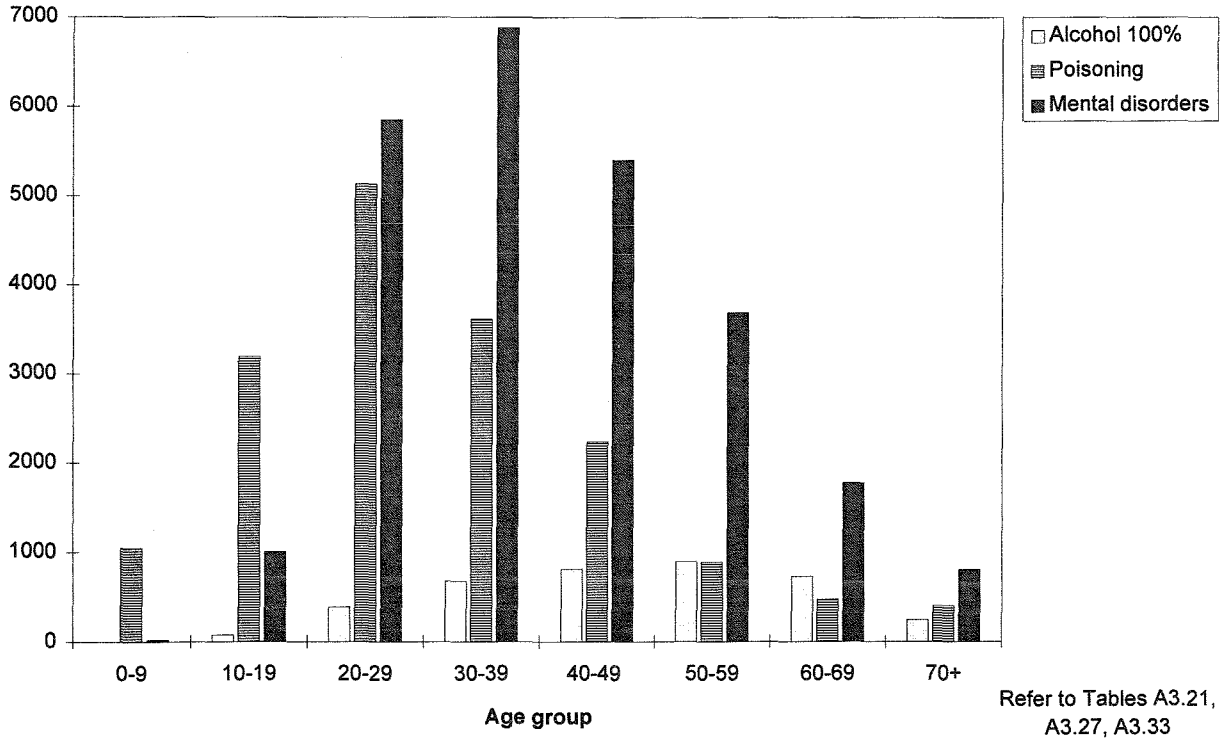
Source: Health Department of Western Australia, Hospital Morbidity Data System
Note: In this study, the principal diagnosis only was used to assess whether an admission was drug-caused.

Distribution of hospital admissions

A breakdown of the number of drug-caused hospital admissions by cause type and age group (Figure 3.8; Appendix Tables A3.19 to A3.21, pages A-41 to A-43) found that for admissions due to drug-caused poisoning:

- the highest number of hospital admissions, 5,130 (30.2%) cases, involved 30-39 year olds; and
- the lowest number of hospital admissions, 403 (2.4%) cases, involved 70 year olds and above.

Figure 3.8: Number of drug-related hospital admissions by cause type and age group, Western Australia, 1982-1992



Refer to Tables A3.21, A3.27, A3.33

Age-standardised rates

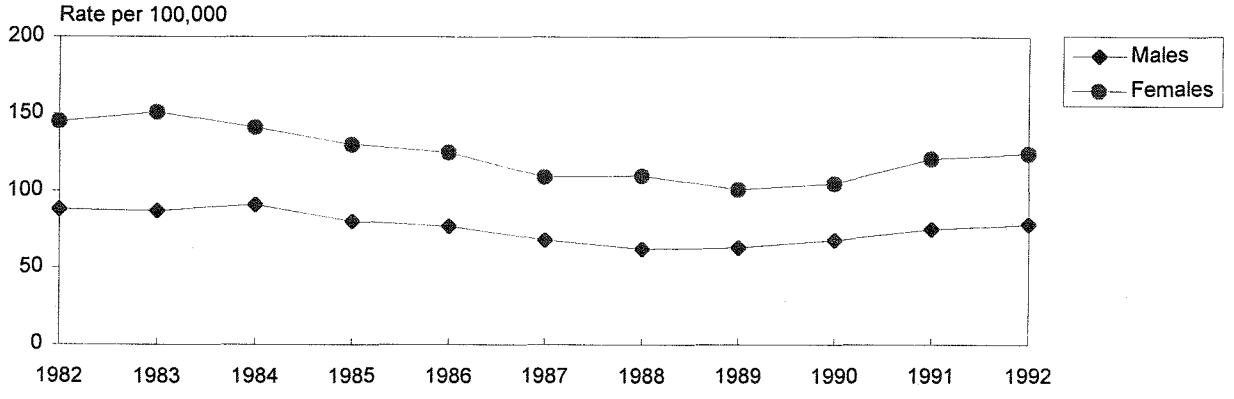
Female age-standardised admission rates for drug-caused poisoning were higher than those for males. The trend for both sexes was similar with rates falling after 1983/1984, then rising slightly from 1990. The male:female rate ratios remained constant over the 11-year period at 0.6 (Figure 3.9; Table 3.9).

Table 3.9: Age-standardised rates for hospital admissions due to drug-caused poisoning by sex, Western Australia, 1982-1992

	Males	Females	Persons	Male:female rate ratios
1982	88 (3.7)	145 (4.7)	116 (3.0)	0.6
1983	87 (3.6)	151 (4.7)	119 (3.0)	0.6
1984	91 (3.7)	141 (4.5)	115 (2.9)	0.6
1985	80 (3.4)	130 (4.3)	105 (2.7)	0.6
1986	77 (3.3)	125 (4.1)	101 (2.6)	0.6
1987	68 (3.0)	109 (3.8)	87 (2.4)	0.6
1988	62 (2.8)	110 (3.8)	85 (2.3)	0.6
1989	63 (2.8)	101 (3.6)	82 (2.3)	0.6
1990	68 (2.9)	105 (3.6)	86 (2.3)	0.6
1991	75 (3.0)	121 (3.9)	98 (2.4)	0.6
1992	78 (3.0)	124 (3.9)	100 (2.4)	0.6

Source: Health Department of Western Australia, Hospital Morbidity Data System
Note: In this study, the principal diagnosis only was used to assess whether an admission was drug-caused. Figures in brackets are standard errors.

Figure 3.9: Age-standardised admission rates for drug-caused poisoning by sex, Western Australia, 1982-1992



Refer to Table 3.12

3.4.2 Mental disorders

Drug-caused mental disorders include psychoses, dependence, and non-dependent use caused by alcohol and other drugs.

Overview

In the 11-year period 1982-1992 there were 25,424 hospital admissions due to drug-caused mental disorders in Western Australia, of which 19,108 (75.2%) were male and 6,316 (24.8%) were female.

The following summary of the types of drug-caused mental disorders highlights the differences and similarities between the sexes (Table 3.10; Appendix Tables A3.22 to A3.24, pages A-44 to A-46).

- Alcohol dependence was responsible for the highest proportion of hospital admissions due to drug-caused mental disorders in both sexes (males 64.7%, females 46.5%).
- Alcohol psychosis was responsible for a greater proportion of hospital admissions due to drug-caused mental disorders in males than in females (12.3% compared to 7.5%).
- Other drug psychoses, other drug dependence, and non-dependent drug use (alcohol and other drugs) were responsible for a greater proportion of hospital admissions due to drug-caused mental disorders in females than in males.

Table 3.10: Number and proportion of hospital admissions due to drug-caused mental disorders by type of disorder and sex, Western Australia, 1982-1992

Type of mental disorder	Males		Females		Persons
	Number of admissions	% of admissions by type of disorder	Number of admissions	% of admissions by type of disorder	Number of admissions
Alcohol psychosis	2,342	12.3	472	7.5	2,814
Other drug psychoses	262	1.4	189	3.0	451
Alcohol dependence	12,367	64.7	2,938	46.5	15,305
Other drug dependence	1,854	9.7	1,204	19.1	3,058
Non-dependent alcohol use	1,983	10.4	1,285	20.3	3,268
Non-dependent use (other drugs)	300	1.6	228	3.6	528
All types of mental disorders	19,108	100.0	6,316	100.0	25,424

Source: Health Department of Western Australia, Hospital Morbidity Data System
Note: In this study, the principal diagnosis only was used to assess whether an admission was drug-caused.

Distribution of hospital admissions

A breakdown of the number of hospital admissions by cause type and age group (Figure 3.8, page 33; Appendix Tables A3.25 to A3.27, pages A-47 to A49) found that for admissions due to drug-caused mental disorders:

- the highest number of hospital admissions, 6,882 (27.1%) cases, involved 30-39 year olds; and
- the lowest number of hospital admissions, 23 (0.1%) cases, involved 0-9 year olds.

Age-standardised rates

The highest male age-standardised hospitalisation rate for all drug-caused mental disorders occurred in 1982 (323 hospital admissions per 100,000 person-years) and has been falling steadily since. The age-standardised rates for females has shown little change over the 11-year period. (Figure 3.10; Appendix Tables A3.28 and A3.29, pages A-50 and A-51).

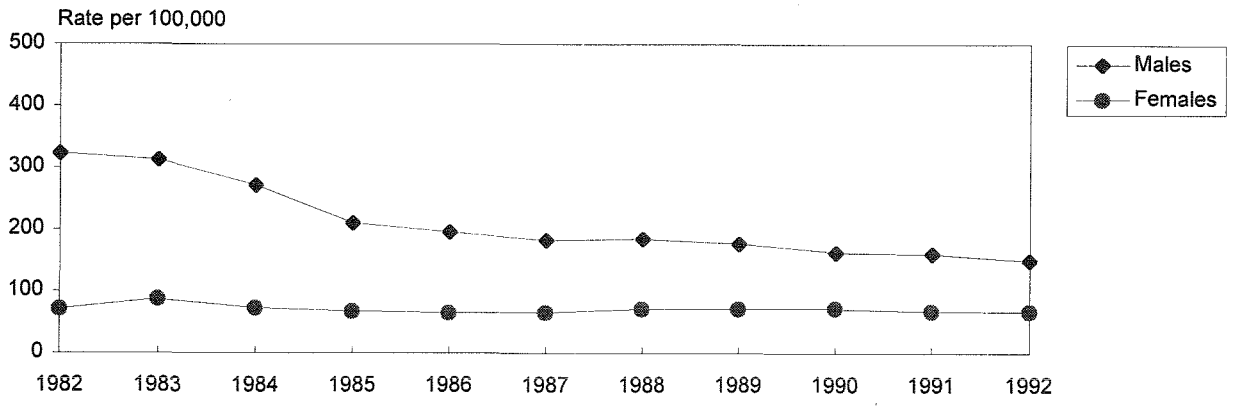
Over the 11-year period:

- there has been a marked reduction in hospitalisation rates for alcohol dependence in both sexes;
- the hospitalisation rate for alcoholic psychosis remained relatively steady in both sexes; and
- the rate for non-dependent alcohol use increased in both sexes.

The increase in the non-dependent rate of hospitalisation may reflect a change in increased rate of presentation of people for treatment at an earlier stage in their drinking (due to the development of early intervention strategies), or may be due to changes in diagnostic practices by health care providers. (Figures 3.11 to 3.13; Appendix Tables A3.28 to A3.30, pages A-50 to A-52).

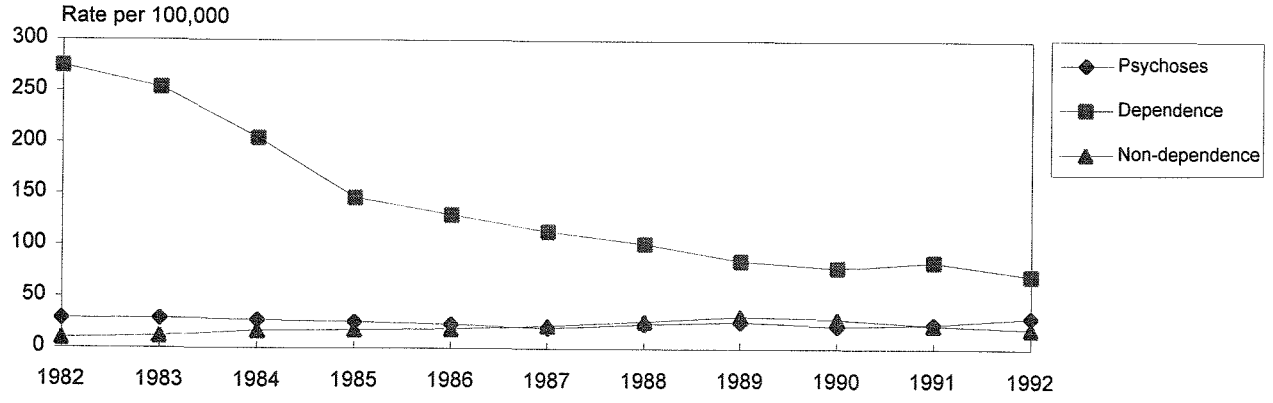
The hospitalisation rate for psychoses due to drugs other than alcohol has shown an increase, particularly since 1990. In males the rate has exceeded 6.0 admissions per 100,000 person-years since 1990, and in females the rate reached 5.2 per 100,000 by 1992. This increasing trend, which began in males in the late 1980s, is closely related to the increased prevalence of amphetamine use that has occurred in this State, particularly amongst young people (Figure 3.14, page 37 and Figure 3.15, page 38, Appendix Tables A3.28 and A3.29, pages A-50 and A-51).

Figure 3.10: Age-standardised admission rates for drug-caused mental disorders by year and sex, Western Australia, 1982-1992



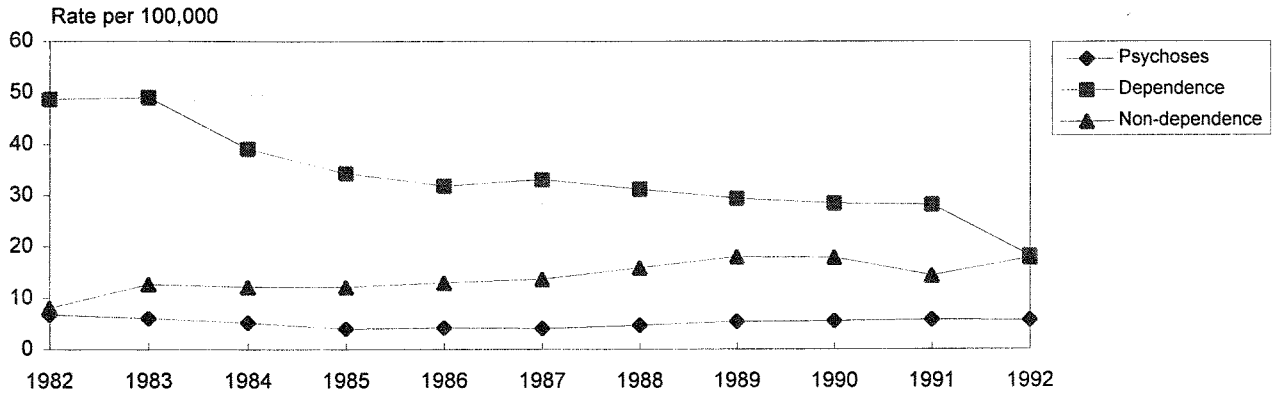
Refer to Tables A3.28, A3.29, A3.33

Figure 3.11: Male age-standardised admission rates for alcohol-caused mental disorders by type of disorder, Western Australia, 1982-1992



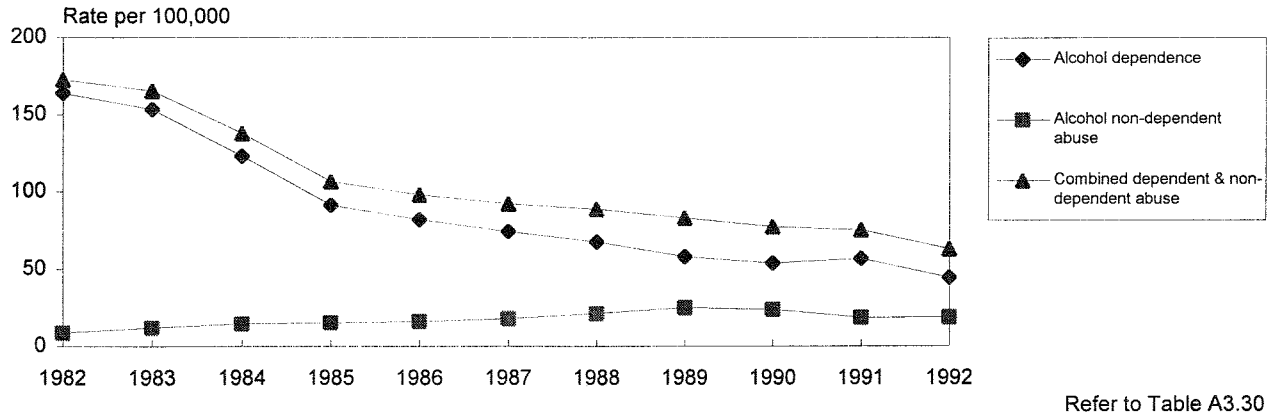
Refer to Table A3.28

Figure 3.12: Female age-standardised admission rates for alcohol-caused mental disorders by type of disorder, Western Australia, 1982-1992



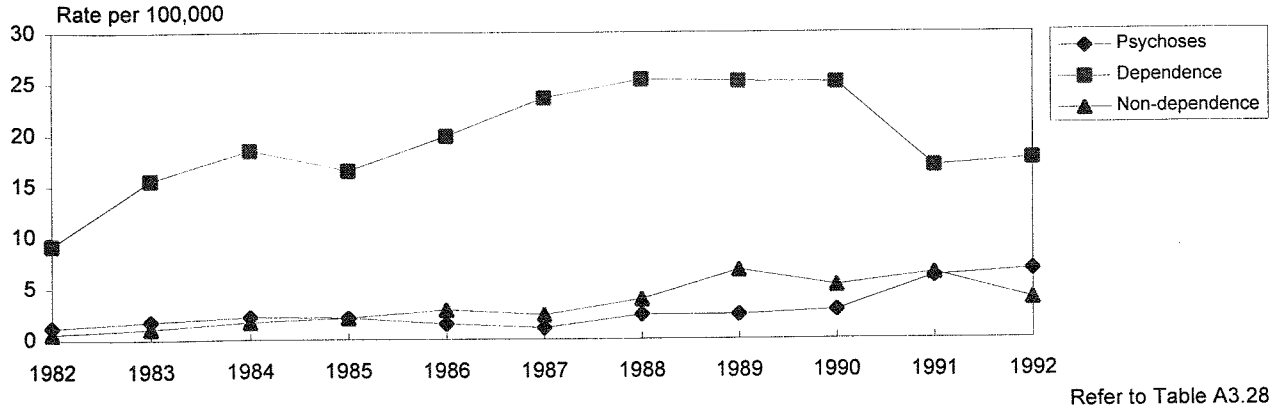
Refer to Table A3.29

Figure 3.13: Age-standardised admission rates for alcohol dependence and non-dependent alcohol use, Western Australia, 1982-1992



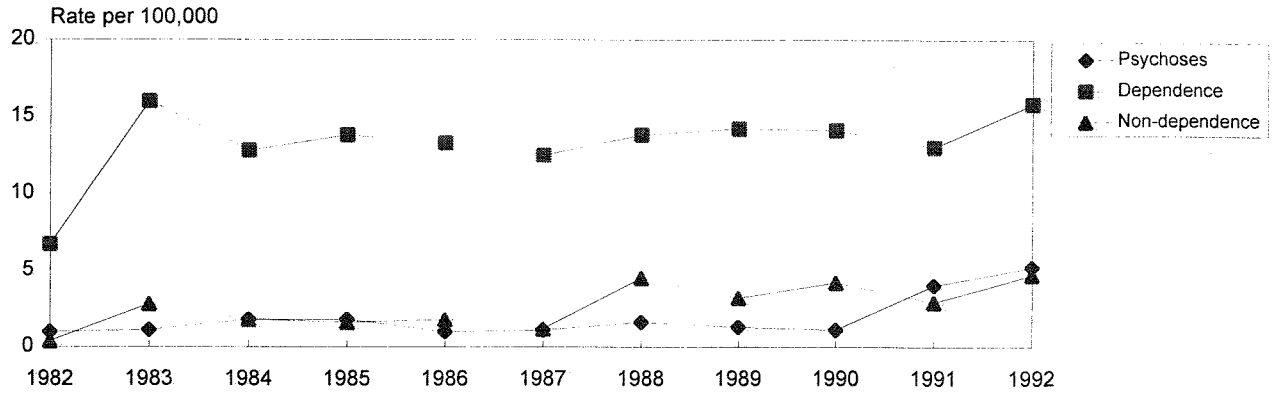
Refer to Table A3.30

Figure 3.14: Male age-standardised admission rates for mental disorders caused by drugs other than alcohol, by type of disorder, Western Australia, 1982-1992



Refer to Table A3.28

Figure 3.15: Female age-standardised admission rates for mental disorders caused by drugs other than alcohol, by type of disorder, Western Australia, 1982-1992



Refer to Table A3.29

The highest male:female rate ratio, 4.5, occurred in 1982 and the rate ratios have been steadily decreasing since, with the lowest rate ratio, 2.2, occurring in 1992 (Table 3.11).

Table 3.11: Male:female rate ratios for hospital admissions due to drug-caused mental disorders, 1982-1992

Year	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Rate ratio	4.5	3.6	3.7	3.1	3.0	2.8	2.6	2.5	2.3	2.4	2.2

3.4.3 Conditions wholly attributable to alcohol

Conditions wholly attributable to alcohol include alcoholic cardiomyopathy, alcoholic polyneuropathy, alcoholic gastritis, and alcoholic liver cirrhosis.

Overview

In the 11-year period 1982-1992 there were 3,821 hospital admissions due to conditions wholly attributable to alcohol in Western Australia, of which 2,973 (77.8%) were male and 848 (22.2%) were female. Alcoholic liver cirrhosis was responsible for most of the hospital admissions due to conditions wholly attributable to alcohol in both sexes (Table 3.12; Appendix Table A3.31, page A-53).

Table 3.12: Number and proportion of hospital admissions due to conditions wholly attributable to alcohol, by type of condition and sex, Western Australia, 1982-1992

Type of condition	Males		Females		Persons
	Number of admissions	% of admissions by type of condition	Number of admissions	% of admissions by type of condition	Number of admissions
Cardiomyopathy	170	5.7	21	2.5	191
Polyneuropathy	109	3.7	47	5.5	156
Gastritis	964	32.4	194	22.9	1,158
Liver cirrhosis	1,730	58.2	586	69.1	2,316
All conditions	2,973	100.0	848	100.0	3,821

Source: Health Department of Western Australia, Hospital Morbidity Data System
Note: In this study, the principal diagnosis only was used to assess whether an admission was drug-caused.

Distribution of hospital admissions

A breakdown of the number of hospital admissions by cause type and age group (Figure 3.8, page 33; Appendix Tables A3.32 to A3.34, pages A-54 to A-56) found that for admissions due to conditions wholly attributable to alcohol:

- the highest number of hospital admissions, 894 (32.4%) cases, involved 50-59 year olds;
- the lowest number of hospital admissions, 74 (1.9%) cases, involved 10-19 year olds; and
- there were no children aged 0-9 years admitted to hospital for conditions wholly attributable to alcohol.

Age-standardised rates

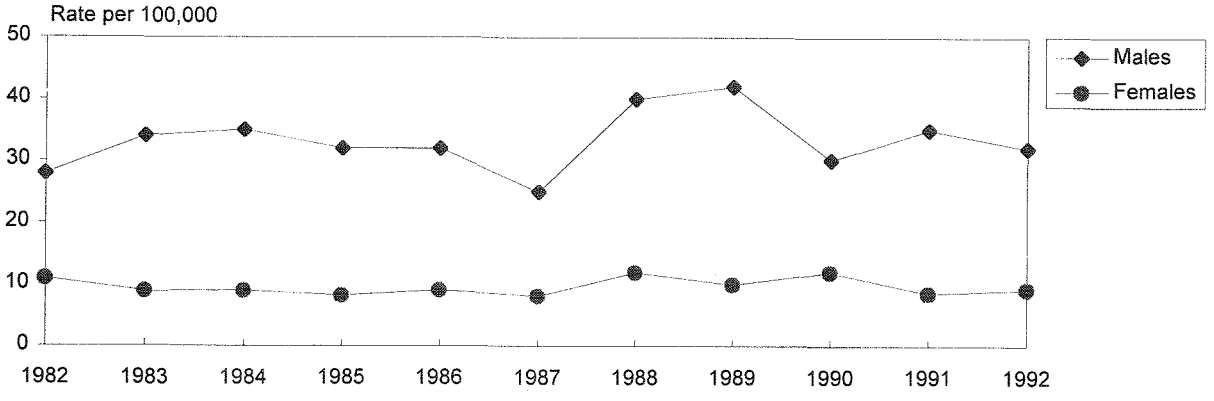
The male age-standardised hospitalisation rates for conditions wholly attributable to alcohol increased in 1988 and 1989 then fell again. The age-standardised rates for females, rates increased slightly over the period 1988-1990. The lowest male:female rate ratio, 2.6, occurred in 1990; the highest, 4.1, occurred in 1989 and 1991 (Figure 3.16; Table 3.13).

Table 3.13: Age-standardised rates for hospital admissions due to conditions wholly attributable to alcohol by sex, Western Australia, 1982-1992

	Males	Females	Persons	Male:female rate ratios
1982	28 (2.0)	11 (1.3)	20 (1.2)	2.7
1983	34 (2.2)	8.9 (1.2)	22 (1.2)	3.8
1984	35 (2.2)	9.0 (1.1)	23 (1.3)	3.9
1985	32 (2.1)	8.2 (1.1)	20 (1.2)	3.9
1986	32 (2.0)	9.1 (1.1)	21 (1.2)	3.5
1987	25 (1.7)	8.1 (1.0)	17 (1.0)	3.0
1988	40 (2.2)	12 (1.2)	26 (1.3)	3.3
1989	42 (2.2)	10 (1.1)	27 (1.3)	4.1
1990	30 (1.9)	12 (1.2)	21 (1.1)	2.6
1991	35 (2.0)	8.5 (1.0)	22 (1.1)	4.1
1992	32 (1.9)	9.2 (1.0)	21 (1.1)	3.5

Source: Health Department of Western Australia, Hospital Morbidity Data System
Note: In this study, the principal diagnosis only was used to assess whether an admission was drug-caused. The figures in brackets are standard errors.

Figure 3.16: Age-standardised admission rates for conditions wholly attributable to alcohol by sex, Western Australia, 1982-1992



Refer to Table A3.34

Chapter 4 - Notification-related data

Information about drug use and drug users can be derived from a number of notification sources. This chapter provides analyses of drug-related public health data based on:

- notifications of HIV/AIDS in injecting drug users (IDUs)
- treatment program data for IDUs with HIV/AIDS
- notifications of drug addiction
- distribution of needles and syringes

4.1 HIV/AIDS in IDUs - notification data

From 1983 to 1992 there were 766 notifications for HIV and AIDS in Western Australia. Two-thirds (515) of these were homosexual males, but the second highest risk group, if related risk categories are taken into consideration, was intravenous drug use, which accounted for 10% (76) of notifications (Table 4.1; Figure 4.1, page 42).

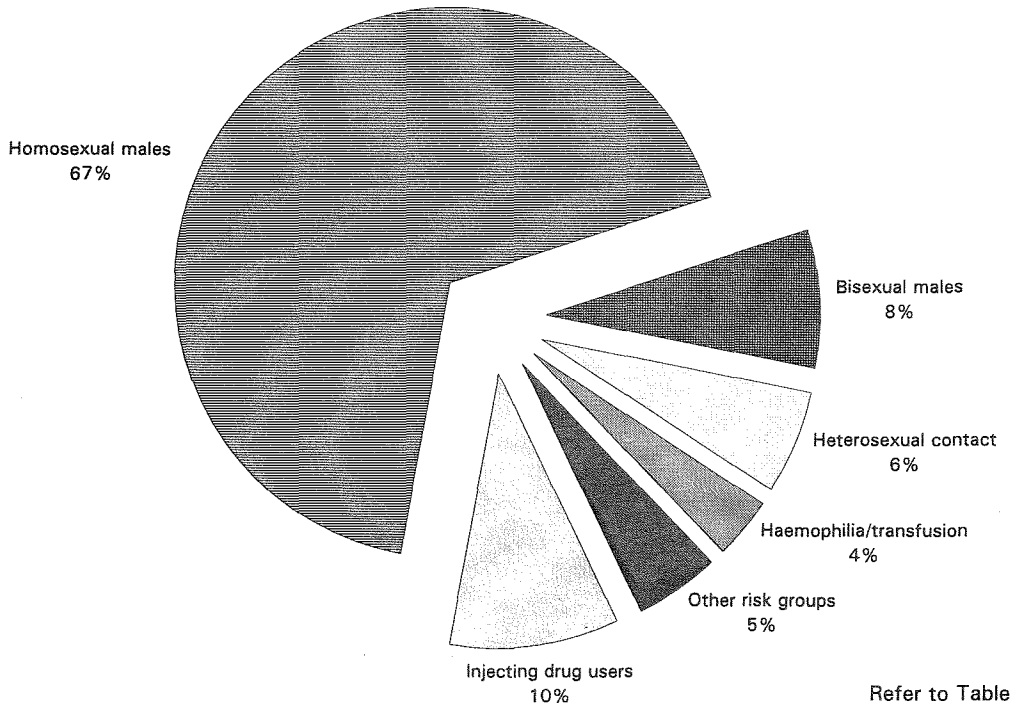
Table 4.1: Number of HIV/AIDS notifications by risk group Western Australia, 1983-1992

Risk group	1983-1992	
	N	%
Homosexual male	515	67.2
Bisexual male	61	8.0
Intravenous drug use & homosexual/bisexual male	37	4.8
Intravenous drug use & heterosexual (both sexes)	36	4.7
Intravenous drug use & female prostitute	3	0.4
Female prostitute	2	0.3
Heterosexual contact	47	6.1
Infant of infected mother	1	0.1
Person with haemophilia/coagulation disorder	20	2.6
Recipient of blood transfusion	9	1.2
Other/undetermined	35	4.6
All notifications	**766**	**100.0**

Source: AIDS Bureau, Health Department of Western Australia

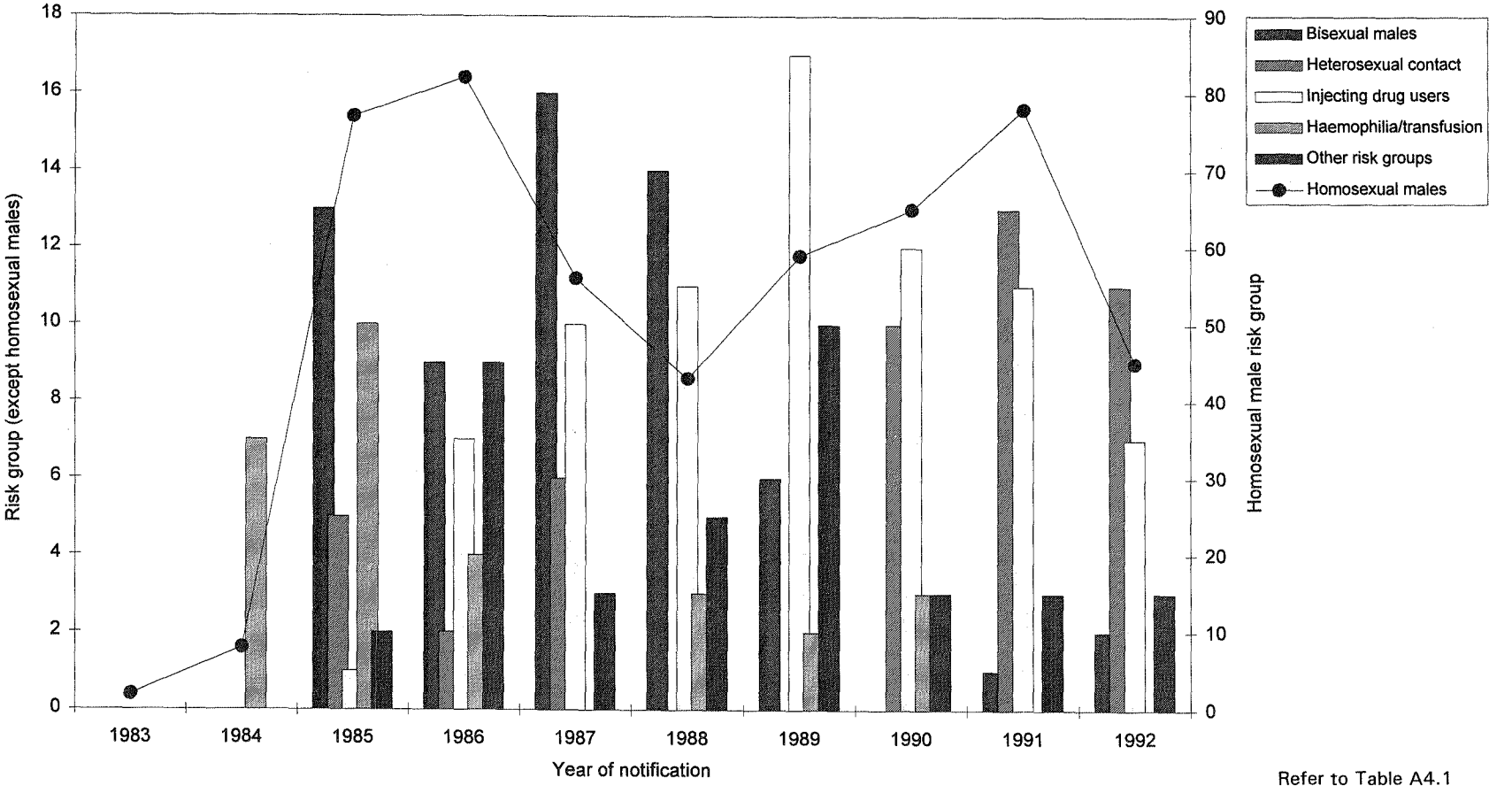
The number of notifications of HIV/AIDS where the risk factor was injecting drug use increased from one notification in 1985 to a peak of 17 notifications in 1989. Since then the number of notifications for which the designated risk factor was injecting drug use has been steadily dropping and in 1992 there were seven notifications. The 'bisexual male' risk group was the second highest risk group until 1989 when the number of notifications from IDUs overtook it (Appendix Table A4.1, page A-57; Figure 4.2, page 43).

Figure 4.1: Breakdown of HIV/AIDS notifications by risk group, 1983-1992



Refer to Table 4.1

Figure 4.2: Number of HIV/AIDS notifications by year and risk group, Western Australia, 1983-1992



Refer to Table A4.1

4.2 HIV/AIDS in IDUs - drug treatment data

HIV testing is now accepted as an integral component of treatment programs for drug users, especially where injecting drug use has occurred. The rationale for this is based on the belief that treatment should support harm minimisation and evaluate outcome across a broad set of measures, such as improved knowledge about health care, reductions in high-risk practices and improvements in social stability, rather than focus on the narrow goal of abstinence.[22]

Testing by the methadone treatment program, the only source of data in this State about the seroprevalence levels of a treatment population of injecting drug users, indicates very low seroprevalence in IDUs (Table 4.2), in stark contrast to the high seroprevalence reported in other populations of IDUs.[23]

Table 4.2: Numbers of tests and HIV positive cases by the methadone treatment program, Western Australia 1986-1992

		HIV positive individuals		Tests/quarter
Year	Quarter	Number	%	
1986	January-March	3	0.9	-
	April-June	3	1.0	2
	July-September	3	1.1	1
	October-December	2	0.7	2
	Total			5
1987	January-March	4	1.5	73
	April-June	3	1.1	49
	July-September	6	2.0	122
	October-December	7	2.2	111
	Total			**355**
1988	January-March	7	2.0	92
	April-June	8	2.2	116
	July-September	8	2.0	89
	October-December	9	2.0	124
	Total			**421**
1989	January-March	6	1.3	90
	April-June	6	1.3	112
	July-September	7	1.6	89
	October-December	8	1.9	154
	Total			**445**
1990	January-March	9	2.0	200
	April-June	8	1.8	141
	July-September	3	0.6	140
	October-December	5	1.1	131
	Total			**612**
1991	January-March	7	1.5	115
	April-June	8	1.6	119
	July-September	7	1.4	126
	October-December	8	1.6	103
	Total			**463**
1992	January-March	8	1.6	110
	April-June	11	2.2	69
	July-September	10	1.9	102
	October-December	8	1.5	88
	Total			**369**
Total tests conducted 1986-1992				**2,670**

Source: Western Australian Alcohol & Drug Authority
Note: Testing data not available in the first quarter of 1986

[22] Methadone Working Party, Ministerial Council on Drug Strategy. *National Policy on Methadone*. Canberra, Australian Government Publishing Service, 1993.

[23] Wodak A. To take up arms against a sea of drugs: AIDS, injecting drug users and drug policy. In Australian Academy of Sciences. *HIV infection and AIDS, Proceedings of the 1991 Annual General Meeting of the Australian Academy of Science*. Canberra, Australian Academy of Science, 1991.

4.3 Notifications of drug addiction

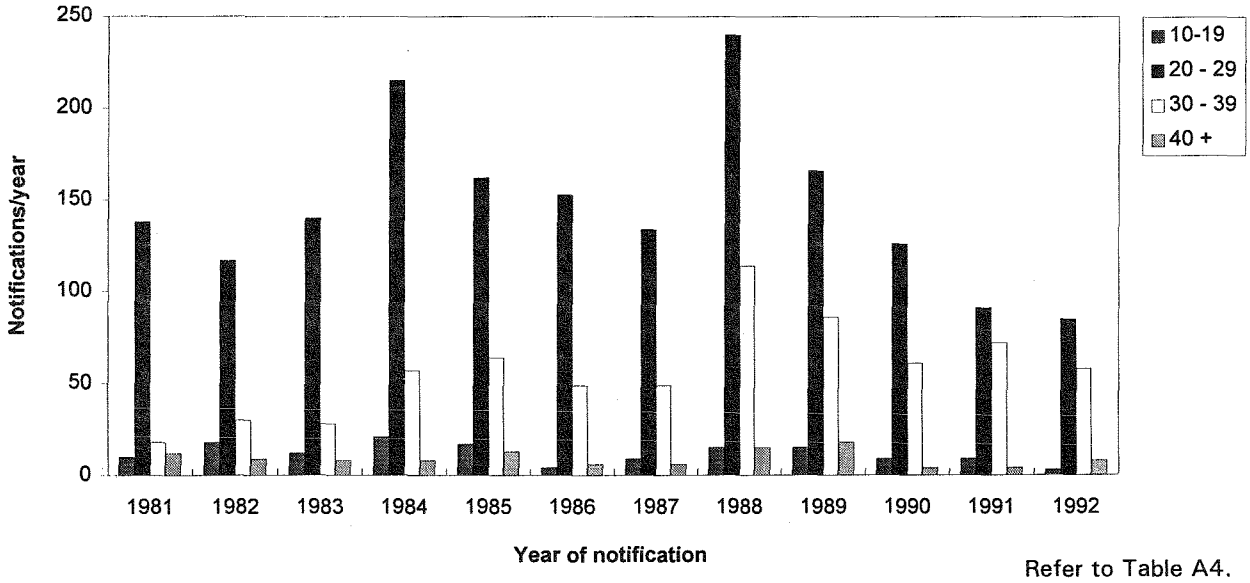
From 1982 to 1992 there were 2,558 notifications of drug addiction - 1,603 (62.7%) males and 955 (37.3%) females (Appendix Table A4.2, page A-58).

In Figure 4.3 a breakdown by age group shows:

- the age group with the highest number of notifications was the 20-29 years age group where there were 1,629 (63.7%) notifications;
- the age group with the next highest number of notifications was the 30-39 years age group with 668 (26.1%) notifications;
- the 15-19 years age group had 132 (5.2%) notifications;
- the 40 years and over age group had 99 (3.9%) notifications;
- there were 30 cases (1.2%) where the age was not reported.

In interpreting Western Australian data on drug notifications it is necessary to take account of periods when there were abnormally high levels of notifications in response to restrictions imposed by the Health Department of Western Australia on general practitioners because of overprescribing to young adults (Figure 4.3). These periods occurred in 1984, in relation to the addictive drug Temgesic (buprenorphine) and in 1988, due to excessive prescription of tranquillisers, especially of ampoules of benzodiazepines.

Figure 4.3: Numbers of notifications of drug addiction by year of notification and age group, Western Australia 1981-1992



Refer to Table A4.

4.4 Availability of needles and syringes

Distributed through retail chemists

From April 1987 to December 1992 approximately 1,550,484 needles and syringes (N&S) were distributed as either SS5 Packs or FitPacks through retail chemists in Western Australia (Table 4.3). However, this number underestimates the total sales of needles and syringes to IDUs by chemists as loose N&S may also be legitimately sold on request.

The number of needles and syringes distributed to IDUs through retail chemists in Western Australia:

- nearly doubled between 1988 (the first full year of data) and 1989
- more than trebled between 1989 and 1990
- increased by 24% between 1990 and 1991
- increased by 33% between 1991 and 1992

Table 4.3: Estimate numbers of needles and syringes distributed through retail chemists, Western Australia, 1987-1992

Year	Quarter	Needles/syringes
1987	April-June	1,284
	July-September	4,080
	October-December	8,610
Total		**13,974**
1988	January-March	4,180
	April-June	14,345
	July-September	15,270
	October-December	25,140
Total		**58,935**
1989	January-March	23,190
	April-June	22,395
	July September	23,755
	October-December	41,405
Total		**110,745**
1990	January-March	63,790
	April-June	69,455
	July-September	106,720
	October-December	110,625
Total		**350,590**
1991	January-March	107,280
	April-June	99,360
	July-September	117,490
	October-December	110,450
Total		**434,580**
1992	January-March	194,650
	April-June	142,300
	July-September	80,245
	October-December	164,465
Total		**581,660**
Total 1987-1992		**1,550,484**

Source: Pharmaceutical Council; AIDS Bureau, Health Department of Western Australia.
Note: Data not available prior to the second quarter of 1987.

Distributed through Needle and Syringe Exchange Programs (NSEPs)

From 1987 to 1992 a total of 1,049,470 needles and syringes were distributed through NSEPs to IDUs in the Perth metropolitan area through programs run by the WA AIDS Council and the ADA. The total number of needles and syringes distributed through NSEPs more than doubled between 1989 to 1990, and 1990 to 1991. The number distributed in 1992, however, fell by 21% compared with the number distributed in 1991 (Table 4.4).

Table 4.4: Needles/syringes distributed through NSEPs, 1987-1992

Year	Quarter	ADA	Western Australian AIDS Council programs			Total
			*PSST van	WAAC office	Sauna	
1989	January-March	75	-	-	-	75
	April-June	275	8,925	5,000	24,000	38,200
	July September	350	7,793	2,894	5,900	16,937
	October-December	725	9,754	2,107	8,200	20,786
Total		**1425**	**26,472**	**10,001**	**38,100**	**75,998**
1990	January-March	2,065	13,867	1,743	9,000	26,675
	April-June	2,025	10,863	3,264	21,990	38,142
	July-September	1,970	14,435	5,159	23,300	44,864
	October-December	3,375	16,443	9,467	41,500	70,785
Total		**9,435**	**55,608**	**19,633**	**95,790**	**180,466**
1991	January-March	2,030	20,092	14,323	55,500	91,945
	April-June	2,820	22,251	18,469	57,000	100,540
	July-September	7,866	26,959	24,897	64,000	123,722
	October-December	8,570	24,247	32,701	62,500	128,018
Total		**21,286**	**93,549**	**90,390**	**239,000**	**352,371**
1992	January-March	9,148	19,582	27,074	42,500	98,304
	April-June	11,357	12,504	18,364	38,000	80,225
	July-September	17,027	6,785	16,942	43,400	84,154
	October-December	20,958	7,483	26,097	31,560	86,098
Total		**58,490**	**46,354**	**88,477**	**155,460**	**348,781**
Total needles & syringes 1987-1992		**90,636**	**221,983**	**208,501**	**528,350**	**1,049,470**

Source: Western Australian AIDS Council; Alcohol and Drug Authority.
Note: Although the WA AIDS Council programs were running from the third quarter of 1987, the data was not available monthly and the data for the period July 1987-June 1989 was added to the June 1989 quarter.
* 'Practise Safe Sex Today' van

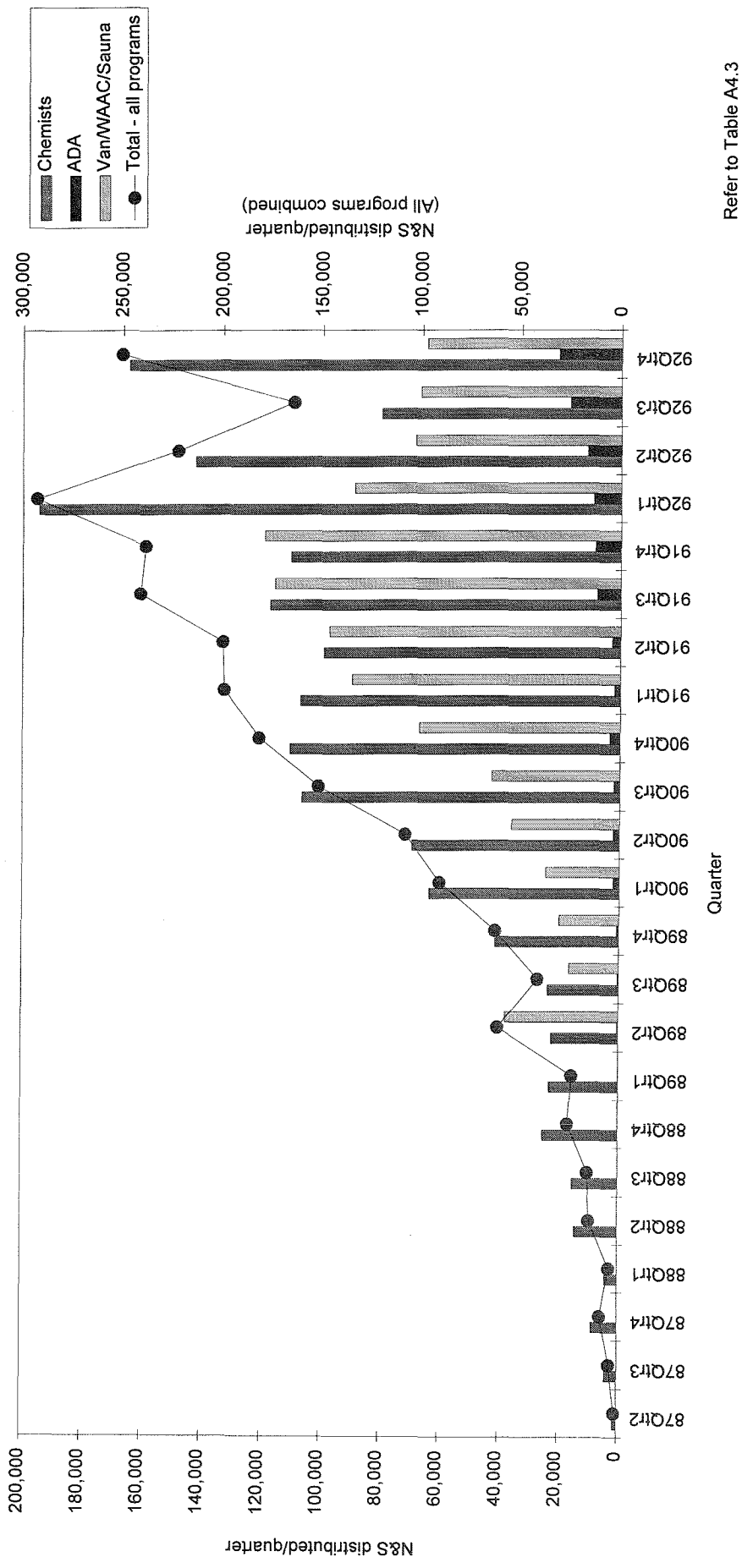
Combined data on N&S distributed through NSEPs and as SS5 or FitPacks through retail chemists show that from the inception of the HIV preventive strategy until the first quarter 1992 there was a steady increase in the quantity of N&S distributed in this State[24] (Figure 4.4, page 48). Over the last three quarters in 1992 the number N&S being distributed has levelled off.

Based on the data in Appendix Table A4.3, it has been estimated that the daily average number of N&S distributed to IDUs through all types of programs, from the first full year, was 161 per day in 1988, 512 per day in 1989, 1,455 per day in 1990, 2,408 per day in 1991 and 2,549 per day in 1992.

The combined total of N&S distributed to IDUs over the period 1987 to 1992, through NSEPs and retail pharmacies, was 2,599,954 (Table A4.3, page A-59).

[24] Note: quarterly data from the NSE program between July 1987 and June 1989 was calculated by linear interpolation.

Figure 4.4: Numbers of needles and syringes distributed by quarter, Western Australia, 1987-1992



Refer to Table A4.3

Chapter 5 - Alcohol and Drug Information Service

This chapter provides details of calls to the Alcohol and Drug Information Service (ADIS) about:

- licit drugs; and
- illicit drugs.

Since the inception of ADIS in early 1986 there have been a total of 65,570 drug-related calls and the number of calls has increased each year (Table 5.1, Appendix Tables A5.1 and A5.2 pages A-60 and A-61).

Table 5.1: Number of drug-related telephone calls to ADIS, 1986-1992

Year	Quarter	Number of calls
1986	April-June	899
	July-September	1,143
	October-December	1,242
	Total	**3,284**
1987	January-March	1,197
	April-June	1,238
	July-September	1,316
	October-December	1,843
	Total	**5,594**
1988	January-March	1,764
	April-June	1,747
	July September	2,101
	October-December	1,907
	Total	**7,519**
1989	January-March	1,547
	April-June	2,526
	July September	2,081
	October-December	1,747
	Total	**7,901**
1990	January-March	2,039
	April-June	2,571
	July-September	2,370
	October-December	2,136
	Total	**9,116**
1991	January-March	2,396
	April-June	2,526
	July-September	2,742
	October-December	2,502
	Total	**10,166**
1992	January-March	2,729
	April-June	2,720
	July-September	2,642
	October-December	2,715
	Total	**10,806**
1986-92		**65,570**

Source: Western Australian Alcohol & Drug Authority, Alcohol & Drug Information Service

5.1 Licit drugs

Telephone calls to ADIS about licit drugs relate to the use of:

- alcohol
- tobacco
- caffeine
- analgesics
- tranquillisers
- sedatives
- anti-depressants
- other prescription drugs
- other drugs

The number of drug-related telephone calls to ADIS regarding licit drugs are shown by drug and year in Table 5.2 and by quarter in Figure 5.1, page 52 (Appendix Table A5.1, page A-60). As it is not feasible for ADIS to record whether the drug was obtained licitly or illicitly, it is possible that a small number of drugs grouped under licit drugs were illicitly used, for example, under-age drinkers.

Table 5.2: Number of telephone calls to ADIS related to licit drug use, 1986-1992

Drug	1986	1987	1988	1989	1990	1991	1992	1986-1992
Alcohol	977	2,288	3,237	2,948	3,226	3,150	3,413	19,239
Tobacco	47	181	215	568	608	445	513	2,577
Caffeine	0	0	0	39	31	35	26	131
Analgesics	0	0	0	90	124	163	151	528
Tranquillisers	253	346	548	736	806	770	585	4,044
Sedatives	0	0	0	37	59	71	36	203
Anti-depressants	0	0	0	165	177	234	226	802
Prescription	0	0	0	286	413	457	382	1,538
Other drugs	551	634	837	376	202	209	233	3,042
All licit drugs	**1,828**	**3,449**	**4,837**	**5,245**	**5,646**	**5,534**	**5,565**	**32,104**

Note: Data for 1986 relates to the period April - December.

Alcohol related calls

Alcohol-related calls were the subject of the most calls received by ADIS for licit drugs. Up to the third quarter of 1987 about 500 calls per quarter (about 30-40% of total calls) related to alcohol. After this time the number of alcohol-related calls increased to about 800 calls per quarter, possibly due to the effect of the HDWA Health Promotion Services Branch's Drink Safe Campaign, and has remained at this level. In 1992 61.3% of all calls about licit drugs related to alcohol use.

Tobacco related calls

There were peaks in June 1989 and June 1990 in the quarterly totals of calls for tobacco, which were probably associated with the QUIT campaign supported by the HDWA Health Promotion Services Branch.

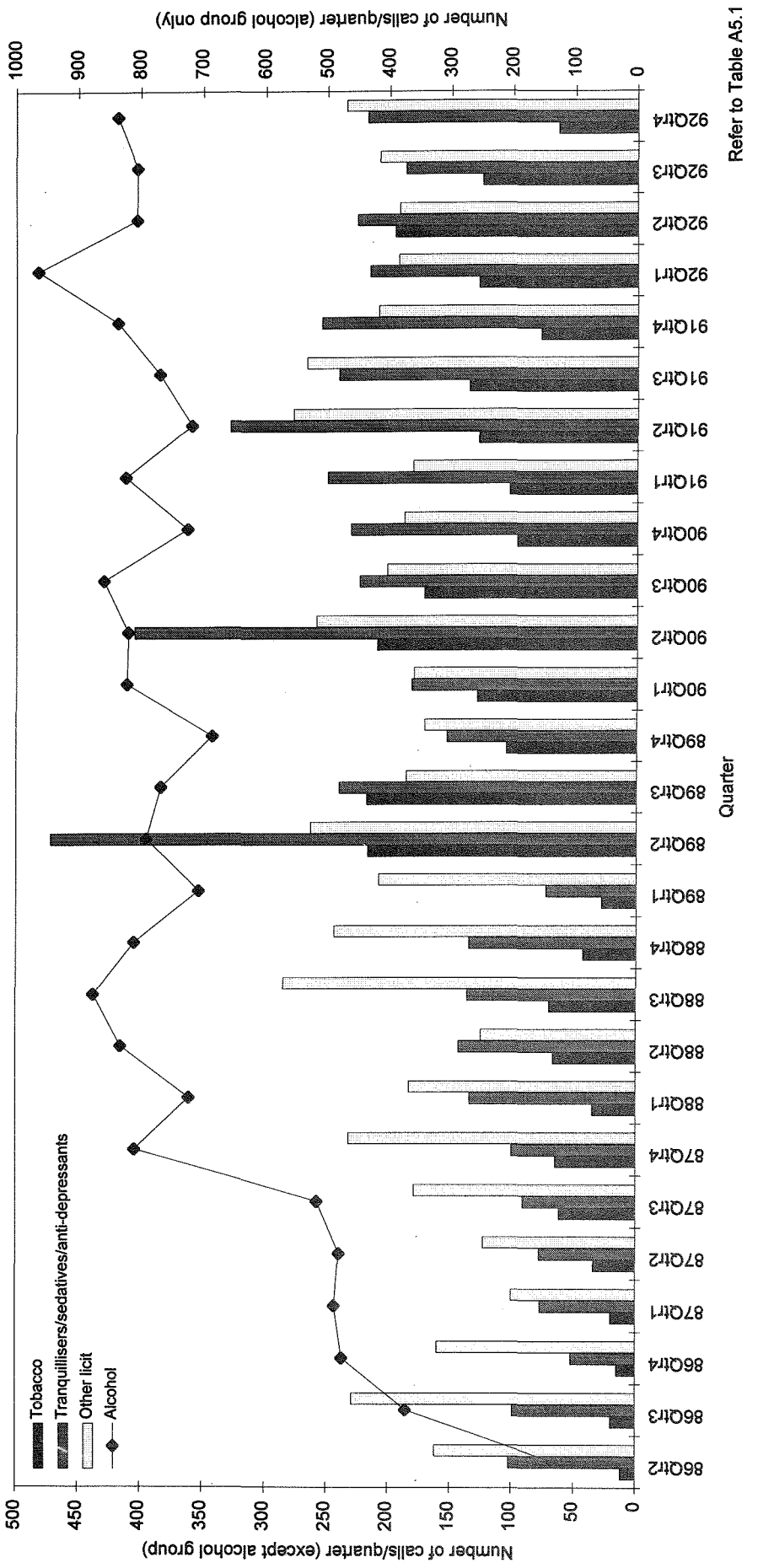
Tranquilliser related calls

There were also peaks in June 1989 and June 1990 in the quarterly totals of calls for tranquillisers, which were probably associated with the Minor Tranquilliser campaign supported by the HDWA Health Promotion Services Branch.

Calls related to other drugs

The reduction in calls recorded as 'other' after the March 1989 quarter may be due to a change in coding practices, as the decline in the number of calls under this category coincided with increases in the number of calls about tranquilliser and tobacco use.

Figure 5.1: Quarterly drug-related telephone calls to ADIS, licit drugs, 1986-1992



5.2 Illicit drugs

Telephone calls to ADIS about illicit drugs relate to the use of:

- heroin
- cannabis
- cocaine
- psychostimulants (includes amphetamines)
- hallucinogens
- inhalants
- polydrugs (drug combinations)
- MDMA (Ecstasy)

The number of drug-related telephone calls to ADIS regarding illicit drugs are shown by drug and year in Table 5.3 and by quarter in Figure 5.2, page 55 (Appendix Table A5.2, page A-61).

Table 5.3: Number of telephone calls to ADIS related to illicit drug use, 1986-1992

Drug	1986	1987	1988	1989	1990	1991	1992	1986-1992
Heroin	459	672	781	731	747	783	817	4,990
Cannabis	638	905	1,008	978	1,184	1,605	1,906	8,224
Cocaine	0	56	71	69	61	62	74	393
Stimulants	68	138	279	406	937	1,351	1,498	4,677
Hallucinogens	25	40	76	84	134	253	332	944
Inhalants	0	0	0	132	163	232	200	727
Polydrug	266	316	354	178	171	211	111	1,607
MDMA	0	18	113	78	73	135	303	720
All illicit drugs	**1,456**	**2,145**	**2,682**	**2,656**	**3,470**	**4,632**	**5,241**	**22,282**

Note: Data for 1986 relates to the period April - December.

Heroin-related calls

The number of heroin-related calls has tended to remain fairly steady at about 700-800 calls per year.

Cannabis-related calls

There were more calls to ADIS relating to cannabis use than any other illicit drug - 36.9% of all calls regarding illicit drugs during the period 1986 to 1992. Apart from 1989, when there was a slight drop in the number of cannabis-related calls, the number of calls has been steadily increasing since ADIS began recording drug-related calls.

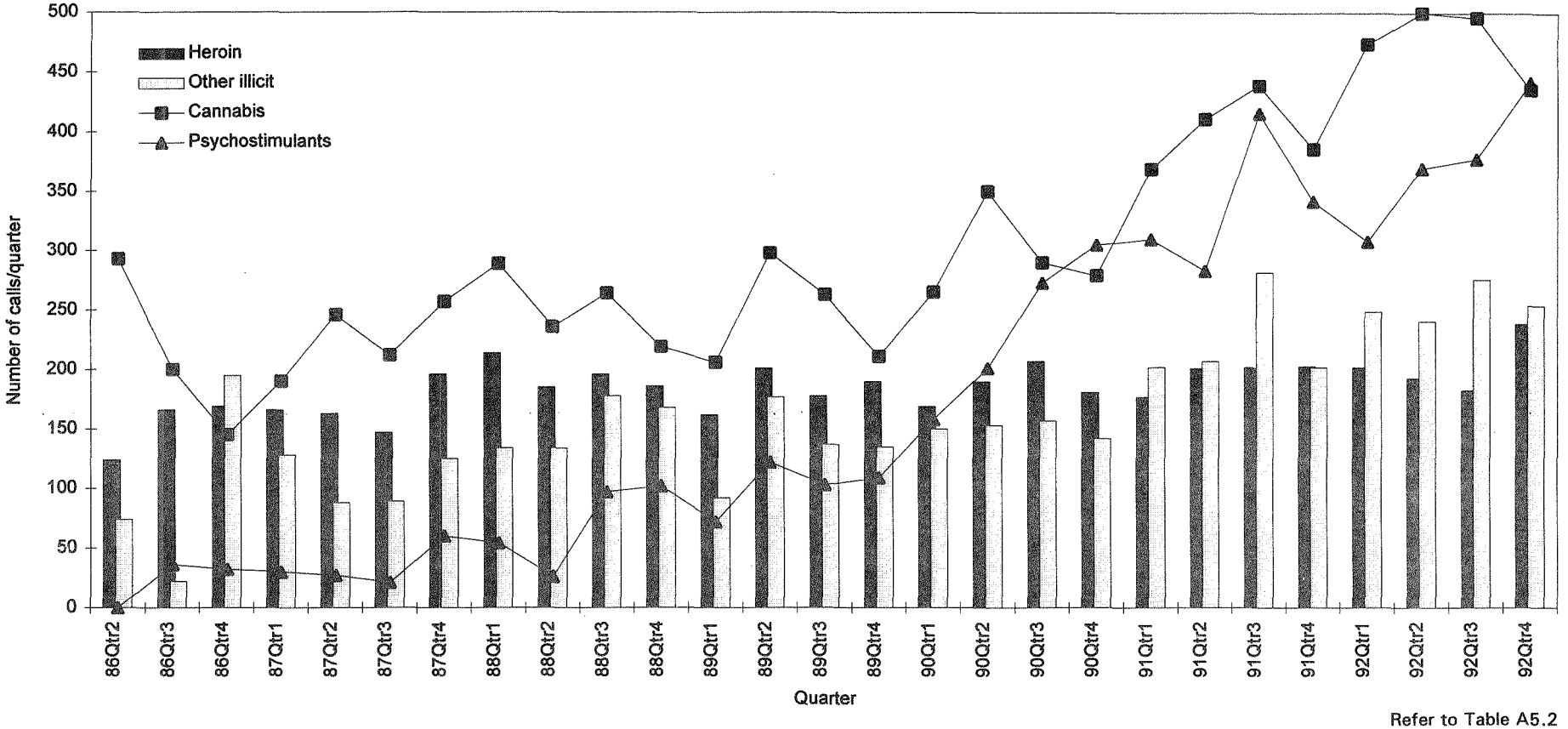
Psychostimulant-related calls

The number of psychostimulant-related calls was relatively low until the middle of 1988 when there was a marked increase. Since then the number has steadily increased. In 1992, there were 1,498 calls related to psychostimulant use, accounting for 28.6% of all calls about illicit drug use.

Calls related to other drugs

Calls concerned with other illicit drugs have been at low frequencies, though the number of calls under the category of polydrugs declined after 1988. It is unclear whether the decrease in polydrug calls is related to changes in prevalence, or changes in coding practices. The number of calls relating to the use of MDMA has doubled each year since 1990.

Figure 5.2: Quarterly drug-related telephone calls to ADIS, illicit drugs, 1986-1992



Refer to Table A5.2

Chapter 6 - Users of drug treatment services

6.1 Population numbers

At present the only profile of the clients of the non-government organisations (NGOs) in Western Australia is from the March 1990 Australia-wide Clients of Treatment Service Agencies (COTSA) one-day census[25] of all treatment agencies (government and non-government). The definition of client contact data in this survey meant, however, that only 78 (17.5%) of the 445 participants in methadone treatment at the time of the survey were counted.

By adjusting the COTSA data to include the remaining 367 individuals in methadone treatment, it is estimated there were 881 primary clients in treatment programs on census day in March 1990 in Western Australia. The four most frequent types of principal drug problem were:

- opiates 449 (51%);
- alcohol 303 (34%);
- opiate/poly drug 49 (6%); and
- benzodiazepines 25 (3%).

That is, just over half the population attending drug and alcohol (D&A) treatment programs were persons with opiate-related drug problems and just over one-third were persons with alcohol-related problems.

6.2 Expenditure on drug and alcohol programs

Annual expenditure on government and non-government programs funded by the ADA rose from $984,670 in 1976 to $12,731,012 in 1992 (Appendix Table A6.1, page A-62), with a marked increase from 1986, at which time the National Campaign Against Drug Abuse (NCADA) funding supplemented other sources.

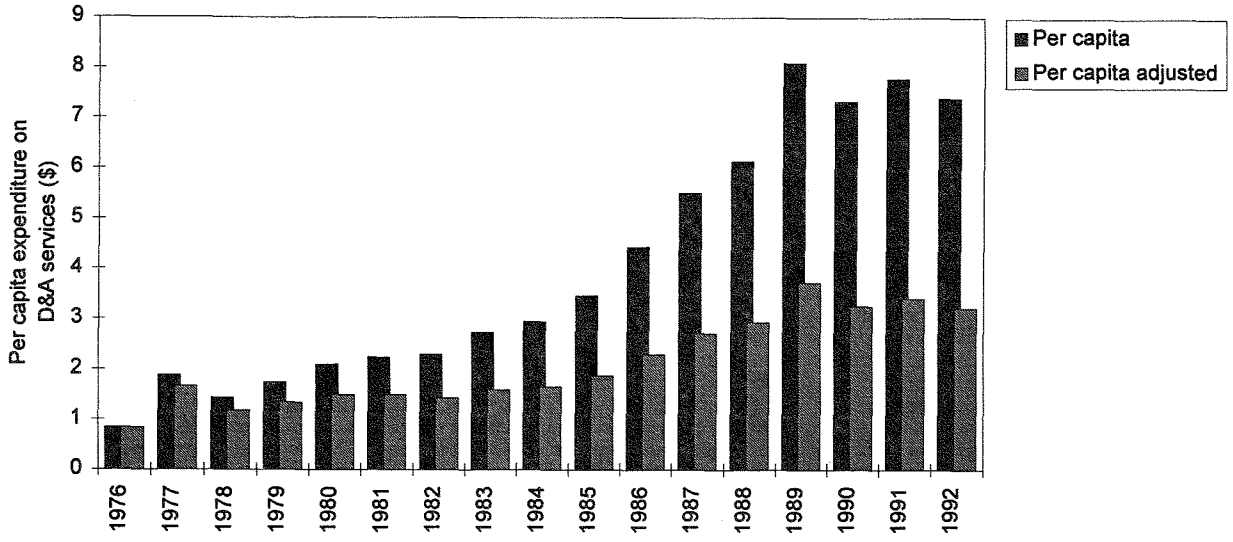
There has also been a steady increase in the proportion of total ADA non-capital expenditure provided to NGOs rising from 5.5% ($145,577) of total expenditure in 1980 to 31.3% ($3,985,283) in 1992.

When adjusted for inflation, per capita expenditure on D&A services increased more than 2.5 times from 1976 to 1992. After a peak of $3.72 (1976 dollars) in 1989, per capita expenditure on D&A services declined slightly and has remained steady at about $3.30 (1976 dollars) per capita (Figure 6.1, page 57). It is likely that per capita expenditure on D&A services in Western Australia is somewhat higher than these data suggests as the amount of funding received by NGOs through donations and non-ADA grants is not available.

---

[25] Webster P, Mattick RP, Baillie A. *Clients of Treatment Service Agencies: March 1990 Findings*. Canberra: Commonwealth Department of Health, Housing and Community Services, 1991.

Figure 6.1: Actual and adjusted per capital ADA expenditure on drug and alcohol services, Western Australia, 1976-1992



Refer to Table 6.1

6.3 Methadone program

6.3.1 Methadone consumption

In recent years annual consumption of methadone has increased markedly in Western Australia (and Australia) after being fairly steady through the 1980s (Table A6.2, page A-63) (as well as use by IDUs, a small amount of methadone is used for other medical purposes, such as analgesia).

The increase in methadone consumption, especially since 1990, is due to substantial increases in the size of the treatment population, and the retention of patients for a greater period of time by the application of higher dosage policies (see below).

6.3.2 Annual treatment data

New Admissions: 1973-1992

Over the period 1973 to 1992 there was a total of 2,793 new admissions to methadone treatment in Western Australia (Table 6.1, page 58), with three peaks in 1977, 1985 and 1988, when there were 266, 230 and 247 first-time admissions, respectively.

Table 6.1: Methadone treatment population by year, Western Australia, 1973-1992

Year	Total number of persons treated	New admissions		
		Annual	% new of annual total	Cumulative
1973	N/A	2	-	2
1974	N/A	31	-	33
1975	N/A	142	-	175
1976	N/A	188	-	363
1977	N/A	266	-	629
1978	479	205	42.8	834
1979	382	118	30.9	952
1980	288	59	20.5	1011
1981	214	68	31.8	1079
1982	264	100	37.9	1179
1983	225	77	34.2	1256
1984	387	163	42.1	1419
1985	547	230	42.0	1649
1986	557	150	26.9	1799
1987	506	134	26.5	1933
1988	680	247	36.3	2180
1989	720	144	20.0	2324
1990	710	153	21.5	2477
1991	739	153	20.7	2630
1992	766	163	21.3	2793

Source: WA Alcohol & Drug Authority
Note: Size of total treatment population not available for period 1973-1977

During the 1980s the proportion of new admissions of the total treatment population peaked in the 1984-1985 period, and subsequently has gradually declined. In 1992 only 163 (21.3%) of the 766 persons treated were new (Table 6.1).

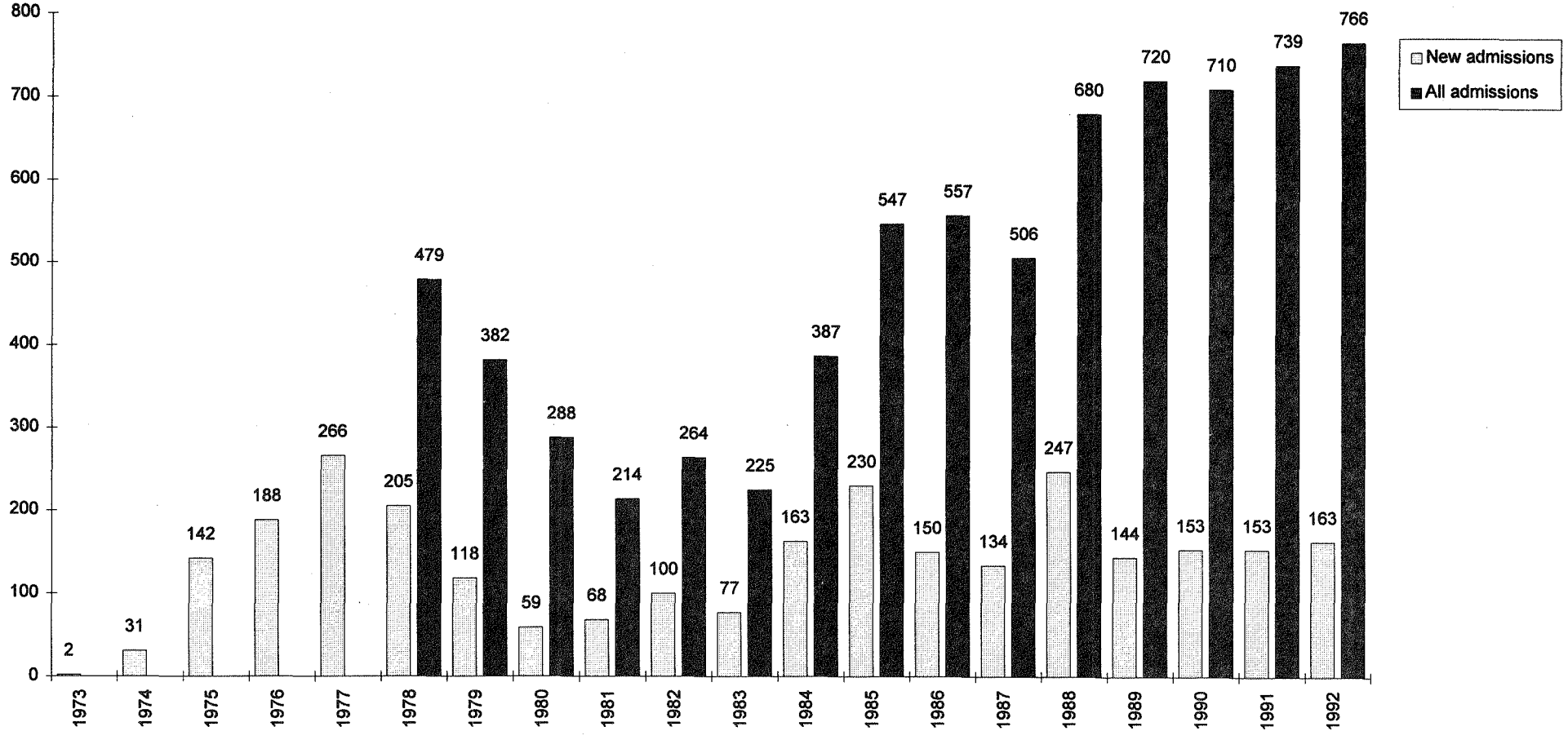
Since 1986 the number of new admissions has remained relatively static, at around 150 new admissions per year, with the exception of 1988 when there were 247 new admissions (Figure 6.2, page 59). Overall, the growth in the size of the total treatment population that has occurred since 1985 has been due to the increased number of readmissions, not new admissions, and may indicate that there is a static population of heroin users in this State.

Size of annual treatment population: 1973-1992

There have been a number of changes in the numbers treated by the WA methadone program from 1978 to 1992 (Figure 6.2, page 59):

- there was a pronounced drop from a peak in 1978 (479 persons) to 1981 (214 persons);
- between 1982 and 1983 the annual population was relatively steady in the 220-260 range;
- there was a sharp increase from 1983 (225 persons) to 1985 (547 persons);
- over the period 1985 to 1987 the number of people treated ranged from about 500 to about 550;
- since 1988 there has been a gradual but sustained annual increase in the number of people treated, such that in 1992 methadone treatment was provided to 766 people.

Figure 6.2: Number of persons treated per year, WA methadone program, 1973-1992



Note: Size of annual treatment population not known before 1978

Refer to Table 6.1

6.3.3 Quarterly treatment data

Quarterly treatment data are only available from 1978, when the ADA assumed responsibility for methadone treatment in WA. Data on the age composition of the WA treatment population is only available from the beginning of 1986 when the ADA introduced a computerised database.

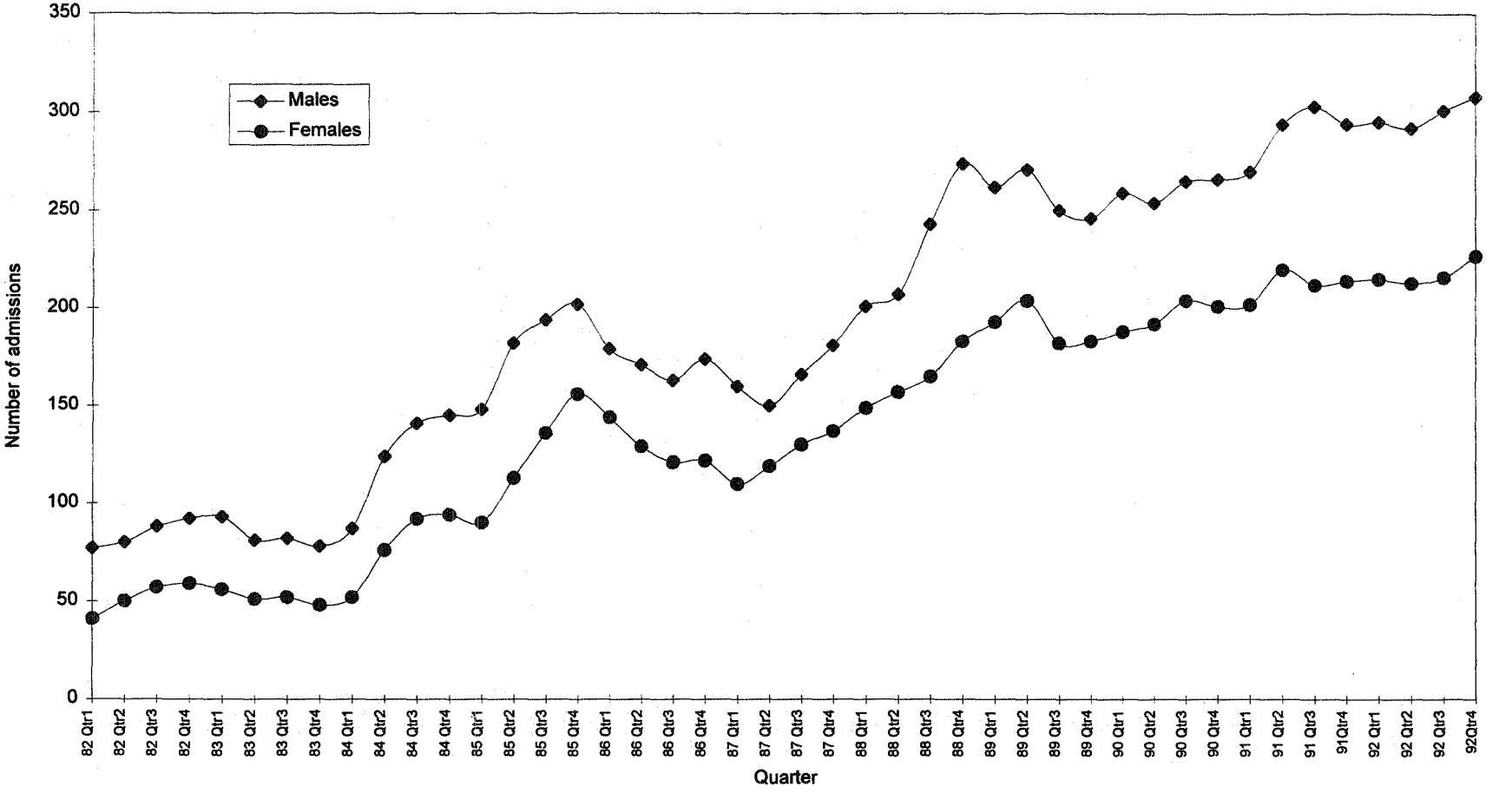
Size and composition of quarterly treatment population

The size of the quarterly methadone treatment population increased fairly steadily over the period 1982 to 1992, from 118 persons in the March 1982 quarter to 535 persons in the December 1992 quarter (Figure 6.3, page 61; Appendix Table A6.3, page A-64).

The proportion of females in treatment program increased slightly in the initial years, but has been fairly steady at just over 40% since the middle of 1985 (Appendix Table A6.3, page A-64).

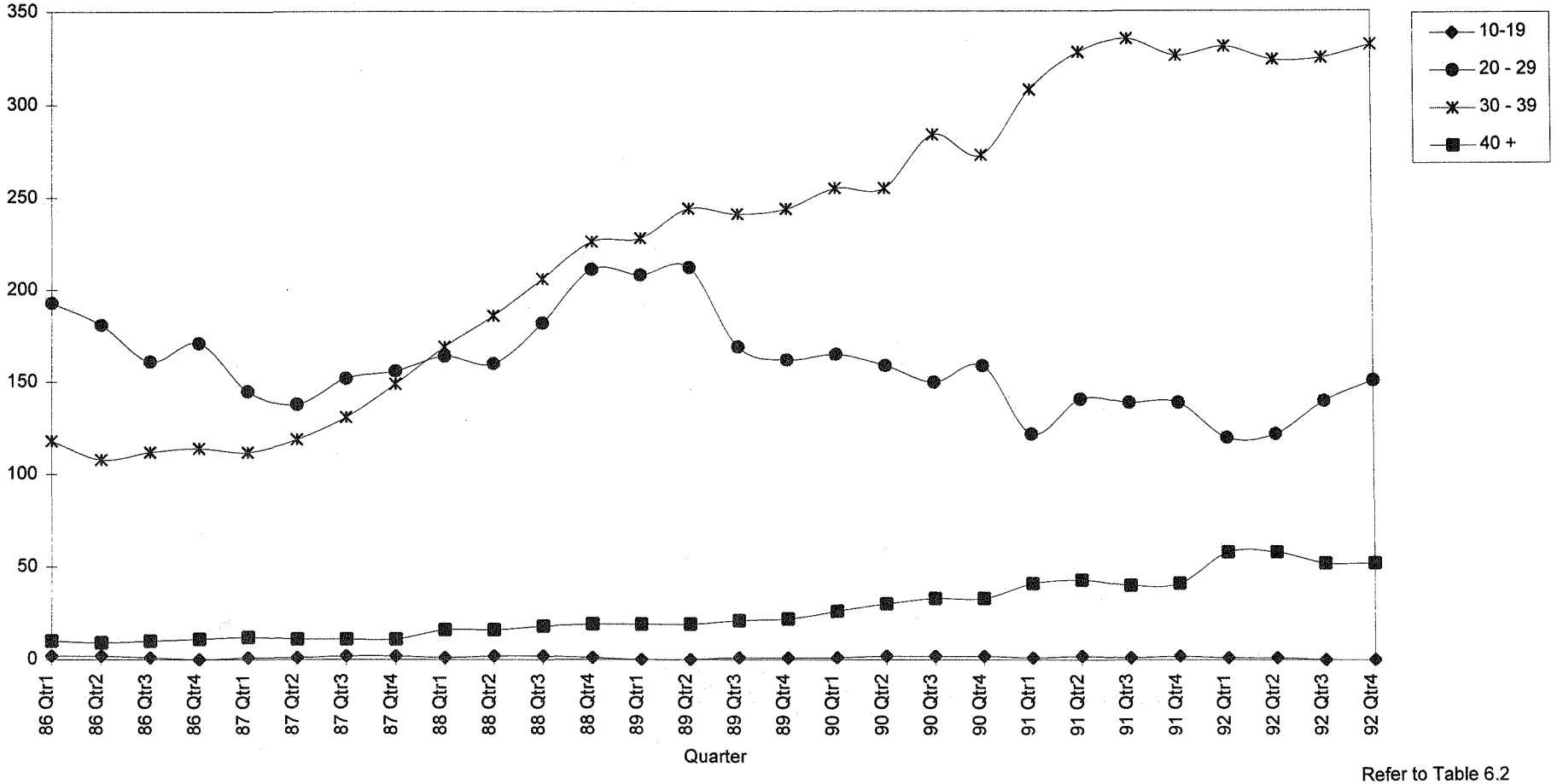
The mean age of the treatment population has increased steadily since data on age were collected in 1986 (Table 6.2, page 63). In the early years, most people in the treatment population were aged 20-29 years, but in 1992 only one-third of people were in that age group and three-fifths of people were aged 30-39 years (Figure 6.4, page 62).

Figure 6.3: Numbers of people in methadone treatment program by sex, Western Australia, 1982-1992



Refer to Table A6.3

Figure 6.4: Numbers of people in methadone treatment program by age group, Western Australia, 1986-1992



Refer to Table 6.2

Table 6.2: Quarterly methadone treatment population by age group, 1986-1992

Year	Quarter	15-19	20-29	30-39	40+	Mean age
1986	January-March	2	193	118	10	29.1
	April-June	2	181	108	9	29.6
	July-September	1	161	112	10	29.7
	October-December	-	171	114	11	29.8
1987	January-March	1	145	112	12	30.1
	April-June	1	138	119	11	30.3
	July-September	2	152	131	11	30.6
	October-December	2	156	149	11	30.5
1988	January-March	1	164	169	16	30.7
	April-June	2	160	186	16	30.7
	July-September	2	182	206	18	30.7
	October-December	1	211	226	19	30.8
1989	January-March	-	208	228	19	30.8
	April-June	-	212	244	19	30.9
	July-September	1	169	241	21	31.4
	October-December	1	162	244	22	31.7
1990	January-March	1	165	255	26	31.7
	April-June	2	159	255	30	32.0
	July-September	2	150	284	33	31.9
	October-December	2	159	273	33	31.7
1991	January-March	1	122	308	41	32.8
	April-June	2	141	328	43	32.6
	July-September	1	139	335	40	32.6
	October-December	2	139	326	41	32.5
1992	January-March	1	120	331	58	33.5
	April-June	1	122	324	58	33.3
	July-September	-	140	325	52	33.0
	October-December	-	151	332	52	32.8

Source: Western Australia Alcohol & Drug Authority.

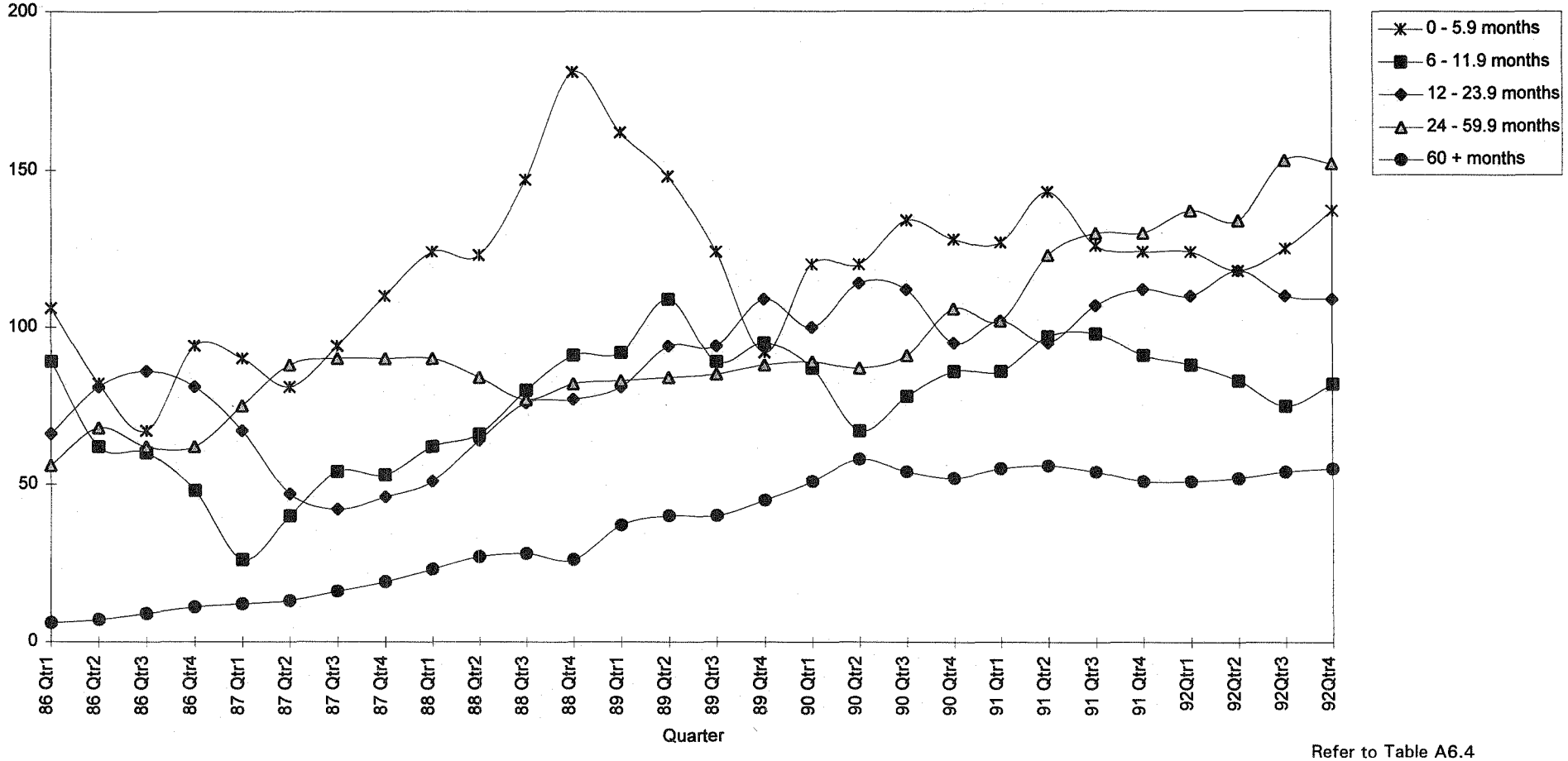
Length of stay

Length of stay is an important measure of the effectiveness of methadone treatment. There is a large body of research that conclusively indicates longer treatment episodes provide better outcomes than shorter treatment episodes. [26] Over the period from the March 1986 quarter to the December 1992 quarter, the mean length of stay of the Western Australia methadone treatment population increased by 75%, from 15.3 months to 26.8 months (Appendix Table A6.4, page A-65).

The key features of trends in length of stay in treatment can be seen in Figure 6.5 (page 64), show a reduction in the number of short-stay patients (0 - 5.9 months group) after the peak at the end of 1988, and a steady increase in the number of persons in the 60 months, and 24 - 59.9 months duration of treatment group.

[26] See Cooper JR, Altman F, Brown BS, Czechowicz D. (eds) ***Research On the Treatment of Narcotic Addiction: State of the Art.*** Rockville, MD: National Institute on Drug Abuse, 1983; Gerstein DR, Harwood HJ. (eds) ***Treating Drug Problems: A Study of the Evolution, Effectiveness and Financing of Public and Private Drug Treatment Systems.*** Washington, DC: National Academy Press, 1990; Ball JC, Ross A. ***The Effectiveness of Methadone Treatment: Patients, Programs, Services and Outcome.*** NY: Springer-Verlag, 1991; Ward J, Mattick R, Hall W. ***Key Issues In Methadone Maintenance Treatment.*** Sydney, University of New South Wales Press, 1992.

Figure 6.5: Numbers of people in methadone treatment program by length of stay (months), Western Australia, 1986-1992



Refer to Table A6.4

6.4 Residential detoxification programs, 1986-1992

Computerised data on the ADA's residential detoxification program are not available prior to March 1988. In interpreting the data, readers need to recognise a number of locational changes in the Central Drug Unit's (CDU) operations. The purpose-built premises in Moore Street, East Perth, which opened in January 1989, initially housed only illicit drug users, with licit drug users continuing to be treated at the ADA's Carrellis Centre. From June 1991, the East Perth premises became the detoxification centre for both licit and illicit drug users.

The combined reveal data an overall reduction in the number of admissions after the June 1991 quarter. There were an average of 140 admissions per quarter in the six quarters after the June 1991 amalgamation, compared with an average of 169 admissions per quarter in the 13 quarters up to June 1991 (Figure 6.6, page 66).

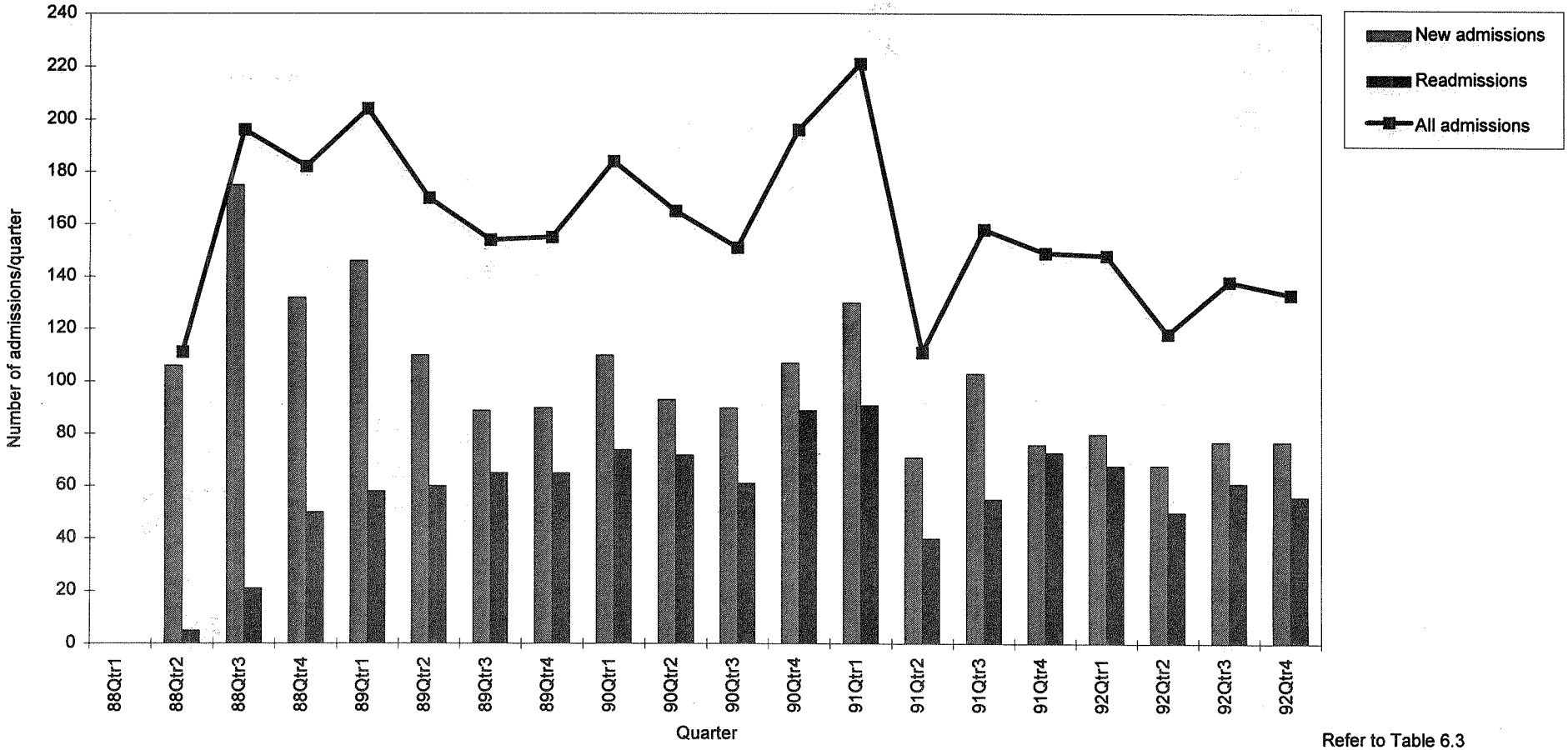
Table 6.3 and Figures 6.7 to 6.9 (page 67) shows a pronounced trend in reductions in the number of admissions to residential programs, of new admissions, readmissions and total admissions, of both males and females, over the period 1988 to 1992.

Table 6.3: Number of admissions to residential detoxification programs by admission type and sex, Western Australia, 1988-1992

		New admissions			Readmissions			All admissions		
Year	Quarter	Males	Females	All	Males	Females	All	Males	Females	All
1988	April-June	82	24	106	2	3	5	84	27	111
	July-September	128	47	175	16	5	21	144	55	196
	October-December	98	34	132	35	15	50	133	49	182
	Total	**308**	**105**	**413**	**53**	**23**	**76**	**361**	**131**	**489**
1989	January-March	100	46	146	40	18	58	140	64	204
	April-June	82	28	110	45	15	60	127	43	170
	July-September	62	27	89	56	9	65	118	36	154
	October-December	57	33	90	49	16	65	106	49	155
	Total	**301**	**134**	**435**	**190**	**58**	**248**	**491**	**192**	**683**
1990	January-March	73	37	110	56	18	74	129	55	184
	April-June	59	34	93	51	21	72	110	55	165
	July-September	68	22	90	46	15	61	114	37	151
	October-December	77	30	107	67	22	89	144	52	196
	Total	**277**	**123**	**400**	**220**	**76**	**296**	**497**	**199**	**696**
1991	January-March	86	44	130	70	21	91	156	65	221
	April-June	50	21	71	34	6	40	84	27	111
	July-September	73	30	103	41	14	55	114	44	158
	October-December	54	22	76	56	17	73	110	39	149
	Total	**263**	**117**	**380**	**201**	**58**	**259**	**464**	**175**	**639**
1992	January-March	57	23	80	49	19	68	106	42	148
	April-June	44	24	68	32	18	50	76	42	118
	July-September	54	23	77	41	20	61	95	43	138
	October-December	57	20	77	41	15	56	98	35	133
	Total	**212**	**90**	**302**	**163**	**72**	**235**	**375**	**162**	**537**

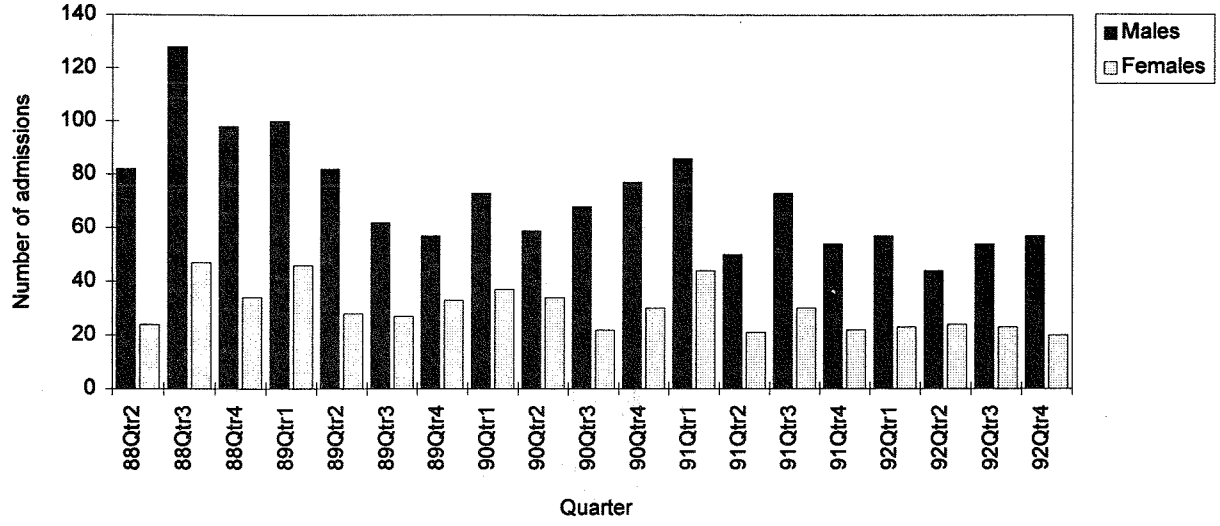
Source: Alcohol and Drug Authority
Note: Accurate data not available prior to March 1988

Figure 6.6: Number of admissions to residential detoxification programs by admissions type and sex, Western Australia, 1988-1992



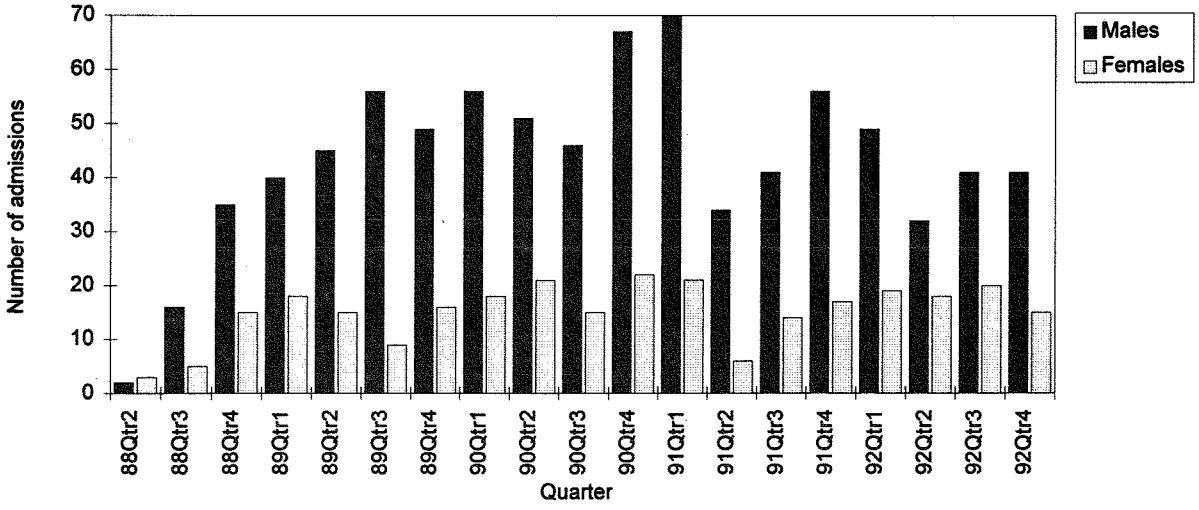
Refer to Table 6.3

Figure 6.7: Residential detoxification programs, quarterly treatment population by sex - new admissions, 1988-1992



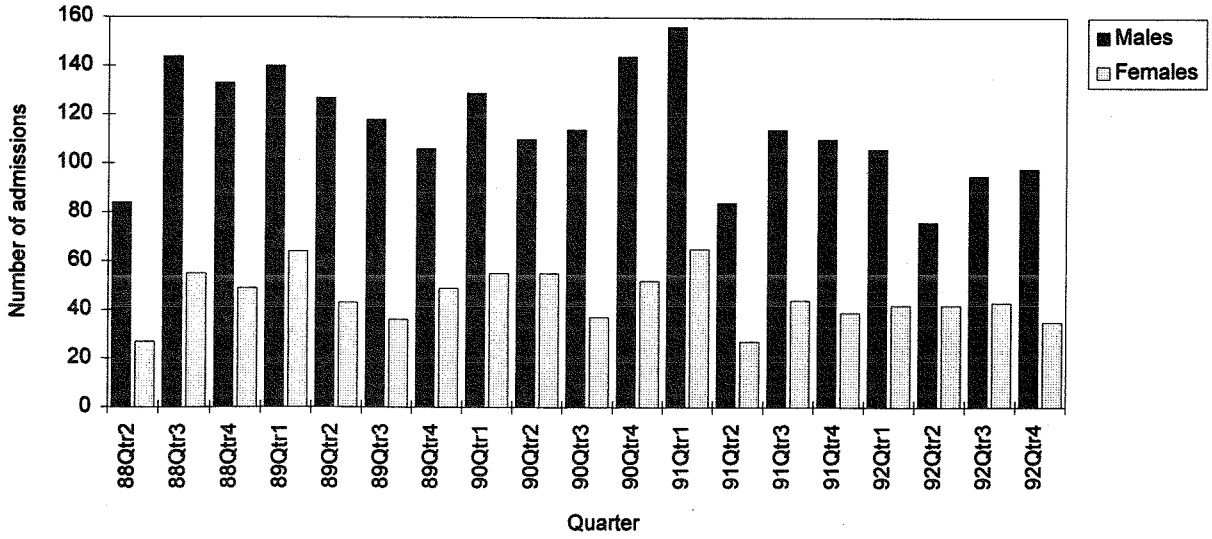
Refer to Table 6.3

Figure 6.8: Residential detoxification programs, quarterly treatment population by sex - readmissions, 1988-1992



Refer to Table 6.3

Figure 6.9: Residential detoxification programs, quarterly treatment population by sex - all admissions, 1988-1992



Refer to Table 6.3

Age

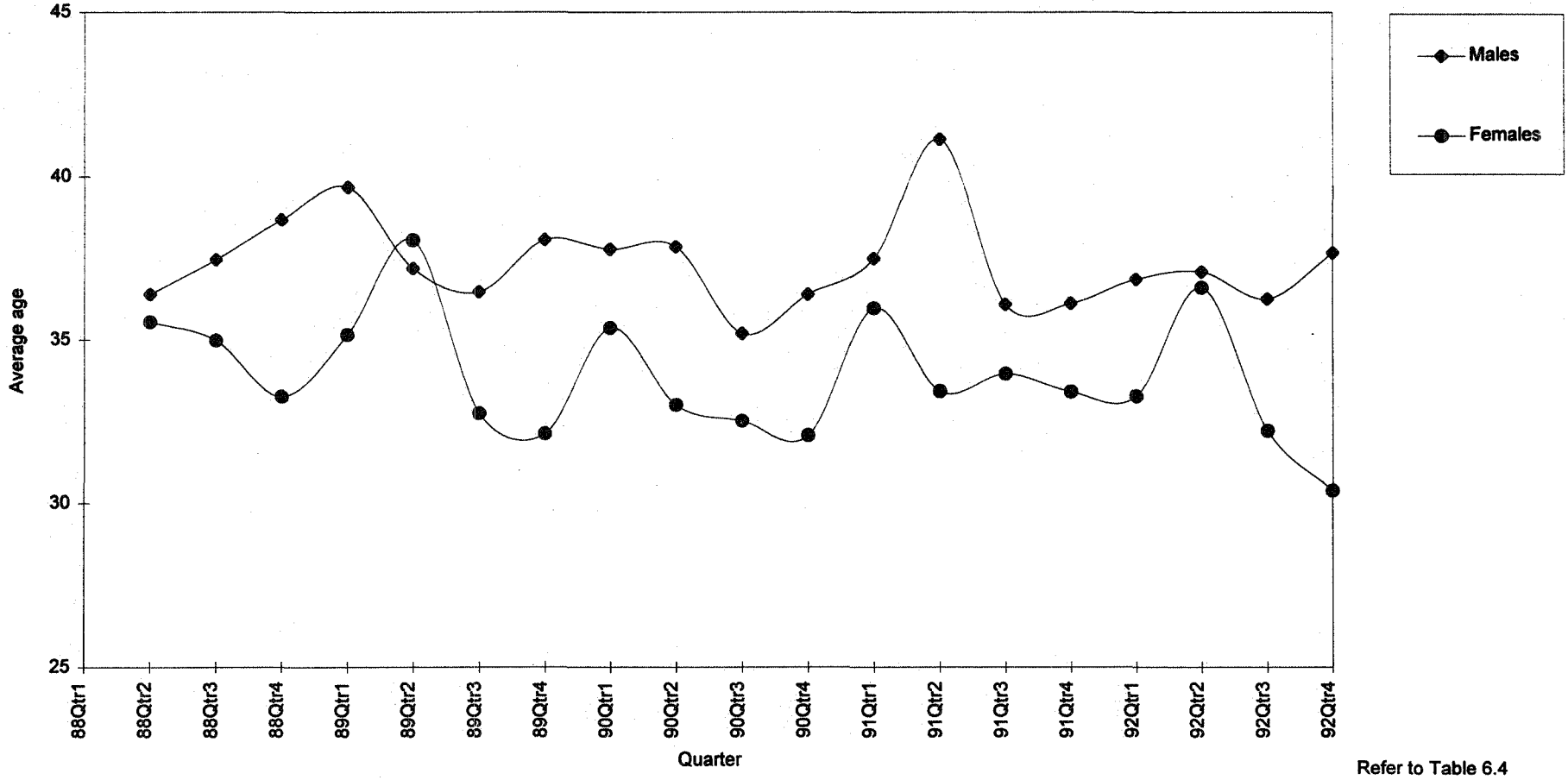
The average age of males admitted to the CDU was around five years more than of females admitted, with the average for males generally in the mid to late 30s and that for females in the early to mid 30s (Table 6.4, Figure 6.10, page 69)

Table 6.4: Average ages of admissions to residential detoxification programs by sex, Western Australia, 1988-1992

		New admissions			Readmissions			All admissions		
Year	Quarter	Males	Females	All	Males	Females	All	Males	Females	All
1988	April-June	36.4	35.5	36.2	36.5	35.7	36.0	36.4	35.5	36.2
	July-September	37.5	34.6	36.7	37.3	35.0	36.7	37.5	35.0	36.7
	October-December	38.5	33.1	37.1	39.1	33.5	37.4	38.7	33.3	37.2
1989	January-March	40.1	34.6	38.3	38.7	36.7	38.0	39.7	35.1	38.3
	April-June	35.5	40.1	36.7	40.2	34.3	38.7	37.2	38.1	37.4
	July-September	36.4	32.3	35.2	36.5	34.1	36.1	36.5	32.8	35.6
	October-December	36.5	29.8	34.1	39.8	36.9	39.1	38.1	32.1	36.2
1990	January-March	37.5	35.2	36.8	38.1	35.6	37.5	37.8	35.4	37.1
	April-June	36.2	34.5	35.8	39.8	30.6	37.1	37.8	33.0	36.2
	July-September	33.7	29.2	32.6	37.3	37.4	37.4	35.2	32.5	34.5
	October-December	37.0	31.0	35.3	35.7	33.6	35.2	36.4	32.1	35.3
1991	January-March	36.8	36.0	36.5	38.3	35.9	37.8	37.5	36.0	37.0
	April-June	38.7	34.4	37.4	44.5	31.7	41.3	41.1	33.4	39.0
	July-September	33.6	33.1	33.5	40.4	35.9	39.2	36.1	34.0	35.5
	October-December	34.7	31.1	33.7	37.5	36.4	37.2	36.1	33.4	35.4
1992	January-March	35.3	32.9	34.6	38.7	33.7	37.3	36.9	33.3	35.9
	April-June	35.9	36.4	36.1	38.6	36.9	38.0	37.1	36.6	36.9
	July-September	35.2	30.2	33.7	37.6	34.6	36.6	36.3	32.2	35.0
	October-December	36.1	29.7	34.4	39.9	31.3	37.6	37.7	30.4	35.7

Source: Alcohol and Drug Authority
Note: Accurate data not available prior to March 1988

Figure 6.10: Numbers of admissions to residential detoxification programs by sex and average age, Western Australia, 1988-1992



Refer to Table 6.4

6.5 Court Diversion Service, 1988 - 1992

Over the period 1988 to 1992 there were 635 referrals to the Court Diversion Service (CDS). Over each of the first three full years of its operation the number of admissions remained relatively constant, averaging about 120 per year. In 1992 there was a marked increase in the number of admissions, and by the December 1992 quarter, there were 55 referrals, the largest number recorded in any quarter (Table 6.5).

Table 6.5: Number of referrals to Court Diversion Service by quarter, Western Australia, 1988-1992

Year	Quarter	Referrals
1988	April-June	39
	July-September	21
	October-December	19
	Total	**79**
1989	January-March	28
	April-June	38
	July-September	30
	October-December	31
	Total	**127**
1990	January-March	16
	April-June	28
	July-September	41
	October-December	23
	Total	**108**
1991	January-March	30
	April-June	34
	July-September	31
	October-December	23
	Total	**118**
1992	January-March	48
	April-June	52
	July-September	48
	October-December	55
	Total	**203**

Source: Alcohol and Drug Authority
Note: Accurate data not available prior to March 1988

6.6 Primary drug problems of new admissions to ADA programs

In the period 1988-1992 there were 6,380 new admissions to the ADA of which 4,551 (71.3%) were males and 1,829 (28.7%) were females (Appendix Table A6.5, page A-66).

Key aspects of new admissions to other ADA programs by primary type of drug of use over the period 1988-1992 (Appendix Table A6.5, page A-66, Figures 6.11 and 6.12, page 72):

- alcohol was the most frequent cause of admission, particularly among males;
- admissions for alcohol increased over the period, particularly among females;
- admissions for illicit opiate use remained steady after a decrease from 1988 to 1989;
- admissions for benzodiazepine use decreased slightly;
- admissions for amphetamine-related use increased from 13 to 134 in males and from 4 to 52 in females;
- admissions for cannabis use increased from 25 to 122; and
- cocaine was rarely the cause of admission, with only 6 admissions in the five year period

Primary drug problem by age group (1988 - 1992)

Appendix Table A6.6 contains data on the five most frequent primary drug groups:

Alcohol

Of the 3,200 alcohol-related admissions:

- 305 (9.5%) involved the 10-19 age group;
- 1,055 (33%) involved the 20-29 age group;
- 931 (29.1%) involved the 30-39 age group; and
- 601 (18.8%) involved the over 40-49 age group.

The number of new alcohol-related admissions increased by 19.6%, from 556 in 1988 to 665 in 1992.

Illicit opiates

Of the 885 admissions for illicit opiate use:

- 27 (3.1%) involved the 15-19 age group;
- 520 (58.8%) involved the 20-29 age group; and
- 304 (34.4%) involved the 30-39 age group.

The number of new admissions for illicit opiate use decreased by 36%, from 247 in 1988 to 158 in 1992.

Benzodiazepines

There was a more even distribution of admissions by age group for the 202 benzodiazepine-related admissions:

- 51 (25.2%) involved the 20-29 age group;
- 51 (25.2%) involved the 30-39 age group;
- 43 (21.3%) involved the 40-49 age group;
- 24 (11.9%) involved the 50-59 age group; and
- 23 (11.4%) involved the 60 and over age group.

The number of new benzodiazepine-related admissions decreased by 50%, from 45 in 1988 to 30 in 1990.

Amphetamines

There were 462 admissions that involved amphetamines:

- 94 (20.3%) involved the 10-19 age group;
- 291 (63%) involved the 20-29 age group; and
- 67 (14.5%) involved the 30-39 age group.

The number of new amphetamine-related admissions increased eleven-fold, from 17 cases in 1988 to 186 cases in 1992.

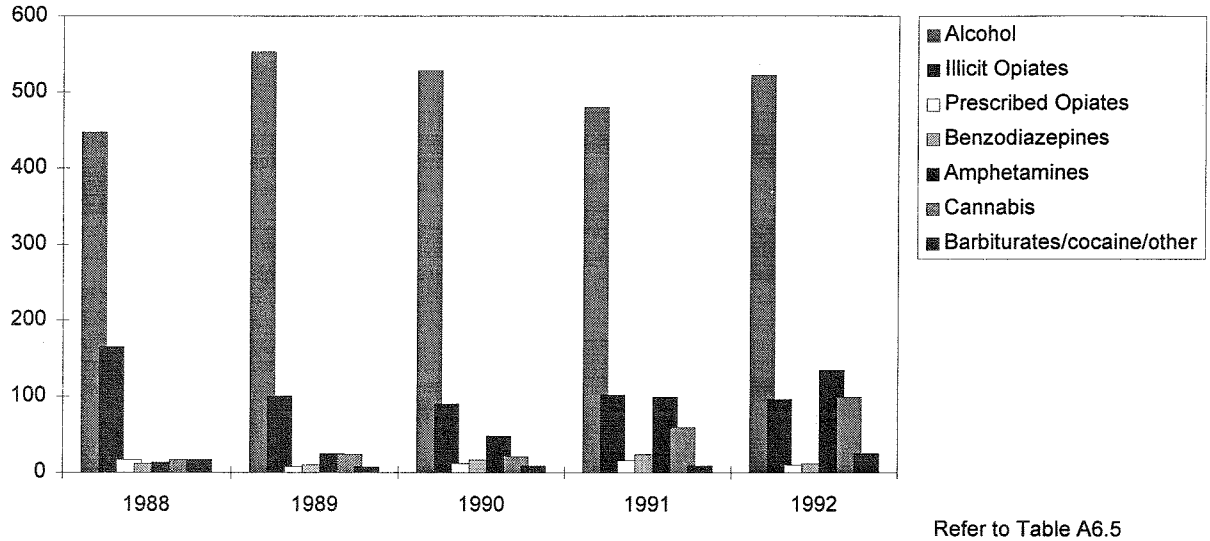
Cannabis

There were 278 admissions that involved cannabis:

- 87 (31.3%) cases involved the 10-19 age group; and
- 131 (47.1%) cases involved the 20-29 age group.

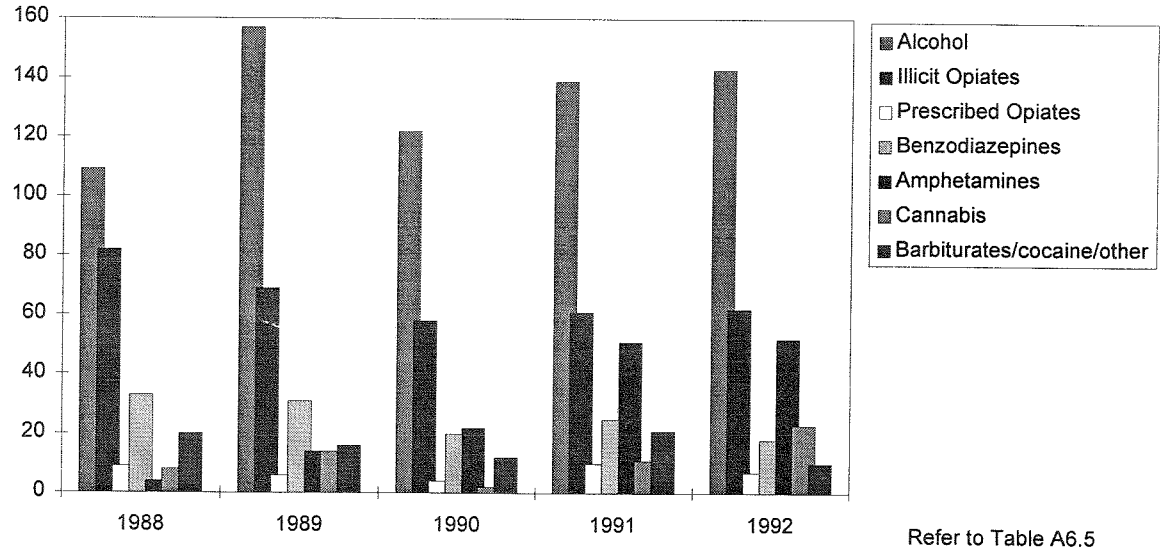
The number of new admissions for cannabis used increased five-fold, from 25 in 1988 to 122 in 1992.

Figure 6.11: Number of male admissions to ADA programs by primary drug type, Western Australia, 1988-1992



Refer to Table A6.5

Figure 6.12: Number of female admissions to ADA programs by primary drug type, Western Australia, 1988-1992



Refer to Table A6.5

6.7 Sobering- up centres

By the end of 1992, there were three sobering-up shelters in Western Australia:

Perth centre, operated by the Salvation Army, opened in May 1990;
South Hedland centre, opened in April 1991; and
the Halls Creek centre, which opened in September 1992.

In the Perth Centre just one in four admissions involved Aborigines, compared to the South Hedland and Halls Creek Centres, where almost all admissions involved Aborigines. Overall, of the 5,688 admissions to sobering-up centres, 3347 (58.8%) involved Aborigines.

Chapter 7 Alcohol consumption data

7.1 Sales of alcoholic beverages

A correction has been applied to the annual data published by the Office of Racing and Gaming (ORG) in the period 1988-1990, to account for the effect of double counting of sales of alcohol recorded under the heading of Liquor Purchases by Wholesalers in ORG annual reports. [27] Sales recorded under this heading are mostly sales to liquor merchants. This separate tabulation arises because wholesalers were made responsible for collection of tax under section 58 of the Liquor Licensing Act 1988. [28]

Over the five year period 1988-1992, the total value of all forms of alcohol sold increased by 14.1% (Appendix Table A7.1, page A-69).[29]

Value of alcohol
The annual value of alcohol sold as:

- low alcohol beer increased by 91.7%;
- high alcohol beer decreased by 15.4%:
- low alcohol wine increased by 165.3%;
- high alcohol wine increased by 29.2%:
- spirits increased by 37.4%;
- all forms of alcohol increased by 14.1%.

Volume of alcohol
The annual volume of absolute alcohol sold as:

- low alcohol beer increased by 87.5%;
- high alcohol beer decreased by 24.9%:
- low alcohol wine increased by 88.5%;
- high alcohol wine increased by 13.8%:
- spirits increased by 22.1%;
- all forms of alcohol increased by 0.9%.

7.2 Estimated per capita alcohol consumption

Consumption of absolute alcohol can be estimated from sales data by applying conversion factors to the volumes sold of specific classes of alcoholic beverages. The conversion factors used in this report are:

- low alcohol beer 3.5%
- high alcohol beer 4.8%
- low alcohol wine 6.0%
- high alcohol wine 11.9%
- spirits 38.5%

Data derived from sales data for 1988-1992 and estimated consumption data for 1968- 1984 suggest that the total annual consumption of absolute alcohol consumed in Western Australia peaked in 1978, when it was estimated there was a consumption of 14.51 litres of absolute alcohol per capita aged 15 years and over (Table 7.1; Figure 7.1, page 75). The accuracy of the data for the period 1968-1984 has not been determined, so it is uncertain whether there was a decrease in the annual rate of consumption after 1978.

---

[27] I am indebted to Dr Ian Smith, Senior Research Psychologist, WA Alcohol & Drug Authority for his observations of the ORG sales data and the effect of double counting.

[28] The Liquor Licensing Act 1988 was assented to on 8 December 1988.

[29] Extracted from Annual Reports of ORG.

Over the period from 1988 up to the present, when licensing court sales data has been available, per capita consumption of absolute alcohol remained steady up to 1990, decreased to 9.92 in 1991, and then rose to 10.58 in 1992.

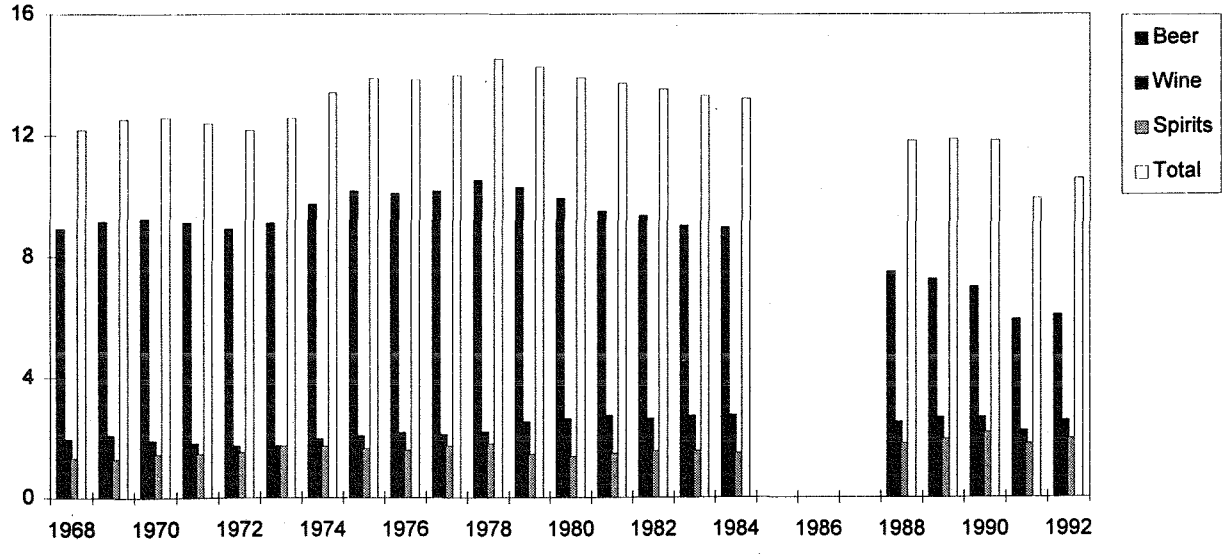
Table 7.1: Estimated per capita alcohol consumption, Western Australia, 1968-1992

(per capita litres of absolute alcohol, population aged 15 years and over)

Year	Beer	Wine	Spirits	Total
1968	8.93	1.94	1.31	12.18
1969	9.17	2.07	1.29	12.53
1970	9.25	1.89	1.43	12.57
1971	9.14	1.81	1.44	12.39
1972	8.93	1.72	1.51	12.16
1973	9.13	1.72	1.71	12.56
1974	9.74	1.95	1.71	13.40
1975	10.17	2.06	1.63	13.86
1976	10.08	2.17	1.57	13.82
1977	10.16	2.10	1.71	13.97
1978	10.53	2.19	1.79	14.51
1979	10.30	2.52	1.44	14.26
1980	9.92	2.61	1.36	13.89
1981	9.50	2.73	1.47	13.70
1982	9.35	2.62	1.54	13.51
1983	9.03	2.72	1.55	13.30
1984	8.97	2.74	1.48	13.19
1985	N/A	N/A	N/A	N/A
1986	N/A	N/A	N/A	N/A
1987	N/A	N/A	N/A	N/A
1988	7.50	2.51	1.80	11.81
1989	7.26	2.66	1.95	11.87
1990	7.00	2.66	2.17	11.83
1991	5.92	2.22	1.79	9.92
1992	6.06	2.56	1.95	10.58

Note: N/A = not available

Figure 7.1: Estimated per capita alcohol consumption, Western Australia, 1983-1992 (litres of absolute alcohol, population aged 15 years and older)



Refer to Table 7.1

The following trends in the apparent consumption of alcohol in Western Australia over the period 1968-1992 are apparent:

Beer
The annual per capita consumption of absolute alcohol consumed as beer peaked in 1978, at 10.53 litres per capita. In 1978 beer made up 72.6% of the total consumption of alcohol whereas in 1992 the proportion of alcohol consumed as beer made up only 57.3% of the total consumption.

Wine
The drop in the annual per capita consumption of beer has been offset by increases in the consumption of wine and spirits. The per capita consumption of wine has remained above two litres of absolute alcohol per capita since 1975, and generally between 2.5 and 2.7 litres since 1980.

Spirits
Per capita consumption spirits rose by 36.6%, from 1.31 in 1968 to 1.79 litres of absolute alcohol per capita in 1979, then after a slight decline, increased again to a peak in 1990 of 2.17 litres.

7.3 Self-reported alcohol consumption

There have been three major ABS population surveys of self-reported alcohol consumption in Western Australia - in 1977, 1985 and 1991. The 1991 survey was commissioned by the Health Promotion Services Branch of the Health Department of Western Australia. These surveys provide representative data of trends in age and sex specific alcohol consumption in the State. However, the interpretation of the results over the period 1977 to 1991 requires an adjustment as the unit of alcohol use changed after the 1977 survey from grams of absolute alcohol to mls of absolute alcohol.

Conversion of consumption from grams to mls of absolute alcohol

- 1977 level of light consumption (< 40 gms per day) is regarded as equivalent to the level of light drinker (< 50 mls per day) in the 1985 and 1991 surveys.
- 1977 level of medium consumption (40-79 gms per day) is regarded as equivalent to the level of medium drinker (50-99 mls per day) in the 1985 and 1991 surveys.
- 1977 levels of heavy (80-119 gms per day) and very heavy consumption (at least 120 gms per day) have been aggregated, as they are regarded as equivalent to the level of heavy drinker (100 mls and over per day) in the 1985 and 1991 surveys.

Average daily consumption

The 1985 and 1991 surveys use the concept of the average daily consumption of alcohol, being one-seventh the total reported consumption of standard drinks in the seven days that immediately preceded the day of interview. Average daily consumption provides a four-point scale of individual alcohol consumption:

non-drinker	
light drinker	<50 mls per day
medium drinker	50 - 99 mls per day
heavy drinker	100 mls and over per day

A standard drink, which contains 8-10 grams of absolute alcohol, is defined as being equivalent to:

- one 285 ml (middie) glass of high alcohol beer, or
- one 120 ml glass of table wine, or
- one 30 ml nip of spirits, or
- one 60 ml glass of fortified wine.

For example, an average daily consumption of 50 mls of absolute alcohol (ie a light drinker), would have involved the consumption of the following number of standard drinks:
3.5 glasses of high alcohol beer each day, or
3.5 glasses of table wine each day, or
4.5 glasses of fortified wine each day, or
4.5 nips of spirits each day.

Average daily alcohol consumption can be classified as being high risk (when there is a definite risk of physical and neurological damage and social problems) or low risk (not normally regarded as a risk to health). The high and low risk drinking levels for males and females are shown below.

Level of risk	Male drinkers	Female drinkers
Low Risk	Up to 4 standard drinks per day	Up to 3 standard drinks per day
High Risk	6 or more standard drinks per day	4 or more standard drinks per day

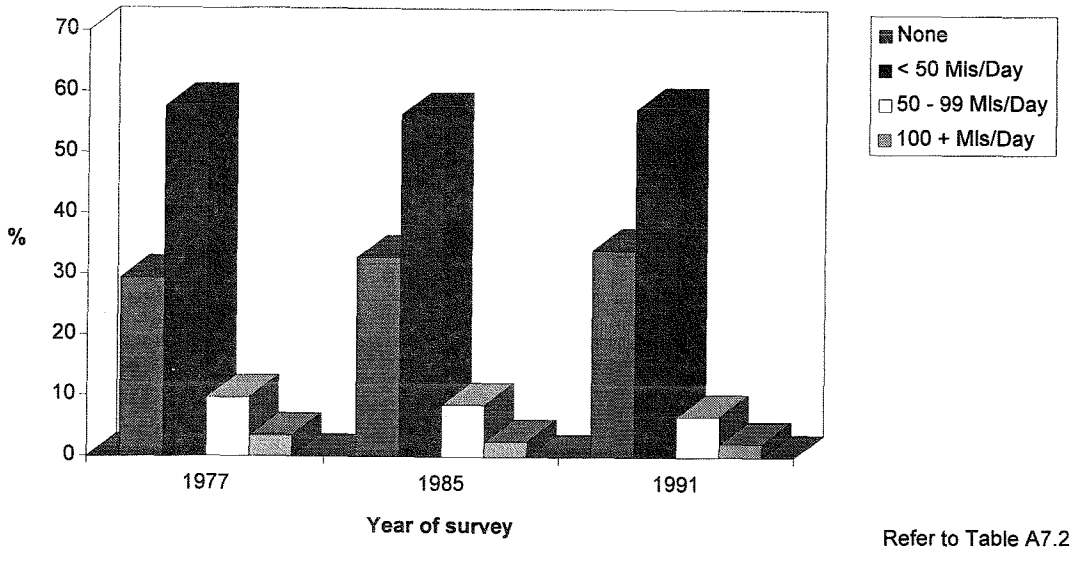
An average daily consumption of 50 mls of absolute alcohol per day would closely follow the recommended level of low risk male drinking of up to four standard drinks per day, and exceed the recommended level of low risk female drinking of up to three standard drinks per day.

7.3.1 Average daily consumption by sex, 1977, 1985, 1991

Over the period from 1977 to 1991 the proportion of drinkers in the WA population decreased by 6.5%, from 70.6% to 66.0% (Appendix Table A7.2, page A-70; Figure 7.2). There was:

- a decrease of 0.7%, from 57.6% to 57.2 %, in the proportion of drinkers in the light (ie <50 mls) drinker group;
- a decrease of 31.2%, from 9.6% to 6.6%, in the proportion of drinkers in the medium (ie 50-99 mls) drinker group; and
- a decrease of 35.3%, from 3.4% to 2.2%, in the proportion of drinkers in the heavy (ie 100 mls and over) drinker group.

Figure 7.2: Percentage of all drinkers by level of average daily consumption, Western Australia, 1977, 1985, 1991



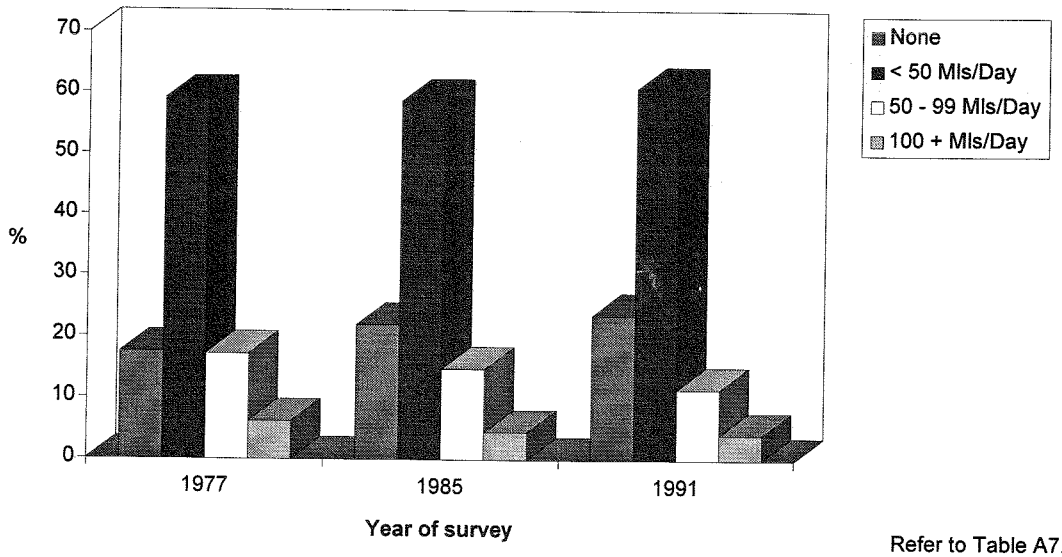
Refer to Table A7.2

Males

Over the period 1977-1991 the proportion of male drinkers in the WA population decreased by 7.4%, from 82.5% to 76.4% (Appendix Table A7.3, page A-71; Figure 7.3). There was:

- an increase of 2.9% in the percentage of male drinkers in the light (ie <50 mls) drinker group, from 59.1% in 1977 to 60.8% in 1991;
- a decrease of 33.1% in the percentage of male drinkers in the medium (ie 50-99 mls) drinker group, from 17.2% in 1977 to 11.5% in 1991 and
- a decrease of 33.9% in the percentage of male drinkers in the heavy (ie 100 mls and over) drinker group, from 6.2% in 1977 to 4.1% in 1991.

Figure 7.3: Percentage of male drinkers by level of average daily consumption, Western Australia, 1977, 1985, 1991



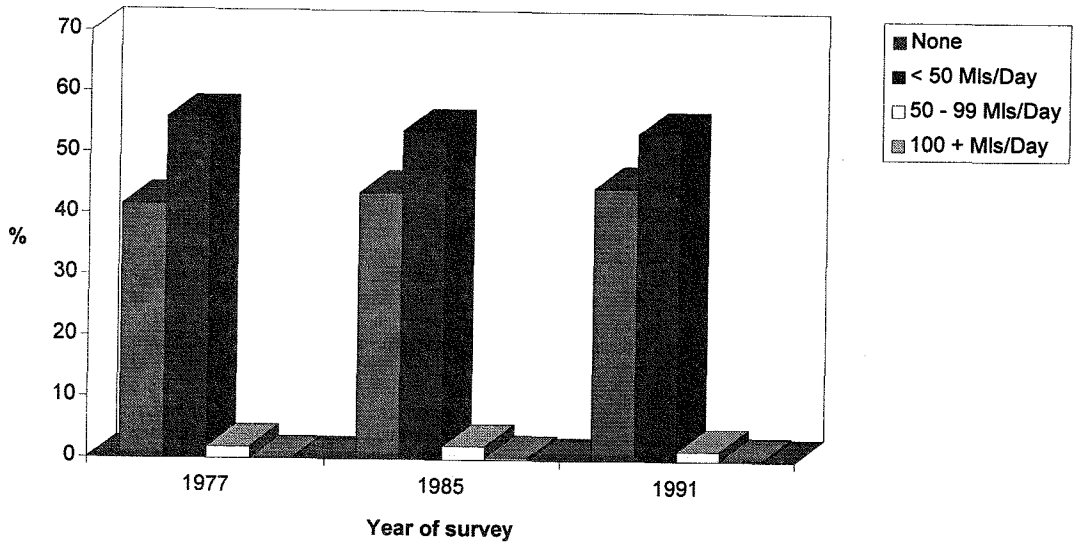
Refer to Table A7.3

Females

Over the period 1977-1991 the proportion of female drinkers in the WA population decreased by 5.1%, from 58.4% to 55.4% (Appendix Table A7.4, page A-72; Figure 7.4). There was:

- a decrease of 4.1% in the percentage of female drinkers in the light (ie <50 mls) drinker group, from 55.9% in 1977 to 53.6% in 1991;
- a decrease of 1.6% in the percentage of female drinkers in the medium (ie 50-99 mls) drinker group, from 1.9% in 1977 to 1.6% in 1991; and
- there may have been an increase in the percentage of female drinkers in the heavy (ie 100 mls and over) drinker group after 1977 (when no heavy drinkers were reported).

Figure 7.4 Percentage of female drinkers by level of average daily consumption, Western Australia, 1977, 1985, 1991



That is, the major reason for the changes in the total drinking population was a move from heavy to light or average daily alcohol consumption by the male drinking population.

7.3.2 Average daily consumption by age group and type of beverage, 1985, 1991

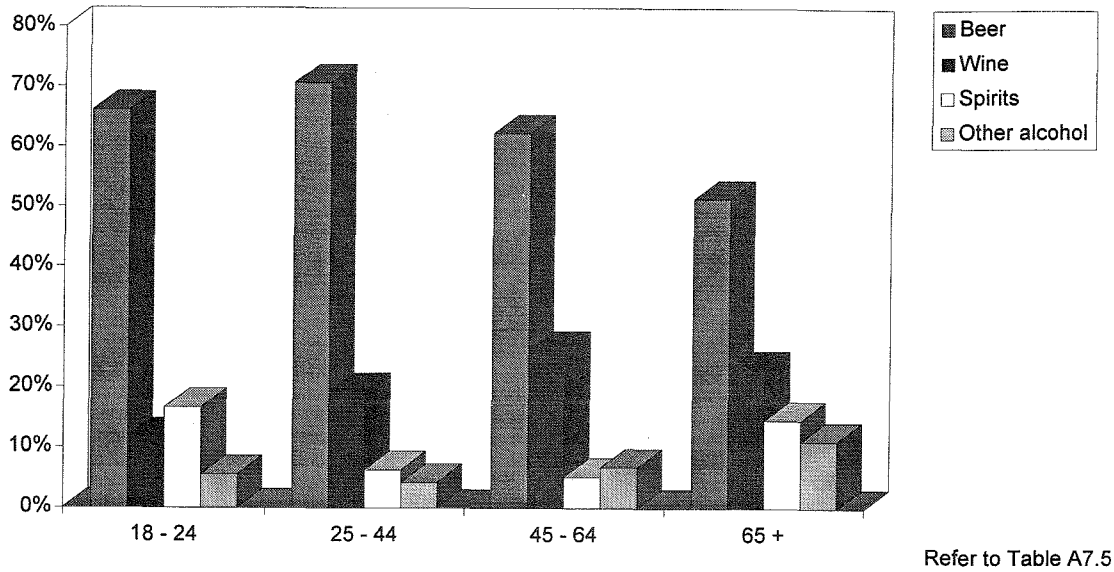
A breakdown of consumption data by age group is only available for the 1985 and 1991 surveys (Appendix Table A7.5, page A-73; Figures 7.5 and 7.6, page 80). These data show that the daily average consumption of all types of beverages by all drinkers decreased by 10.6% from 1985 to 1991, from 27.3 mls to 24.4 mls. Over the period of the two surveys the following age-specific changes in average alcohol consumption occurred:

- 18-24 years age group - decreased by 11.7%;
- 25-44 years age group - decreased by 12.2%;
- 45-64 years age group - decreased by 5.6%; and
- 65 years and over age group - increased by 22.9%

Other findings of the surveys included:

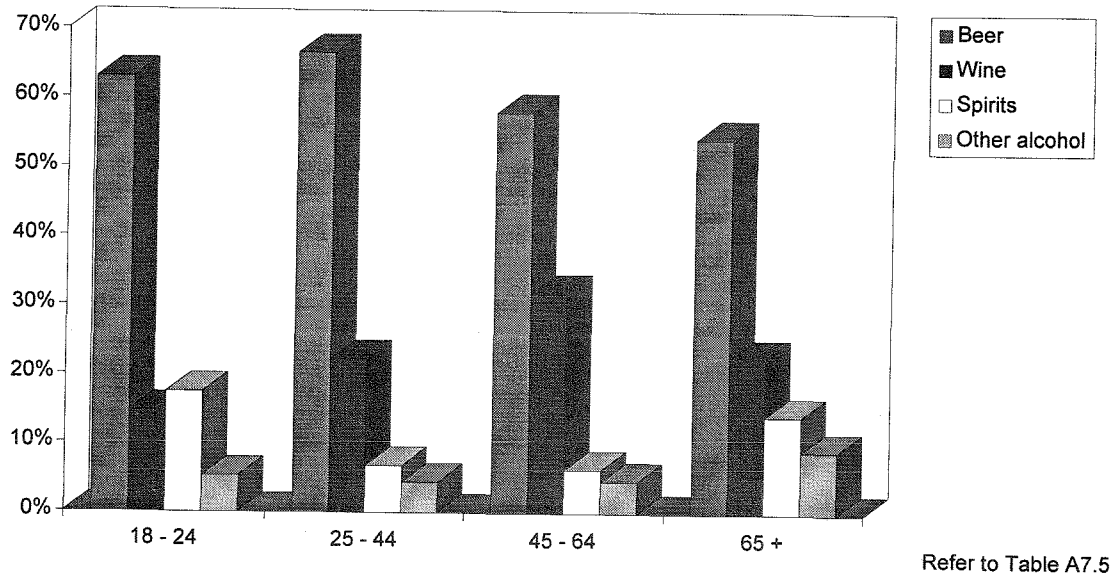
- the highest average daily alcohol consumption levels in both surveys occurred in the 18-24 years age group and mainly involved the consumption of beer;
- the highest average daily consumption of spirits occurred in the 18-24 years age group;
- the average daily consumption of both wine and fortified wine tended to increase with age; and
- beer consumption decreased with age, though in both surveys similar levels were recorded by both the 18-24 and 25-44 years age groups.

Figure 7.5: Percentage of all drinkers by type of alcohol and age group, Western Australia, 1985



Refer to Table A7.5

Figure 7.6: Percentage of all drinkers by type of alcohol and age group, Western Australia, 1991



Refer to Table A7.5

Males

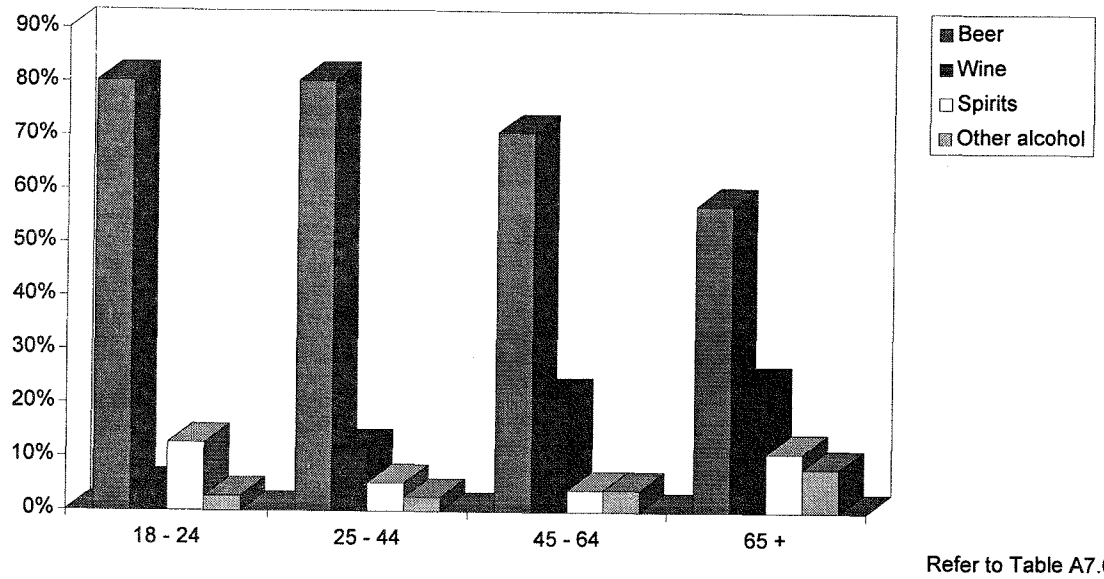
The average daily total alcohol consumption of all types of beverages by the male drinking population decreased by 11.0% from 36.3 mls of absolute alcohol in 1985 to 32.3 mls in 1991 (Appendix Table A7.6, page A-74; Figures 7.7 and 7.8, page 81).

Beer was the most significant form of alcohol consumption of the male drinking population in both 1985 and 1991. Although there was a decrease of 14.3% in the average daily consumption of beer, from 28 mls of absolute alcohol in 1985 to 24.0 mls in 1991, over the same period there was an increase of 34.3% in the average daily beer consumption by the 65 years and over age group.

In both 1985 and 1991 the average daily consumption of absolute alcohol consumed as wine was 4.7 mls, although there were small increases from the 1985 to 1991 surveys in the average daily consumption of wine

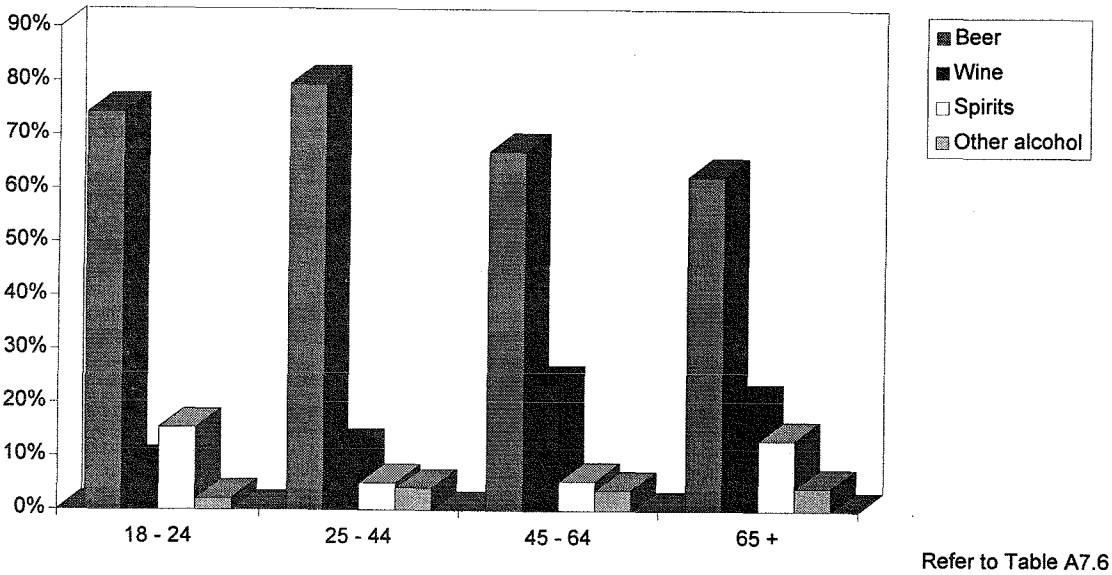
by males aged 45 years and over. The average daily consumption of wine increased with age in both the 1985 to 1991 surveys, peaking in the 45-64 years age group.

Figure 7.7: Percentage of male drinkers by type of alcohol and age group, Western Australia, 1985



Refer to Table A7.6

Figure 7.8: Percentage of male drinkers by type of alcohol and age group, Western Australia, 1991



Refer to Table A7.6

Females

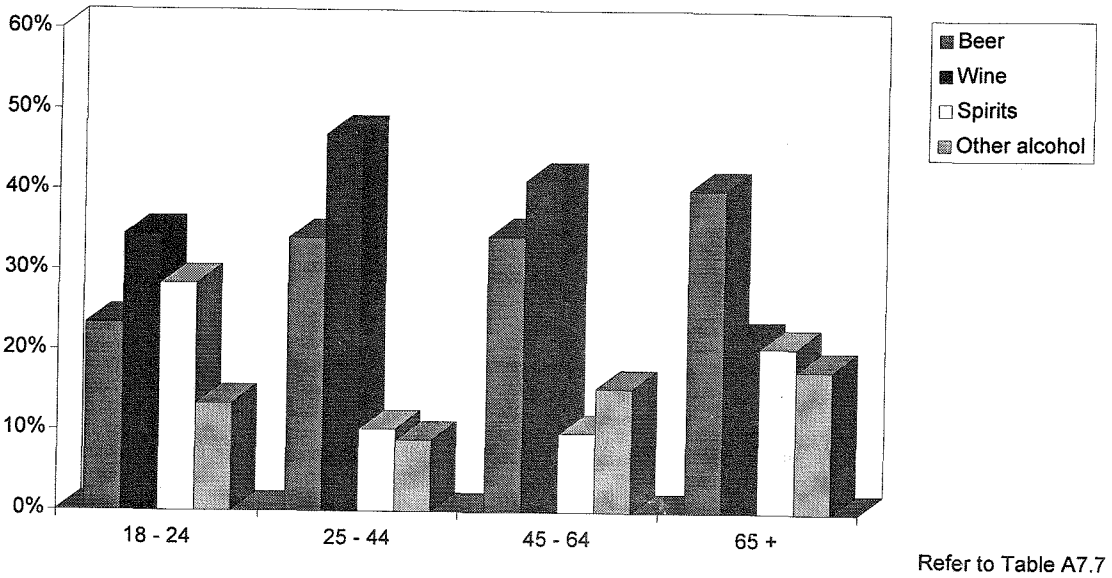
The total average daily consumption of all types of beverages by the female drinking population decreased by 9.4% from 14.9 mls in 1985 to 13.5 mls in 1991 (Appendix Table A7.7, page A-75; Figures 7.9 and 7.10, page 82).

While the consumption of wine by the total population decreased by 12.9% between the 1985 and 1991 surveys, there was an increase of 14.8%, from 6.1 mls in 1985 to 7.0 mls in 1991 in the consumption of wine by female drinkers. For females in the 25-44 and 45-64 years age groups consumption of wine increased by 14.5% and 32.2%, respectively. Wine was the most significant form of alcohol consumption for females in every age group, except the 65 years and over age group, for which it was beer.

The average daily consumption of spirits decreased by 9.1%, from 2.2 mls in 1985 to 2.0 mls in 1991. While in both surveys the consumption of spirits was highest in the 18-24 age group, from 1985 to 1991 consumption of spirits by this age group decreased by 21.6%.

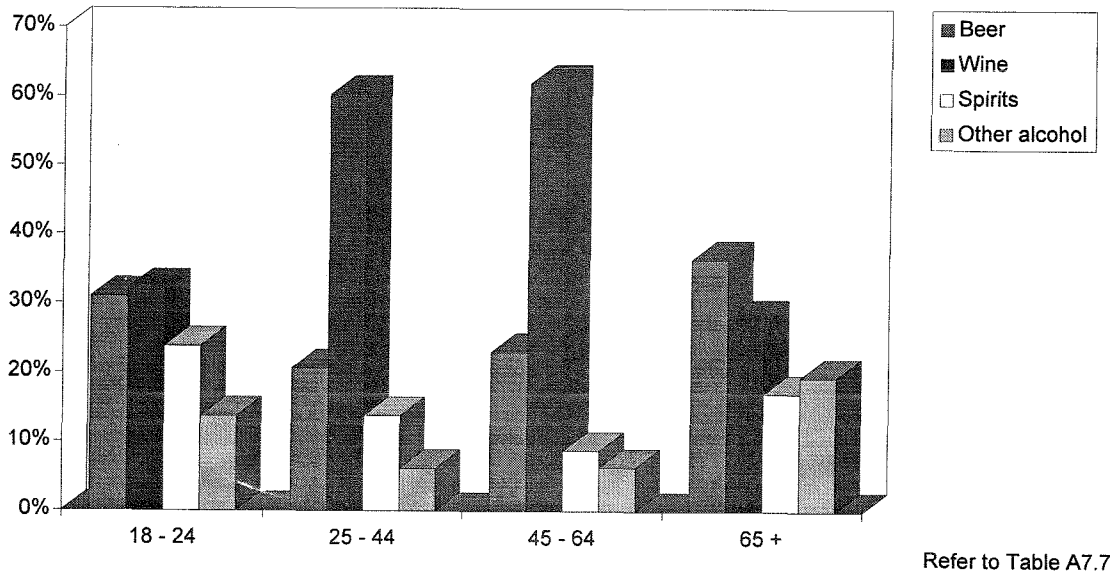
The average daily consumption of beer decreased by 31.2% from 4.8 mls in 1985 to 3.3 mls in 1991, but there were significant increases in the consumption of beer by the 18-24 and 65 years and over age groups (23.8% and 9.3% respectively).

Figure 7.9: Percentage of female drinkers by type of alcohol and age group, Western Australia, 1985



Refer to Table A7.7

Figure 7.10: Percentage of female drinkers by type of alcohol and age group, Western Australia, 1991



Refer to Table A7.7

Chapter 8 Tobacco consumption

8.1 Smoking prevalence

The percentage of adults who smoke has decreased over the period 1984-1993 from 30.8% to 25.0%. Although the prevalence among males has steadily dropped over this period (from 34.4% to 26.0%), there has been some fluctuation in the proportion of female smokers (Table 8.1, Figure 8.1).

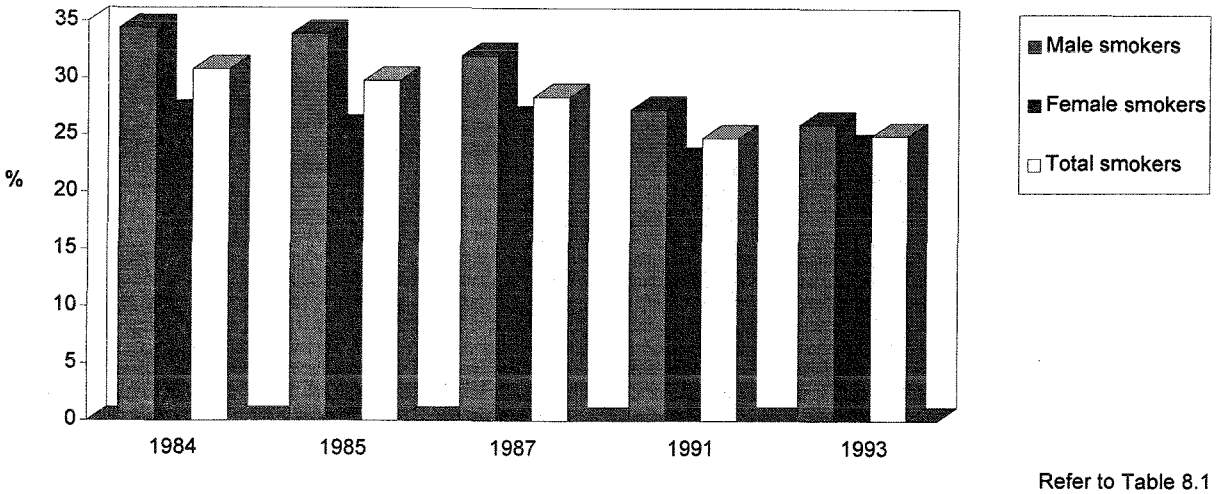
However, it should be noted that the sample size for the 1993 survey was much smaller than in previous years so the standard error is larger.

Table 8.1: Smoking prevalence among adults, Western Australia, 1984-1993

	Male smokers			Female smokers			Total smokers		
	%	N	SE	%	N	SE	%	N	SE
1984	34.4	*1513*	(± 2.4)	26.9	*1857*	(±2.0)	30.8	*3370*	(±1.5)
1985	33.9	*1432*	(±2.4)	25.6	*1759*	(±2.0)	29.8	*3191*	(±1.6)
1987	32.0	*1503*	(±2.3)	26.4	*1813*	(±2.0)	28.4	*3316*	(±1.5)
1991	27.3	*1431*	(±2.3)	22.8	*1823*	(±1.9)	24.8	*3254*	(±1.5)
1993	26.0	*254*	(±5.3)	24.0	*254*	(±5.4)	25.0	*508*	(±3.8)

Source: Sample surveys by Health Promotion Services Branch, Health Department of WA.
Note: SE = standard error

Figure 8.1: Smoking prevalence (%) among adults by sex, Western Australia, 1984-1993



Refer to Table 8.1

Age groups

Data are available by sex, smoking status and age group for the years 1984, 1985, 1987 and 1991 (Tables A8.1, page A-76; Figures 8.2 to 8.5).

Persons

- The 18-24 years age group has the highest prevalence of smokers and the lowest proportion of ex-smokers.
- The over 65 years age group has the lowest prevalence of smokers and the highest proportion of ex-smokers.
- The proportion of current smokers was lowest in all age groups in 1991.
- The over 65 years age group had the highest proportion of non-smokers until 1991 when the 18-24 years age group had a slightly higher proportion of non-smokers.

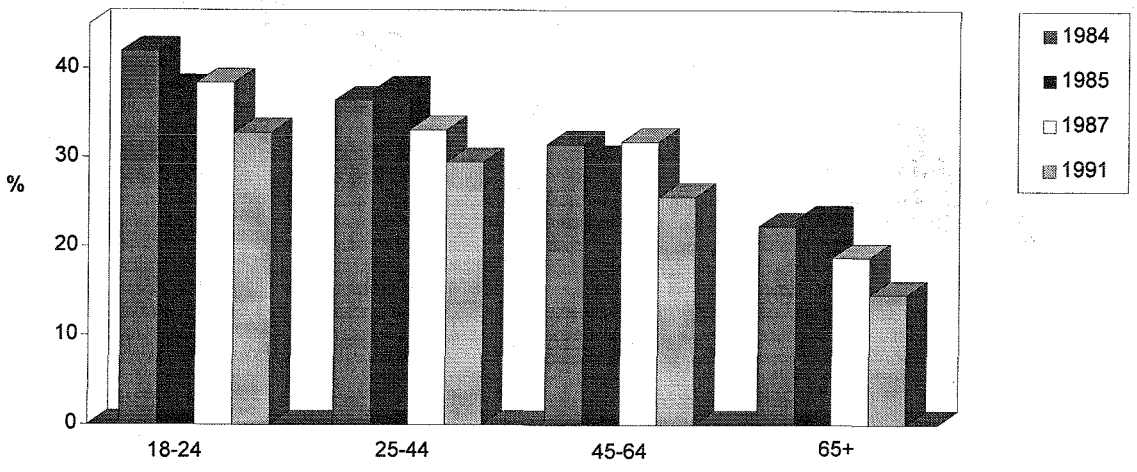
Males

- The 18-24 years age group has the highest prevalence of smokers and the lowest proportion of ex-smokers.
- The over 65 years age group has the lowest prevalence of smokers and the highest proportion of ex-smokers.
- The proportion of current smokers was lowest in all age groups in 1991.
- The 18-24 years age group had the highest proportion of non-smokers.

Females

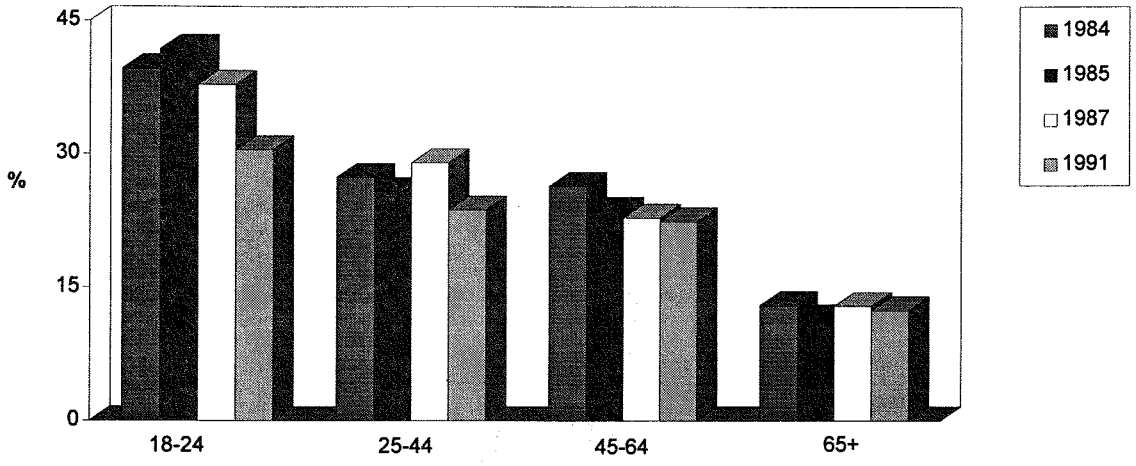
- The 18-24 years age group has the highest prevalence of smokers and, in general, the lowest proportion of ex-smokers.
- The over 65 years age group has the lowest prevalence of smokers.
- The proportion of current smokers was lowest in all age groups in 1991.
- The over 65 years age group had the highest proportion of non-smokers.

Figure 8.2: Prevalence of current smokers (%) among male adults by age group, Western Australia, 1984-1991



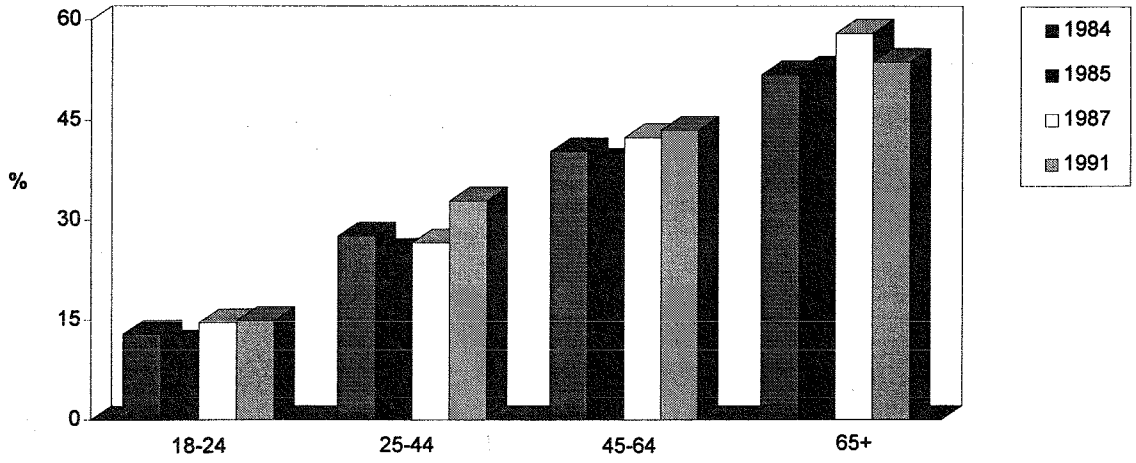
Refer to Table A8.1

Figure 8.3: Prevalence of current smokers (%) among female adults by age group, Western Australia, 1984-1991



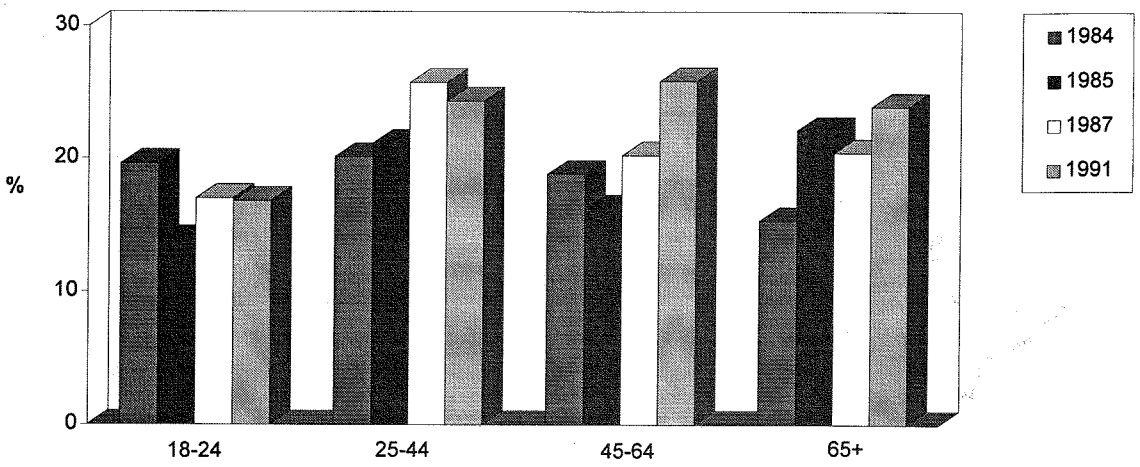
Refer to Table A8.1

Figure 8.4 Prevalence of current smokers (%) among male adults by age group, Western Australia, 1984-1991



Refer to Table A8.1

Figure 8.5 Prevalence of ex-smokers (%) among female adults by age group, Western Australia, 1984-1991



Refer to Table A8.1

Young people aged 12 to 17 years

There is a large increase in the number of children who take up smoking after the age of 12 years, when they leave primary school and begin high school (Table 8.3; Figures 8.6, 8.7, page 87).

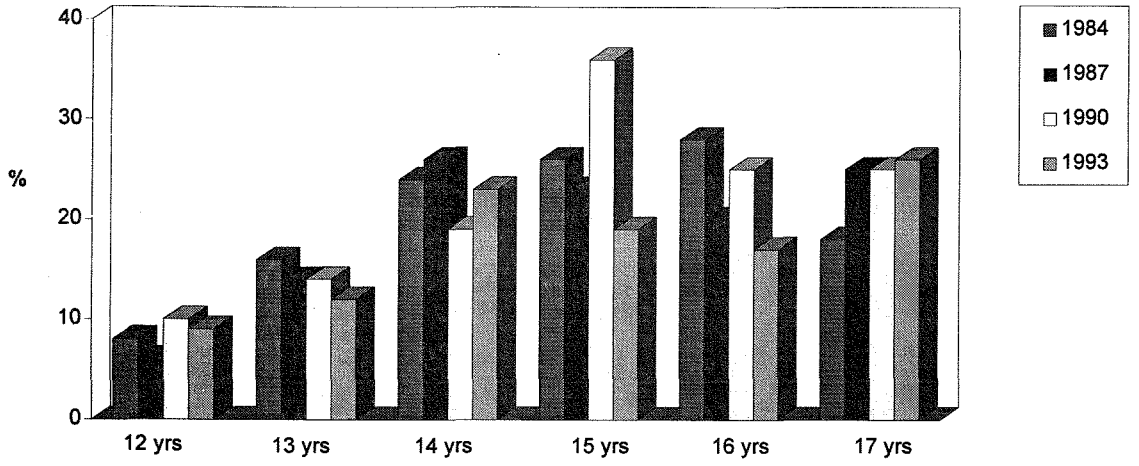
- Less than 10% of 12 year olds smoked.
- About 25% of children aged between 14 and 17 years smoked.
- The proportion if 17 year olds that smoked had steadily increased over the survey periods.
- The proportions of children aged 13-16 years smoking in 1991 were less than the proportions smoking in 1984.

Table 8.3: Prevalence of people aged 12-17 years who smoked in previous week, Western Australia, 1984-1993

Year	Sex	Age					
		12	13	14	15	16	17
1984	M	8	16	24	26	28	18
	F	7	15	29	35	26	30
1987	M	6	14	26	23	20	25
	F	4	19	26	35	31	26
1990	M	10	14	19	36	25	25
	F	4	13	23	32	26	25
1993	M	9	12	23	19	17	26
	F	5	11	20	27	25	25

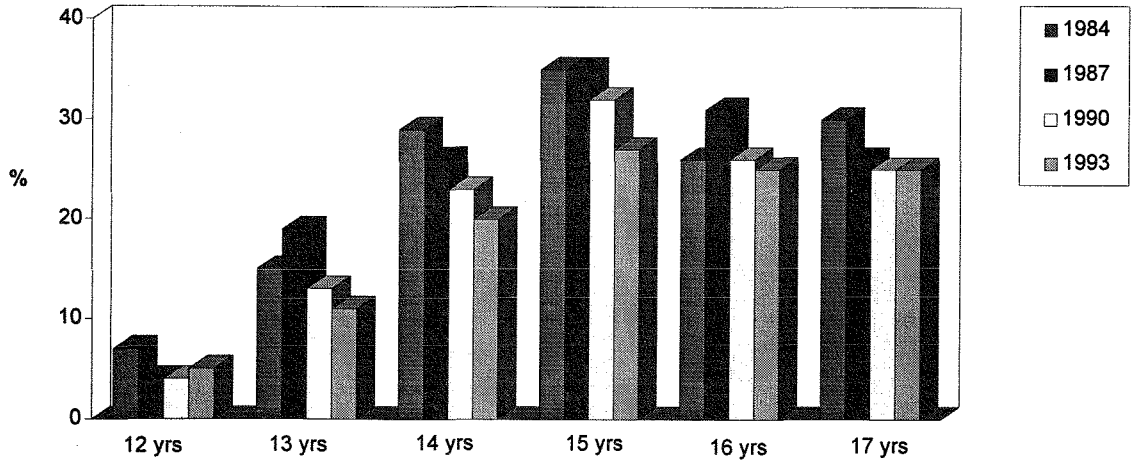
Source: Anti-Cancer Council of Victoria national surveys, WA data provided by Health Promotion Services Branch, Health Department of WA.

Figure 8.6 **Prevalence of males aged 12-17 years who smoked in previous week, Western Australia, 1984-1993**



Refer to Table 8.3

Figure 8.7 **Prevalence of females aged 12-17 years who smoked in previous week, Western Australia, 1984-1993**



Refer to Table 8.3

8.2 Tobacco franchise licence fee collections

The amount of revenue generated from tobacco franchise licence fee collections in 1992 was over $108 million. The big increases in revenue in 1984 and 1990 followed increases in the tobacco licence rate, increased from 12.5% to 35% in 1983, and increased from 35% to 50% in 1989 (Table 8.4).

The revenue derived from tobacco franchise licence fees is collected through the Business Franchise (Tobacco) Act 1975. A proportion of this licence fee, at present 10%, is distributed under the Tobacco Control Act 1990 by the WA Health Promotion Foundation for health promotion and funding of sporting, community and arts organisations.

Table 8.4: Tobacco franchise licence fee collections, Western Australia, 1977-1992

Year ended 30 June	Total franchise fee collections
1977	$7,548,815
1978	$8,332,623
1979	$8,961,738
1980	$9,881,463
1981	$10,190,563
1982	$11,942,217
1983	$16,945,515
1984	$46,721,382
1985	$50,425,420
1986	$57,017,647
1987	$61,899,082
1988	$65,075,330
1989	$70,562,142
1990	$93,224,952
1991	$110,592,016
1992	$108,417,473

Source: State Treasury, Intergovernmental Relations and Revenue Policy Division
Note: Tobacco licence rate increased from 12.5% to 35% in 1983, for half of the September/October licence period (payable 15 August) and increased from 35% to 50% from 1 November 1989

Table A1.1
ICD9 codes - mortality directly caused by drugs, including alcohol

Drug type	Mental disorders			Medical conditions	External causes (E-codes)			
	Dependence	Non-dependent abuse	Psychoses		Assault by poisoning	Accidental	Suicide	Undetermined
Opiates	3040,3047	3055	292		E9620	E8500-E8503, E8508, E8509	E9500	E9800
Barbiturates	3041	3054	292		E9620	E851	E9501	E9801
Tranquillisers/sedatives	-	3054	292		E9620	E852, E853	E9502, E9503	E9802, E9803
Anti-depressants	-	3058	292		E9620	E8540	E9503	E9803
Cocaine	3042	3056	292		E9620	E8552	E9503	E9803
Psychostimulants	3044	3057	292		E9620	E8542	E9503	E9803
Hallucinogens	3045	3053	292		E9620	E8541	E9503	E9803
Cannabis	3043	3052	292		E9620	E8541	E9503	E9803
Volatile substances	3046	-	292		-	E8620, E8621, E8629, E8666	E9511	E9811
Other & unpsecified Drugs	3048, 3049	3059	292		E9620	E8504-E8507	E9504, E9505	E9804, E9805
Alcohol	303	3050	291	3575 (polyneuropathy); 4255 (cardiomyopathy); 5353 (gastritis); 5711-5713, 5715-5719 (liver disease)	-	E8600	E9509	E9809

Source: Manual of The International Statistical Classification of Diseases, Injuries, and Causes of Death, Ninth Revision. Geneva: World Health Organisation, 1977.

Table A1.2
ICD9 codes (1979-1987) - hospitalisation directly caused by drugs, including alcohol

Drug type	Mental disorders			Medical conditions	External causes (E codes)		
	Dependence	Non-dependent abuse	Psychoses	Poisoning	Accidental	Suicide	Undetermined
Opiates	3040	3055	2920-2929	9650	E8500	E9500	E9800
Barbiturates	3041	3054	2920-2929	9670	E851	E9501	E9801
Tranquillisers/sedatives	3041	3054	2920-2929	9676, 9678, 9679, 9691-9695	E852, E853	E9502, E9503	E9802, E9803
Anti-depressants	-	3058	2920-2929	9690	E8540	E9503	E9803
Cocaine	3042	3056	2920-2929	-	-	E9504	E9804
Psychostimulants	3044	3057	2920-2929	9697, 9700, 9708, 9709	E8542, E8543	E9503	E9803
Hallucinogens	3045	3053	2920-2929	9696	E8541	E9503	E9803
Cannabis	3043	3052	2920-2929	9696	E8541	E9503	E9803
Volatile substances	3046	-	2920-2929	-	E8620, E8621, E8666	E9509	E9809
Alcohol	303	3050	291	9800	E8600	E9509	E9809

Source: Manual of The International Statistical Classification of Diseases, Injuries, and Causes of Death, Ninth Revision. Geneva: World Health Organisation, 1977.

Table A1.3
ICD9 CM codes (1988+) - hospitalisation directly caused by drugs, including alcohol

Drug type	Mental disorders			Medical condition	External causes (E codes)		
	Dependence	Non-dependent abuse	Psychoses	Poisoning	Accidental	Suicide	Undetermined
Opiates	3040	3055	2920-2929	96500-96509	E8500	E9500	E9800
Barbiturates	3041	3054	2920-2929	9670	E851	E9501	E9801
Tranquillisers/sedatives	3041	3054	2920-2929	9676, 9678, 9679, 9691-9695	E852, E853	E9502, E9503	E9802, E9803
Anti-depressants	-	3058	2920-2929	9690,	E8540	E9503	E9803
Cocaine	3042	3056	2920-2929	9685	E8552	E9504	E9804
Psychostimulants	3044	3057	2920-2929	9697, 9700, 9707, 9709	E8542, E8543	E9503	E9803
Hallucinogens	3045	3053	2920-2929	9696	E8541	E9503	E9803
Cannabis	3043	3052	2920-2929	9696	E8541	E9503	E9803
Volatile substances	3046	-	2920-2929	-	E8620, E8621, E8666	E9509	E9809
Alcohol	303	3050	2910-2919	9800	E8600	E9509	E9809

Source: International Classification of Diseases, Ninth Revision, Clinical Modification. Ann Arbor, Michigan: Commission of Professional and Hospital Activties, 1989

Table A1.4
Examples of the types of drugs responsible for drug-caused mortality and hospitalisation

Type of drug	Examples
Opiates	Buprenorphine (Temgesic), codeine phosphate (Codiphen, Veganin) dextromoramide (Palfium), dextropropoxyphene (Digesic, Doloxene), diacetylmorphine (heroin), morphine, oxycodone (Proladone), papaveretum (Omnopon), pentazocine (Fortral), pethidine, physeptone (Methadone)
Barbiturates	Amylobarbitone sodium (Sodium Amytal, Neur-Amyl), butobarbitone (Soneryl), pentobarbitone (Carbrital, Nembutal), sodium pentobarbitone (Nembudeine)
Tranquillisers/sedatives	Chloral hydrate (Noctec), chlordiazepoxide (Librium), chlorpromazine (Largactil), diazepam (Ducene, Valium), flunitrazepam (Rohypnol), fluphenazine (Anatensol), nitrazepam (Mogadon), flurazepam (Dalmane), lorazepam (Ativan), lithium (Priadel), oxazepam (Serepax), paraldehyde, promazine (Sparine), temazepam (Euhypnos, Normison), thioridazine (Melleril), trifluroperazine (Calmazine, Stelazine), haloperidol (Haldol, Serenace)
Anti-depressants	Amitriptyline (Laroxyl, Tryptanol, Tofranil), nortriptyline (Allegron, Nortab), trimipramine (Surmontil), doxepin (Sinequan), dothiepin (Prothiaden)
Volatile substances	Inhalational anaesthetics (chloroform, cyclopropane, enflurane, ethylene, ether, fluroxene, halothane, methoxyflurane, nitrous oxide, trichloroethylene), nitrites (amyl nitrite, butyl nitrite), aerosol propellants, chloroform, fluorocarbon propellants (freons), organic solvents (adhesives, plastic cement, thinners containing trichloroethane, trichloroethylene, toluene or xylene), fuel gases (butane, propane), petrol, typists correction fluid
Other/unspecified	Combinations of drugs (excluding opioids), paracetamol, phenacetin, phenylbutazone and antirheumatic drugs

Table A2.1
Number of male drug-caused deaths by type of drug, Western Australia, 1982-1992

Drug type	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
Opiates	8	9	12	18	12	13	17	18	19	13	15	154
Barbiturates	5	5	7	4	4	3	0	2	0	1	2	33
Tranquillisers/sedatives	3	7	10	8	6	12	6	7	9	6	5	79
Anti-depressants	1	1	0	0	1	2	1	0	3	2	3	14
Cocaine	0	0	0	0	0	0	0	0	0	0	0	0
Psychostimulants	0	0	0	0	0	0	0	0	0	3	0	3
Hallucinogens	0	0	0	0	0	0	0	0	0	0	0	0
Volatile substances	0	0	1	1	4	4	1	3	4	4	0	22
Alcohol	62	54	75	87	71	75	93	92	64	69	61	803
Other/unspecified	2	7	3	4	12	9	5	4	5	4	4	59
All drug types	**81**	**83**	**108**	**122**	**110**	**118**	**123**	**126**	**104**	**102**	**90**	**1167**

Source: Health Department of Western Australia, WA mortality database

Table A2.2
Number of female drug-caused deaths by type of drug, Western Australia, 1982-1992

Drug type	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
Opiates	4	3	8	9	8	3	8	5	2	3	11	64
Barbiturates	6	8	6	2	3	2	0	1	0	0	0	28
Tranquillisers/sedatives	7	4	12	5	7	10	8	4	9	13	5	84
Anti-depressants	0	2	2	1	1	4	2	3	1	4	1	21
Cocaine	0	0	0	0	0	0	0	0	1	0	0	1
Psychostimulants	0	0	0	0	0	0	0	0	1	0	0	1
Hallucinogens	0	0	0	0	0	0	0	0	0	0	0	0
Volatile substances	0	0	0	0	0	0	1	0	0	0	0	1
Alcohol	21	17	20	12	25	19	17	19	22	21	19	212
Other/unspecified	1	2	2	10	6	1	0	2	2	2	5	33
All drug types	**39**	**36**	**50**	**39**	**50**	**39**	**36**	**34**	**38**	**43**	**41**	**445**

Source: Health Department of Western Australia, WA mortality database

Table A2.3
Number of drug-caused deaths, persons, by type of drug, Western Australia, 1982-1992

Drug type	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
Opiates	12	12	20	27	20	16	25	23	21	16	26	218
Barbiturates	11	13	13	6	7	5	0	3	0	1	2	61
Tranquillisers/sedatives	10	11	22	13	13	22	14	11	18	19	10	163
Anti-depressants	1	3	2	1	2	6	3	3	4	6	4	35
Cocaine	0	0	0	0	0	0	0	0	1	0	0	1
Psychostimulants	0	0	0	0	0	0	0	0	1	3	0	4
Hallucinogens	0	0	0	0	0	0	0	0	0	0	0	0
Volatile substances	0	0	1	1	4	4	2	3	4	4	0	23
Alcohol	83	71	95	99	96	94	110	111	86	90	80	1015
Other/unspecified	3	9	5	14	18	10	5	6	7	6	9	92
All drug types	**120**	**119**	**158**	**161**	**160**	**157**	**159**	**160**	**142**	**145**	**131**	**1612**

Source: Health Department of Western Australia, WA mortality database

Table A2.4
Number of male drug-caused deaths, by age group, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	0	0	0	0	0	0	0	0	1	0	1
10-19 years	0	2	6	2	3	7	3	3	2	2	1	31
20-29 years	10	15	16	22	16	14	15	13	11	14	10	156
30-39 years	13	13	11	17	15	16	17	22	22	12	18	176
40-49 years	11	14	17	13	12	19	20	12	14	22	11	165
50-59 years	26	16	23	27	35	23	14	33	13	18	21	249
60-69 years	17	19	20	29	21	28	31	32	29	17	24	267
70+ years	4	4	15	12	8	11	23	11	13	16	5	122
All ages	**81**	**83**	**108**	**122**	**110**	**118**	**123**	**126**	**104**	**102**	**90**	**1167**

Source: Health Department of Western Australia, WA mortality database

Table A2.5
Number of female drug-caused deaths, by age group, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	0	0	0	0	0	0	0	0	0	0	0
10-19 years	0	0	0	0	0	1	2	2	1	0	0	6
20-29 years	2	3	13	9	6	4	6	4	3	7	7	64
30-39 years	6	5	7	7	6	4	8	4	7	10	7	71
40-49 years	13	5	10	8	14	13	6	3	7	5	7	91
50-59 years	11	7	10	5	8	7	7	7	11	9	7	89
60-69 years	6	10	5	7	10	5	5	7	7	6	6	74
70+ years	1	6	5	3	6	5	2	7	2	6	7	50
All ages	**39**	**36**	**50**	**39**	**50**	**39**	**36**	**34**	**38**	**43**	**41**	**445**

Source: Health Department of Western Australia, WA mortality database

Table A2.6
Number of drug-caused deaths, persons, by age group, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	0	0	0	0	0	0	0	0	1	0	1
10-19 years	0	2	6	2	3	8	5	5	3	2	1	37
20-29 years	12	18	29	31	22	18	21	17	14	21	17	220
30-39 years	19	18	18	24	21	20	25	26	29	22	25	247
40-49 years	24	19	27	21	26	32	26	15	21	27	18	256
50-59 years	37	23	33	32	43	30	21	40	24	27	28	338
60-69 years	23	29	25	36	31	33	36	39	36	23	30	341
70+ years	5	10	20	15	14	16	25	18	15	22	12	172
All ages	**120**	**119**	**158**	**161**	**160**	**157**	**159**	**160**	**142**	**145**	**131**	**1612**

Source: Health Department of Western Australia, WA mortality database

Table A2.7
Number of male alcohol-caused deaths by age group, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	0	0	0	0	0	0	0	0	0	0	0
10-19 years	0	0	0	0	0	0	0	0	0	0	0	0
20-29 years	1	1	4	6	1	1	4	5	3	0	0	26
30-39 years	6	6	4	8	1	9	7	7	7	4	7	66
40-49 years	11	12	13	9	11	12	18	11	7	19	6	129
50-59 years	24	16	22	26	33	17	14	30	9	15	20	226
60-69 years	16	17	19	27	19	27	27	28	26	17	23	246
70+ years	4	2	13	11	6	9	23	11	12	14	5	110
All ages	**62**	**54**	**75**	**87**	**71**	**75**	**93**	**92**	**64**	**69**	**61**	**803**

Source: Health Department of Western Australia, WA mortality database

Table A2.8
Number of female alcohol-caused deaths by age group, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	0	0	0	0	0	0	0	0	0	0	0
10-19 years	0	0	0	0	0	0	0	0	0	0	0	0
20-29 years	1	0	1	0	0	0	1	0	1	1	1	6
30-39 years	2	2	3	1	0	1	3	3	2	3	1	21
40-49 years	6	3	4	3	8	7	3	1	2	4	3	44
50-59 years	9	5	6	2	7	5	4	4	9	5	5	61
60-69 years	2	4	4	5	8	3	4	5	6	4	4	49
70+ years	1	3	2	1	2	3	2	6	2	4	5	31
All ages	**21**	**17**	**20**	**12**	**25**	**19**	**17**	**19**	**22**	**21**	**19**	**212**

Source: Health Department of Western Australia, WA mortality database

Table A2.9
Number of alcohol-caused deaths, persons, by age group, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	0	0	0	0	0	0	0	0	0	0	0
10-19 years	0	0	0	0	0	0	0	0	0	0	0	0
20-29 years	2	1	5	6	1	1	5	5	4	1	1	32
30-39 years	8	8	7	9	1	10	10	10	9	7	8	87
40-49 years	17	15	17	12	19	19	21	12	9	23	9	173
50-59 years	33	21	28	28	40	22	18	34	18	20	25	287
60-69 years	18	21	23	32	27	30	31	33	32	21	27	295
70+ years	5	5	15	12	8	12	25	17	14	18	10	141
All ages	**83**	**71**	**95**	**99**	**96**	**94**	**110**	**111**	**86**	**90**	**80**	**1015**

Source: Health Department of Western Australia, WA mortality database

Table A2.10
Number of male deaths caused by drugs other than alcohol, by age group, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	0	0	0	0	0	0	0	0	1	0	1
10-19 years	0	2	6	2	3	7	3	3	2	2	1	31
20-29 years	9	14	12	16	15	13	11	8	8	14	10	130
30-39 years	7	7	7	9	14	7	10	15	15	8	11	110
40-49 years	0	2	4	4	1	7	2	1	7	3	5	36
50-59 years	2	0	1	1	2	6	0	3	4	3	1	23
60-69 years	1	2	1	2	2	1	4	4	3	0	1	21
70+ years	0	2	2	1	2	2	0	0	1	2	0	12
All ages	**19**	**29**	**33**	**35**	**39**	**43**	**30**	**34**	**40**	**33**	**29**	**364**

Source: Health Department of Western Australia, WA mortality database

Table A2.11
Number of female deaths caused by drugs other than alcohol, by age group, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	0	0	0	0	0	0	0	0	0	0	0
10-19 years	0	0	0	0	0	1	2	2	1	0	0	6
20-29 years	1	3	12	9	6	4	5	4	2	6	6	58
30-39 years	4	3	4	6	6	3	5	1	5	7	6	50
40-49 years	7	2	6	5	6	6	3	2	5	1	4	47
50-59 years	2	2	4	3	1	2	3	3	2	4	2	28
60-69 years	4	6	1	2	2	2	1	2	1	2	2	25
70+ years	0	3	3	2	4	2	0	1	0	2	2	19
All ages	**18**	**19**	**30**	**27**	**25**	**20**	**19**	**15**	**16**	**22**	**22**	**233**

Source: Health Department of Western Australia, WA mortality database

Table A2.12
Number of deaths caused by drugs other than alcohol, persons, by age group, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	0	0	0	0	0	0	0	0	1	0	1
10-19 years	0	2	6	2	3	8	5	5	3	2	1	37
20-29 years	10	17	24	25	21	17	16	12	10	20	16	188
30-39 years	11	10	11	15	20	10	15	16	20	15	17	160
40-49 years	7	4	10	9	7	13	5	3	12	4	9	83
50-59 years	4	2	5	4	3	8	3	6	6	7	3	51
60-69 years	5	8	2	4	4	3	5	6	4	2	3	46
70+ years	0	5	5	3	6	4	0	1	1	4	2	31
All ages	**37**	**48**	**63**	**62**	**64**	**63**	**49**	**49**	**56**	**55**	**51**	**597**

Source: Health Department of Western Australia, WA mortality database

Table A2.13
Number of deaths caused by poisoning, persons, by type of drug, Western Australia, 1982-1992

Drug type	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
Opiates	10	9	11	7	6	6	13	8	19	16	21	126
Barbiturates	11	13	12	6	7	5	0	3	0	1	2	60
Tranquillisers/sedatives	10	11	22	13	13	22	14	11	18	19	10	163
Anti-depressants	1	3	2	1	2	6	3	3	4	6	4	35
Cocaine	0	0	0	0	0	0	0	0	1	0	0	1
Psychostimulants	0	0	0	0	0	0	0	0	1	3	0	4
Hallucinogens	0	0	0	0	0	0	0	0	0	0	0	0
Volatile substances	0	0	1	0	0	1	1	0	0	1	0	4
Alcohol	0	0	1	5	3	1	1	1	8	0	0	20
Other/unspecified	3	7	5	13	11	8	2	6	7	6	9	77
All drug types	**35**	**43**	**54**	**45**	**42**	**49**	**34**	**32**	**58**	**52**	**46**	**490**

Source: Health Department of Western Australia, WA mortality database

Table A2.14
Number of deaths caused by drug-related poisoning, persons, by age group, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	0	0	0	0	0	0	0	0	1	0	1
10-19 years	0	2	6	2	1	3	2	3	1	1	1	22
20-29 years	8	13	15	12	9	11	9	7	11	18	13	126
30-39 years	11	9	11	9	10	7	10	5	21	15	15	123
40-49 years	7	4	10	9	8	13	5	3	13	4	9	85
50-59 years	4	2	5	5	4	8	3	6	6	7	3	53
60-69 years	5	8	2	5	4	3	5	7	5	2	3	49
70+ years	0	5	5	3	6	4	0	1	1	4	2	31
All ages	**35**	**43**	**54**	**45**	**42**	**49**	**34**	**32**	**58**	**52**	**46**	**490**

Source: Health Department of Western Australia, WA mortality database

Table A2.15
Number of deaths caused by drug-related mental disorders, persons, by type of disorder, Western Australia, 1982-1992

Type of cause		1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-92
Psychoses	Alcohol	7	2	3	3	1	2	2	5	1	2	0	28
	Other drugs	0	0	0	0	0	0	0	0	0	0	0	0
Dependence	Alcohol	10	11	11	14	19	12	19	9	15	21	0	141
	Other drugs	2	5	10	22	25	15	16	18	6	3	5	127
Non-dependent abuse	Alcohol	0	0	1	0	0	0	1	1	0	2	1	6
	Other drugs	0	0	0	0	0	0	0	0	0	0	0	0
All mental disorders	**All drugs**	19	18	25	39	45	29	38	33	22	28	6	302

Source: Health Department of Western Australia, WA mortality database

Table A2.16
Number of deaths caused by drug-related mental disorders, persons, by age group, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	0	0	0	0	0	0	0	0	0	0	0
10-19 years	0	0	0	0	2	5	3	2	2	1	0	15
20-29 years	2	4	12	17	13	7	10	8	2	3	3	81
30-39 years	1	2	2	9	10	4	8	12	5	4	2	59
40-49 years	5	1	2	4	7	3	6	1	4	8	1	42
50-59 years	6	8	3	3	10	3	3	4	3	5	0	48
60-69 years	2	3	3	6	2	3	4	4	3	1	0	31
70+ years	3	0	3	0	1	4	4	2	3	6	0	26
All ages	**19**	**18**	**25**	**39**	**45**	**29**	**38**	**33**	**22**	**28**	**6**	**302**

Source: Health Department of Western Australia, WA mortality database

Table A2.17
Number of deaths caused by conditions wholly attributable to alcohol, by condition and sex, Western Australia, 1982-1992

Condition		1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
Cardiomyopathy	M	4	7	8	15	14	8	13	10	7	10	9	105
	F	3	1	1	0	2	0	3	1	1	1	1	14
	Persons	7	8	9	15	16	8	16	11	8	11	10	119
Gastritis	M	0	0	0	1	0	0	0	0	0	0	0	1
	F	0	0	0	0	0	0	0	0	0	0	0	0
	Persons	0	0	0	1	0	0	0	0	0	0	0	1
Liver disease	M	45	38	54	51	38	56	59	70	37	43	52	543
	F	14	12	16	10	19	15	12	14	17	11	17	157
	Persons	59	50	70	61	57	71	71	84	54	54	69	700
All conditions	M	49	45	62	67	52	64	72	80	44	53	61	649
	F	17	13	17	10	21	15	15	15	18	12	18	171
	Persons	66	58	79	77	73	79	87	95	62	65	79	820

Source: Health Department of Western Australia, WA mortality database

Table A2.18
Number of deaths caused by conditions wholly attributable to alcohol, persons, by age group, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	0	0	0	0	0	0	0	0	0	0	0
10-19 years	0	0	0	0	0	0	0	0	0	0	0	0
20-29 years	2	1	2	2	0	0	2	2	1	0	1	13
30-39 years	7	7	5	6	1	9	7	9	3	3	8	65
40-49 years	12	14	15	8	11	16	15	11	4	15	8	129
50-59 years	27	13	25	24	29	19	15	30	15	15	25	237
60-69 years	16	18	20	25	25	27	27	28	28	20	27	261
70+ years	2	5	12	12	7	8	21	15	11	12	10	115
All ages	**66**	**58**	**79**	77	**73**	**79**	**87**	**95**	**62**	**65**	**79**	**820**

Source: Health Department of Western Australia, WA mortality database

Table A3.1
Number of drug-caused hospital admissions (principal diagnosis) by type of drug, males, Western Australia, 1982-1992

Type of drug	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-92
Opiates	107	154	134	125	123	123	126	127	145	145	139	1448
Barbiturates/tranquillisers/sedatives	357	353	382	345	365	284	303	307	313	319	348	3676
Anti-depressants	60	59	68	61	81	94	60	86	106	125	138	938
Cocaine	0	1	0	0	1	0	0	0	2	0	0	4
Psychostimulants	1	3	2	4	9	8	11	7	20	25	24	114
Hallucinogens	5	4	6	5	1	1	2	4	6	8	16	58
Volatile substances	67	69	77	69	57	52	41	41	35	43	45	596
Alcohol	2446	2455	2186	1761	1674	1532	1667	1650	1474	1574	1524	19943
Other/unspecified/combination	65	83	112	122	142	177	223	257	243	220	199	1843
All drug types	**3108**	**3181**	**2967**	**2492**	**2453**	**2271**	**2433**	**2479**	**2344**	**2459**	**2433**	**28620**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.2
Number of drug-caused hospital admissions (principal diagnosis) by type of drug, females, Western Australia, 1982-1992

Type of drug	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-92
Opiates	198	190	193	194	234	174	204	211	238	297	302	2435
Barbiturates/tranquillisers/sedatives	633	687	637	605	590	484	493	443	438	442	524	5976
Anti-depressants	111	150	149	149	131	158	170	161	187	241	226	1833
Cocaine	1	2	1	0	0	0	0	0	3	3	4	14
Psychostimulants	2	7	5	4	2	17	17	17	15	20	29	135
Hallucinogens	4	2	1	1	1	2	2	3	4	6	4	30
Volatile substances	20	27	28	17	19	18	11	20	10	36	27	233
Alcohol	527	577	515	464	470	498	534	549	580	526	522	5762
Other/unspecified/combination	44	102	78	96	86	98	129	134	131	130	167	1195
All drug types	**1540**	**1744**	**1607**	**1530**	**1533**	**1449**	**1560**	**1538**	**1606**	**1701**	**1805**	**17613**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.3
Number of drug-caused hospital admissions (principal diagnosis) by type of drug, persons, Western Australia, 1982-1992

Type of drug	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-92
Opiates	305	344	327	319	357	297	330	338	383	442	441	3883
Barbiturates/tranquillisers/sedatives	990	1040	1019	950	955	768	796	750	751	761	872	9652
Anti-depressants	171	209	217	210	212	252	230	247	293	366	364	2771
Cocaine	1	3	1	0	1	0	0	0	5	3	4	18
Psychostimulants	3	10	7	8	11	25	28	24	35	45	53	249
Hallucinogens	9	6	7	6	2	3	4	7	10	14	20	88
Volatile substances	87	96	105	86	76	70	52	61	45	79	72	829
Alcohol	2973	3032	2701	2225	2144	2030	2201	2199	2054	2100	2046	25705
Other/unspecified/combination	109	185	190	218	228	275	352	391	374	350	366	3038
All drug types	**4648**	**4925**	**4574**	**4022**	**3986**	**3720**	**3993**	**4017**	**3950**	**4160**	**4238**	**46233**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.4
Number of drug-caused hospital admissions (principal diagnosis) by age group, males, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	77	78	78	73	72	55	37	38	41	43	47	639
10-19 years	116	133	148	124	150	141	167	178	161	182	160	1660
20-29 years	553	566	675	561	517	559	588	605	562	567	543	6296
30-39 years	772	854	678	654	650	525	600	630	657	647	625	7292
40-49 years	724	719	618	534	476	480	441	418	391	510	440	5751
50-59 years	549	504	414	320	334	288	333	323	286	279	256	3886
60-69 years	244	261	273	162	181	137	200	214	186	159	188	2205
70+ years	73	66	83	64	73	86	67	73	60	72	174	891
All ages	**3108**	**3181**	**2967**	**2492**	**2453**	**2271**	**2433**	**2479**	**2344**	**2459**	**2433**	**28620**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.5
Number of drug-caused hospital admissions (principal diagnosis) by age group, females, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	62	46	50	35	32	40	31	23	27	52	32	430
10-19 years	223	245	220	221	239	181	270	244	255	258	255	2611
20-29 years	419	485	479	478	464	394	449	435	453	484	532	5072
30-39 years	313	370	321	328	333	342	341	355	343	373	460	3879
40-49 years	276	270	235	231	196	257	243	220	250	254	267	2699
50-59 years	147	191	166	128	146	119	131	131	159	139	129	1586
60-69 years	70	97	84	68	73	65	57	82	55	69	55	775
70+ years	30	40	52	41	50	51	38	48	64	72	75	561
All ages	**1540**	**1744**	**1607**	**1530**	**1533**	**1449**	**1560**	**1538**	**1606**	**1701**	**1805**	**17613**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.6
Number of drug-caused hospital admissions (principal diagnosis) by age group, persons, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	139	124	128	108	104	95	68	61	68	95	79	1069
10-19 years	339	378	368	345	389	322	437	422	416	440	415	4271
20-29 years	972	1051	1154	1039	981	953	1037	1040	1015	1051	1075	11368
30-39 years	1085	1224	999	982	983	867	941	985	1000	1020	1085	11171
40-49 years	1000	989	853	765	672	737	684	638	641	764	707	8450
50-59 years	696	695	580	448	480	407	464	454	445	418	385	5472
60-69 years	314	358	357	230	254	202	257	296	241	228	243	2980
70+ years	103	106	135	105	123	137	105	121	124	144	249	1452
All ages	**4648**	**4925**	**4574**	**4022**	**3986**	**3720**	**3993**	**4017**	**3950**	**4160**	**4238**	**46233**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.7
Number of alcohol-caused hospital admissions (principal diagnosis) by age group, males, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	5	10	6	5	9	10	5	2	5	3	2	62
10-19 years	24	37	56	22	34	31	46	48	38	47	43	426
20-29 years	301	306	351	293	254	272	282	299	261	266	249	3134
30-39 years	643	688	551	490	450	380	416	418	406	424	381	5247
40-49 years	653	644	540	454	397	392	376	331	307	411	340	4845
50-59 years	525	471	366	295	307	260	303	298	254	247	217	3543
60-69 years	232	250	248	143	164	119	185	195	159	134	151	1980
70+ years	63	49	68	59	59	68	54	59	44	42	141	706
All ages	**2446**	**2455**	**2186**	**1761**	**1674**	**1532**	**1667**	**1650**	**1474**	**1574**	**1524**	**19943**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.8
Number of alcohol-caused hospital admissions (principal diagnosis) by age group, females, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	9	8	7	4	2	9	3	2	3	2	1	50
10-19 years	19	31	21	24	22	19	23	27	28	30	23	267
20-29 years	79	112	93	115	108	102	124	121	139	128	132	1253
30-39 years	106	119	106	95	110	123	136	128	134	130	153	1340
40-49 years	144	119	105	85	78	111	110	101	113	95	94	1155
50-59 years	101	111	103	75	78	69	85	87	104	80	62	955
60-69 years	56	58	49	46	44	37	35	59	27	34	28	473
70+ years	13	19	31	20	28	28	18	24	32	27	29	269
All ages	**527**	**577**	**515**	**464**	**470**	**498**	**534**	**549**	**580**	**526**	**522**	**5762**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.9
Number of alcohol-caused hospital admissions (principal diagnosis) by age group, persons, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	14	18	13	9	11	19	8	4	8	5	3	112
10-19 years	43	68	77	46	56	50	69	75	66	77	66	693
20-29 years	380	418	444	408	362	374	406	420	400	394	381	4387
30-39 years	749	807	657	585	560	503	552	546	540	554	534	6587
40-49 years	797	763	645	539	475	503	486	432	420	506	434	6000
50-59 years	626	582	469	370	385	329	388	385	358	327	279	4498
60-69 years	288	308	297	189	208	156	220	254	186	168	179	2453
70+ years	76	68	99	79	87	96	72	83	76	69	170	975
All ages	**2973**	**3032**	**2701**	**2225**	**2144**	**2030**	**2201**	**2199**	**2054**	**2100**	**2046**	**25705**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.10
Number of hospital admissions (principal diagnosis) due to drugs other than alcohol by age group, males, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	72	68	72	68	63	45	32	36	36	40	45	577
10-19 years	92	96	92	102	116	110	121	130	123	135	117	1234
20-29 years	252	260	324	268	263	287	306	306	301	301	294	3162
30-39 years	129	166	127	164	200	145	184	212	251	223	244	2045
40-49 years	71	75	78	80	79	88	65	87	84	99	100	906
50-59 years	24	33	48	25	27	28	30	25	32	32	39	343
60-69 years	12	11	25	19	17	18	15	19	27	25	37	225
70+ years	10	17	15	5	14	18	13	14	16	30	33	185
All ages	**662**	**726**	**781**	**731**	**779**	**739**	**766**	**829**	**870**	**885**	**909**	**8677**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.11
Number of hospital admissions (principal diagnosis) due to drugs other than alcohol by age group, females, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	53	38	43	31	30	31	28	21	24	50	31	380
10-19 years	204	214	199	197	217	162	247	217	227	228	232	2344
20-29 years	340	373	386	363	356	292	325	314	314	356	400	3819
30-39 years	207	251	215	233	223	219	205	227	209	243	307	2539
40-49 years	132	151	130	146	118	146	133	119	137	159	173	1544
50-59 years	46	80	63	53	68	50	46	44	55	59	67	631
60-69 years	14	39	35	22	29	28	22	23	28	35	27	302
70+ years	17	21	21	21	22	23	20	24	32	45	46	292
All ages	**1013**	**1167**	**1092**	**1066**	**1063**	**951**	**1026**	**989**	**1026**	**1175**	**1283**	**11851**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.12
Number of hospital admissions (principal diagnosis) due to drugs other than alcohol by age group, persons, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	125	106	115	99	93	76	60	57	60	90	76	957
10-19 years	296	310	291	299	333	272	368	347	350	363	349	3578
20-29 years	592	633	710	631	619	579	631	620	615	657	694	6981
30-39 years	336	417	342	397	423	364	389	439	460	466	551	4584
40-49 years	203	226	208	226	197	234	198	206	221	258	273	2450
50-59 years	70	113	111	78	95	78	76	69	87	91	106	974
60-69 years	26	50	60	41	46	46	37	42	55	60	64	527
70+ years	27	38	36	26	36	41	33	38	48	75	79	477
All ages	**1675**	**1893**	**1873**	**1797**	**1842**	**1690**	**1792**	**1818**	**1896**	**2060**	**2192**	**20528**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.13
Number of drug-caused hospital admissions (principal diagnosis) due to poisoning by type of drug, males, Western Australia, 1982-1992

Type of drug	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
Opiates	98	114	108	107	97	110	104	111	130	134	125	1238
Barbiturates	21	26	26	9	8	4	7	6	2	5	5	119
Sedatives	32	20	39	34	44	48	55	54	62	62	70	520
Tranquillisers	298	295	294	287	302	217	225	227	235	229	263	2872
Anti-depressants	60	59	68	61	81	94	60	86	106	125	138	938
Cocaine	0	1	0	0	0	0	0	0	2	0	0	3
Psychostimulants	1	1	2	4	5	7	10	5	8	14	9	66
Hallucinogens	5	3	4	5	0	1	1	1	1	5	11	37
Volatile substances	65	62	66	56	41	33	31	31	20	37	26	468
Alcohol	24	36	40	26	14	19	12	6	16	35	50	278
All drug types	**604**	**617**	**647**	**589**	**592**	**533**	**505**	**527**	**582**	**646**	**697**	**6539**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.14
Number of drug-caused hospital admissions (principal diagnosis) due to poisoning by type of drug, females, Western Australia, 1982-1992

Type of drug	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
Opiates	191	172	173	179	219	162	191	207	232	281	281	2288
Barbiturates	34	43	34	24	21	9	6	3	3	11	4	192
Sedatives	40	47	51	67	78	82	89	96	84	99	77	810
Tranquillisers	554	575	529	494	471	380	383	332	327	315	420	4780
Anti-depressants	111	150	149	149	131	158	170	161	187	241	226	1833
Cocaine	1	2	0	0	0	0	0	0	3	3	3	12
Psychostimulants	2	4	5	4	2	16	14	13	10	16	17	103
Hallucinogens	3	2	1	1	1	1	1	1	1	4	1	17
Volatile substances	19	25	27	16	12	18	10	14	9	28	17	195
Alcohol	28	34	29	23	10	18	3	6	14	15	39	219
All drug types	**983**	**1054**	**998**	**957**	**945**	**844**	**867**	**833**	**870**	**1013**	**1085**	**10449**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.15
Number of drug-caused hospital admissions (principal diagnosis) due to poisoning by type of drug, persons, Western Australia, 1982-1992

Type of drug	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
Opiates	289	286	281	286	316	272	295	318	362	415	406	3526
Barbiturates	55	69	60	33	29	13	13	9	5	16	9	311
Sedatives	72	67	90	101	122	130	144	150	146	161	147	1330
Tranquillisers	852	870	823	781	773	597	608	559	562	544	683	7652
Anti-depressants	171	209	217	210	212	252	230	247	293	366	364	2771
Cocaine	1	3	0	0	0	0	0	0	5	3	3	15
Psychostimulants	3	5	7	8	7	23	24	18	18	30	26	169
Hallucinogens	8	5	5	6	1	2	2	2	2	9	12	54
Volatile substances	84	87	93	72	53	51	41	45	29	65	43	663
Alcohol	52	70	69	49	24	37	15	12	30	50	89	497
All drug types	**1587**	**1671**	**1645**	**1546**	**1537**	**1377**	**1372**	**1360**	**1452**	**1659**	**1782**	**16988**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.16
Age-standardised rates for drug-caused hospital admissions (principal diagnosis) due to poisoning by type of drug, males, Western Australia, 1982-1992

Type of drug	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Opiates	13.4 (1.4)	15.4 (1.5)	14.5 (1.4)	13.7 (1.4)	11.9 (1.2)	13.2 (1.3)	12.5 (1.2)	12.8 (1.2)	14.9 (1.3)	15.3 (1.3)	14.0 (1.3)
Barbiturates	2.6 (0.6)	3.4 (0.7)	3.5 (0.7)	1.1 (0.4)	0.9 (0.4)	0.4 (0.2)	0.8 (0.3)	0.6 (0.3)	0.2 (0.1)	0.5 (0.3)	0.6 (0.2)
Sedatives	4.3 (0.8)	2.8 (0.6)	5.1 (0.8)	4.2 (0.7)	5.5 (0.8)	5.9 (0.9)	6.3 (0.9)	6.6 (0.9)	7.4 (0.9)	7.0 (0.9)	7.8 (1.0)
Tranquillisers	42.5 (2.5)	40.4 (2.4)	40.6 (2.4)	39.5 (2.4)	38.6 (2.3)	27.5 (1.9)	27.1 (1.8)	27.1 (1.8)	27.1 (1.8)	26.2 (1.8)	28.5 (1.8)
Anti-depressants	8.2 (1.1)	7.8 (1.0)	8.7 (1.1)	7.6 (1.0)	9.6 (1.1)	10.8 (1.1)	6.9 (0.9)	9.5 (1.0)	11.5 (1.1)	14.4 (1.3)	15.4 (1.3)
Psychostimulants	0.1 (0.1)	0.1 (0.1)	0.3 (0.2)	0.5 (0.3)	0.7 (0.3)	0.8 (0.4)	1.3 (0.4)	0.5 (0.3)	0.8 (0.3)	1.7 (0.4)	1.0 (0.3)
Volatile substances	12.1 (1.5)	11.3 (1.5)	12.3 (1.5)	9.4 (1.3)	7.2 (1.1)	5.4 (1.0)	4.6 (0.9)	4.6 (0.9)	3.2 (0.7)	5.4 (0.9)	3.7 (0.7)
Alcohol	3.5 (0.7)	5.5 (0.9)	5.7 (0.9)	3.6 (0.7)	2.5 (0.7)	2.8 (0.7)	1.8 (0.5)	0.7 (0.3)	2.1 (0.6)	4.0 (0.7)	5.2 (0.8)
All drugs	87.8 (3.7)	86.9 (3.6)	91.0 (3.7)	80.4 (3.4)	77.4 (3.3)	67.5 (3.0)	61.6 (2.8)	63.0 (2.8)	67.8 (2.9)	75.1 (3.0)	77.5 (3.0)

Source: Health Department of Western Australia, Hospital Morbidity Data System
Note: Figures in brackets are standard errors.

Table A3.17
Age-standardised rates for drug-caused hospital admissions (principal diagnosis) due to poisoning by type of drug, females, Western Australia, 1982-1992

Type of drug	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Opiates	27.9 (2.0)	24.5 (1.9)	24.4 (1.9)	24.5 (1.9)	29.8 (2.0)	21.6 (1.7)	25.0 (1.8)	26.6 (1.9)	29.5 (2.0)	35.1 (2.1)	34.9 (2.1)
Barbiturates	5.0 (0.9)	6.3 (1.0)	4.5 (0.8)	3.2 (0.7)	2.7 (0.6)	0.9 (0.3)	0.7 (0.3)	0.3 (0.2)	0.3 (0.2)	1.1 (0.3)	0.4 (0.2)
Sedatives	5.6 (0.9)	6.6 (1.0)	6.8 (1.0)	8.8 (1.1)	10.0 (1.1)	9.7 (1.1)	11.4 (1.2)	11.6 (1.2)	9.9 (1.1)	11.4 (1.2)	8.4 (1.0)
Tranquillisers	80.6 (3.5)	80.6 (3.4)	73.4 (3.3)	67.0 (3.1)	61.4 (2.9)	48.0 (2.5)	48.0 (2.5)	39.1 (2.2)	38.4 (2.2)	36.8 (2.1)	46.3 (2.3)
Anti-depressants	15.6 (1.5)	21.5 (1.8)	20.4 (1.7)	19.3 (1.6)	17.2 (1.5)	19.7 (1.6)	20.5 (1.6)	18.5 (1.5)	21.2 (1.6)	27.3 (1.8)	24.9 (1.7)
Psychostimulants	0.3 (0.2)	0.5 (0.3)	0.6 (0.3)	0.5 (0.3)	0.4 (0.3)	2.3 (0.6)	1.8 (0.5)	1.7 (0.5)	1.2 (0.4)	2.0 (0.5)	2.2 (0.5)
Volatile substances	4.2 (1.0)	4.7 (1.0)	5.3 (1.0)	3.0 (0.8)	2.2 (0.6)	3.4 (0.8)	1.8 (0.6)	2.3 (0.6)	1.7 (0.6)	4.3 (0.8)	2.4 (0.6)
Alcohol	4.9 (1.0)	5.3 (0.9)	4.6 (0.9)	3.4 (0.7)	1.5 (0.5)	2.9 (0.7)	0.6 (0.4)	0.9 (0.4)	2.1 (0.6)	1.8 (0.5)	4.6 (0.7)
All drugs	145.1 (4.7)	151.1 (4.7)	140.6 (4.5)	130.3 (4.3)	125.1 (4.1)	108.8 (3.8)	109.8 (3.8)	101.0 (3.6)	104.7 (3.6)	120.9 (3.9)	124.2 (3.9)

Source: Health Department of Western Australia, Hospital Morbidity Data System
Note: Figures in brackets are standard errors.

Table A3.18
Number of drug-caused hospital admissions (principal diagnosis) due to poisoning by cause and sex, Western Australia, 1982-1992

Type of cause		1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
Accidental	M	107	103	100	99	82	66	52	49	64	76	75	873
	F	77	61	65	54	45	56	37	33	54	86	64	632
	Persons	**184**	**164**	**165**	**153**	**127**	**122**	**89**	**82**	**118**	**162**	**139**	**1505**
Suicide	M	483	502	532	471	491	455	447	471	489	524	570	5435
	F	890	982	916	892	888	775	826	790	777	880	978	9594
	Persons	**1373**	**1484**	**1448**	**1363**	**1379**	**1230**	**1273**	**1261**	**1266**	**1404**	**1548**	**15029**
Undetermined	M	14	12	15	19	19	12	6	7	29	46	52	231
	F	16	11	17	11	12	13	4	10	39	47	43	223
	Persons	**30**	**23**	**32**	**30**	**31**	**25**	**10**	**17**	**68**	**93**	**95**	**454**
All causes	M	604	617	647	589	592	533	505	527	582	646	697	6539
	F	983	1054	998	957	945	844	867	833	870	1013	1085	10449
	Persons	**1587**	**1671**	**1645**	**1546**	**1537**	**1377**	**1372**	**1360**	**1452**	**1659**	**1782**	**16988**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.19
Number of hospital admissions (principal diagnosis) due to poisoning by age group, males, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	77	77	75	72	69	51	36	38	40	42	45	622
10-19 years	94	90	88	86	95	84	84	82	86	105	85	979
20-29 years	195	195	226	192	159	157	164	179	172	206	206	2051
30-39 years	123	131	100	124	145	106	115	104	142	140	175	1405
40-49 years	67	69	73	70	69	76	54	75	74	87	94	808
50-59 years	25	29	47	24	26	26	24	22	29	28	33	313
60-69 years	12	10	24	17	16	18	15	13	26	22	33	206
70+ years	11	16	14	4	13	15	13	14	13	16	26	155
All ages	**604**	**617**	**647**	**589**	**592**	**533**	**505**	**527**	**582**	**646**	**697**	**6539**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.20
Number of hospital admissions (principal diagnosis) due to poisoning by age group, females, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	62	46	50	35	31	40	30	23	26	50	31	424
10-19 years	203	212	197	189	211	160	219	195	204	211	215	2216
20-29 years	318	303	309	298	285	233	241	237	240	293	322	3079
30-39 years	197	230	202	207	200	181	175	187	167	204	257	2207
40-49 years	128	138	125	139	112	135	119	108	130	145	151	1430
50-59 years	46	70	62	47	63	50	45	41	50	46	60	580
60-69 years	12	36	33	21	24	24	20	21	28	27	19	265
70+ years	17	19	20	21	19	21	18	21	25	37	30	248
All ages	**983**	**1054**	**998**	**957**	**945**	**844**	**867**	**833**	**870**	**1013**	**1085**	**10449**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.21
Number of hospital admissions (principal diagnosis) due to poisoning by age group, persons, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	139	123	125	107	100	91	66	61	66	92	76	1046
10-19 years	297	302	285	275	306	244	303	277	290	316	300	3195
20-29 years	513	498	535	490	444	390	405	416	412	499	528	5130
30-39 years	320	361	302	331	345	287	290	291	309	344	432	3612
40-49 years	195	207	198	209	181	211	173	183	204	232	245	2238
50-59 years	71	99	109	71	89	76	69	63	79	74	93	893
60-69 years	24	46	57	38	40	42	35	34	54	49	52	471
70+ years	28	35	34	25	32	36	31	35	38	53	56	403
All ages	**1587**	**1671**	**1645**	**1546**	**1537**	**1377**	**1372**	**1360**	**1452**	**1659**	**1782**	**16988**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.22
Number of hospital admissions (principal diagnosis) due to drug-caused mental disorders by type of disorder and drug, males, Western Australia, 1982-1992

Type of disorder and drug	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-92
Psychoses												
Alcohol	202	213	206	202	194	169	208	235	200	227	286	2342
Other drugs	9	14	16	17	11	8	20	21	24	59	63	262
Dependence												
Alcohol	1952	1873	1543	1145	1052	955	879	760	723	785	700	12367
Opiates	9	40	26	18	25	13	20	15	14	10	11	201
Barbiturates/ tranquilisers/ sedatives	5	10	21	10	8	9	7	10	7	7	6	100
Cocaine	0	0	0	0	0	0	0	0	0	0	0	0
Cannabis	0	0	1	0	2	0	1	0	0	0	0	4
Psychostimulants	0	1	0	0	4	1	0	1	2	1	4	14
Hallucinogens	0	0	1	0	0	0	0	0	0	0	0	1
Volatile substances	2	7	11	13	16	19	10	10	15	6	19	128
Combination	53	65	85	95	112	156	183	197	198	136	126	1406
Non-dependent abuse												
Alcohol	70	91	134	147	159	188	233	285	272	212	192	1983
Cannabis	0	0	3	3	3	0	2	7	6	8	3	35
Hallucinogens	0	1	1	0	1	0	1	3	5	3	5	20
Barbiturates/ tranquilisers/ sedatives	1	2	2	5	3	6	9	10	7	16	4	65
Opiates	0	0	0	0	1	0	2	1	1	1	3	9
Cocaine	0	0	0	0	1	0	0	0	0	0	0	1
Psychostimulants	0	1	0	0	0	0	1	1	10	10	11	34
Combination	3	4	7	7	14	13	17	32	15	17	7	136
All mental disorders	**2306**	**2322**	**2057**	**1662**	**1606**	**1537**	**1593**	**1588**	**1499**	**1498**	**1440**	**19108**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.23
Number of hospital admissions (principal diagnosis) due to drug-caused mental disorders by type of disorder and drug, females, Western Australia, 1982-1992

Type of disorder and drug	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-92
Psychoses												
Alcohol	46	44	37	30	34	34	39	46	51	53	58	472
Other drugs	7	9	14	13	9	9	13	12	10	42	51	189
Dependence												
Alcohol	326	343	291	258	250	266	262	257	256	254	175	2938
Opiates	7	18	19	15	15	12	12	4	5	15	18	140
Barbiturates/ tranquilisers/ sedatives	5	18	18	16	18	12	5	10	18	13	11	144
Cocaine	0	0	1	0	0	0	0	0	0	0	0	1
Cannabis	0	2	1	0	0	1	0	0	1	1	0	6
Psychostimulants	0	2	0	0	0	0	0	0	2	0	4	8
Hallucinogens	0	0	0	0	0	0	0	0	0	0	0	0
Volatile substances	1	2	1	1	7	0	1	6	1	8	10	38
Combination	35	76	56	75	65	82	97	104	99	75	103	867
Non-dependent abuse												
Alcohol	57	92	93	95	105	113	132	152	156	126	164	1285
Cannabis	0	1	0	0	2	2	1	2	5	0	2	15
Hallucinogens	1	0	0	0	0	1	1	2	3	2	3	13
Barbiturates/ tranquilisers/ sedatives	0	4	5	4	2	1	10	2	6	4	12	50
Opiates	0	0	1	0	0	0	1	0	1	1	3	7
Cocaine	0	0	0	0	0	0	0	0	0	0	1	1
Psychostimulants	0	1	0	0	0	1	3	4	3	4	8	24
Combination	2	14	7	8	10	4	18	16	16	12	11	118
All mental disorders	**487**	**626**	**544**	**515**	**517**	**538**	**595**	**617**	**633**	**610**	**634**	**6316**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.24
Number of hospital admissions (principal diagnosis) due to drug-caused mental disorders by type of disorder and drug, persons, Western Australia, 1982-1992

Type of disorder and drug	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-92
Psychoses												
Alcohol	248	257	243	232	228	203	247	281	251	280	344	2814
Other drugs	16	23	30	30	20	17	33	33	34	101	114	451
Dependence												
Alcohol	2278	2216	1834	1403	1302	1221	1141	1017	979	1039	875	15305
Opiates	16	58	45	33	40	25	32	19	19	25	29	341
Barbiturates/ tranquilisers/ sedatives	10	28	39	26	26	21	12	20	25	20	17	244
Cocaine	0	0	1	0	0	0	0	0	0	0	0	1
Cannabis	0	2	2	0	2	1	1	0	1	1	0	10
Psychostimulants	0	3	0	0	4	1	0	1	4	1	8	22
Hallucinogens	0	0	1	0	0	0	0	0	0	0	0	1
Volatile substances	3	9	12	14	23	19	11	16	16	14	29	166
Combination	88	141	141	170	177	238	280	301	297	211	229	2273
Non-dependent abuse												
Alcohol	127	183	227	242	264	301	365	437	428	338	356	3268
Cannabis	0	1	3	3	5	2	3	9	11	8	5	50
Hallucinogens	1	1	1	0	1	1	2	5	8	5	8	33
Barbiturates/ tranquilisers/ sedatives	1	6	7	9	5	7	19	12	13	20	16	115
Opiates	0	0	1	0	1	0	3	1	2	2	6	16
Cocaine	0	0	0	0	1	0	0	0	0	0	1	2
Psychostimulants	0	2	0	0	0	1	4	5	13	14	19	58
Combination	5	18	14	15	24	17	35	48	31	29	18	254
All mental disorders	2793	2948	2601	2177	2123	2075	2188	2205	2132	2108	2074	25424

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.25
Number of drug-caused hospital admissions (principal diagnosis) due to mental disorders by age group, males, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	1	3	1	3	4	1	0	1	1	2	17
10-19 years	18	37	49	33	50	51	78	93	72	72	71	624
20-29 years	341	346	421	332	331	382	395	386	355	332	308	3929
30-39 years	608	670	528	491	460	381	425	475	483	448	408	5377
40-49 years	608	597	482	404	361	365	321	275	262	334	279	4288
50-59 years	478	426	310	244	244	219	235	214	198	193	149	2910
60-69 years	198	209	209	106	114	86	107	111	96	79	94	1409
70+ years	55	36	55	51	43	49	31	34	32	39	129	554
All ages	**2306**	**2322**	**2057**	**1662**	**1606**	**1537**	**1593**	**1588**	**1499**	**1498**	**1440**	**19108**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.26
Number of drug-caused hospital admissions (principal diagnosis) due to mental disorders by age groups, females, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	0	0	0	1	0	1	0	1	2	1	6
10-19 years	18	31	23	31	26	19	50	46	50	45	39	378
20-29 years	97	176	167	177	173	156	198	189	203	186	200	1922
30-39 years	110	133	109	110	119	141	142	149	161	152	179	1505
40-49 years	124	120	94	75	72	112	107	102	109	95	101	1111
50-59 years	83	101	86	65	64	59	58	65	70	74	50	775
60-69 years	45	48	37	38	38	27	22	46	11	30	26	368
70+ years	10	17	28	19	24	24	17	20	28	26	38	251
All ages	**487**	**626**	**544**	**515**	**517**	**538**	**595**	**617**	**633**	**610**	**634**	**6316**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.27
Number of drug-caused hospital admissions (principal diagnosis) due to mental disorders by age group, persons, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	1	3	1	4	4	2	0	2	3	3	23
10-19 years	36	68	72	64	76	70	128	139	122	117	110	1002
20-29 years	438	522	588	509	504	538	593	575	558	518	508	5851
30-39 years	718	803	637	601	579	522	567	624	644	600	587	6882
40-49 years	732	717	576	479	433	477	428	377	371	429	380	5399
50-59 years	561	527	396	309	308	278	293	279	268	267	199	3685
60-69 years	243	257	246	144	152	113	129	157	107	109	120	1777
70+ years	65	53	83	70	67	73	48	54	60	65	167	805
All ages	**2793**	**2948**	**2601**	**2177**	**2123**	**2075**	**2188**	**2205**	**2132**	**2108**	**2074**	**25424**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.28
Age-standardised rates for hospital admissions (principal diagnosis) due to drug-caused mental disorders by type of disorder and drug, males, Western Australia, 1982-1992

Type of disorder	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Psychoses											
Alcohol	28.4 (2.0)	28.9 (2.0)	27.3 (1.9)	25.3 (1.8)	23.1 (1.7)	20.2 (1.6)	23.9 (1.7)	26.0 (1.7)	22.4 (1.6)	23.7 (1.6)	30.3 (1.8)
Other drugs	1.2 (0.4)	1.8 (0.5)	2.2 (0.5)	2.1 (0.5)	1.5 (0.4)	1.1 (0.4)	2.4 (0.5)	2.4 (0.5)	2.8 (0.6)	6.1 (0.8)	6.7 (0.9)
Dependence											
Alcohol	274.5 (6.3)	254.0 (5.9)	204.5 (5.3)	146.2 (4.4)	129.5 (4.0)	113.8 (3.7)	102.1 (3.5)	85.3 (3.1)	78.4 (2.9)	84.3 (3.0)	71.3 (2.7)
Other drugs	9.2 (1.1)	15.6 (1.4)	18.5 (1.5)	16.5 (1.4)	19.9 (1.6)	23.6 (1.7)	25.4 (1.7)	25.2 (1.7)	25.1 (1.7)	16.9 (1.4)	17.6 (1.4)
Non-dependent abuse											
Alcohol	9.3 (1.1)	11.9 (1.2)	17.1 (1.5)	17.9 (1.5)	18.8 (1.5)	22.2 (1.6)	26.6 (1.8)	31.5 (1.9)	29.1 (1.8)	22.9 (1.6)	19.6 (1.4)
Other drugs	0.6 (0.3)	1.1 (0.4)	1.7 (0.5)	2.1 (0.6)	2.9 (0.6)	2.4 (0.6)	3.9 (0.7)	6.7 (0.9)	5.2 (0.8)	6.4 (0.9)	3.9 (0.7)
All mental disorders											
All drugs	323.2 (6.8)	312.6 (6.6)	271.5 (6.0)	210.1 (5.2)	195.9 (4.9)	182.9 (4.7)	184.7 (4.7)	177.1 (4.5)	162.6 (4.2)	160.5 (4.2)	149.7 (4.0)

Source: Health Department of Western Australia, Hospital Morbidity Data System
Note: Figures in brackets are standard errors.

Table A3.29
Age-standardised rates for hospital admissions (principal diagnosis) due to drug-caused mental disorders by type of disorder and drug, females, Western Australia, 1982-1992

Type of disorder and drug	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Psychoses											
Alcohol	6.8 (1.0)	6.0 (0.9)	5.2 (0.9)	4.0 (0.7)	4.2 (0.7)	4.1 (0.7)	4.7 (0.8)	5.4 (0.8)	5.5 (0.8)	5.8 (0.8)	5.7 (0.8)
Other drugs	1.0 (0.4)	1.1 (0.4)	1.8 (0.5)	1.8 (0.5)	1.0 (0.4)	1.1 (0.4)	1.6 (0.4)	1.3 (0.4)	1.1 (0.4)	4.0 (0.7)	5.2 (0.8)
Dependence											
Alcohol	48.7 (2.7)	49.0 (2.7)	39.1 (2.3)	34.3 (2.2)	31.8 (2.0)	33.1 (2.1)	31.2 (2.0)	29.4 (1.9)	28.4 (1.8)	28.2 (1.8)	18.2 (1.4)
Other drugs	6.7 (1.0)	16.0 (1.5)	12.8 (1.3)	13.8 (1.3)	13.3 (1.3)	12.5 (1.2)	13.8 (1.3)	14.2 (1.3)	14.1 (1.3)	13.0 (1.2)	15.8 (1.3)
Non-dependent abuse											
Alcohol	8.1 (1.1)	12.7 (1.3)	12.2 (1.3)	12.2 (1.3)	13.0 (1.3)	13.7 (1.3)	15.9 (1.4)	18.0 (1.5)	17.9 (1.4)	14.4 (1.3)	17.9 (1.4)
Other drugs	0.4 (0.2)	2.8 (0.6)	1.8 (0.5)	1.6 (0.5)	1.8 (0.5)	1.2 (0.4)	4.5 (0.8)	3.2 (0.6)	4.2 (0.7)	2.9 (0.6)	4.7 (0.8)
All mental disorders											
All drugs	71.5 (3.3)	87.6 (3.5)	73.2 (3.2)	67.9 (3.0)	65.2 (2.9)	65.7 (2.9)	71.6 (3.0)	71.4 (2.9)	71.6 (2.9)	68.1 (2.8)	67.2 (2.7)

Source: Health Department of Western Australia, Hospital Morbidity Data System
Note: Figures in brackets are standard errors.

Table A3.30
Age-standardised rates for hospital admissions (principal diagnosis) due to drug-caused mental disorders by type of disorder and drug, persons, Western Australia, 1982-1992

Type of disorder	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Psychoses											
Alcohol	17.6 (1.1)	17.4 (1.1)	16.3 (1.1)	14.7 (1.0)	13.8 (0.9)	12.0 (0.9)	14.5 (0.9)	15.9 (1.0)	14.2 (0.9)	14.9 (0.9)	18.1 (1.0)
Other drugs	1.2 (0.3)	1.6 (0.3)	2.1 (0.4)	2.2 (0.4)	1.3 (0.3)	1.1 (0.3)	2.0 (0.3)	2.0 (0.3)	2.1 (0.3)	5.2 (0.5)	6.0 (0.6)
Dependence											
Alcohol	164.0 (3.5)	153.4 (3.3)	123.2 (2.9)	91.4 (2.5)	82.1 (2.3)	74.3 (2.2)	67.7 (2.0)	58.0 (1.8)	53.8 (1.7)	56.8 (1.8)	44.4 (1.5)
Other drugs	8.0 (0.7)	15.8 (1.0)	15.7 (1.0)	15.2 (1.0)	16.6 (1.0)	18.2 (1.0)	19.7 (1.1)	19.8 (1.1)	19.7 (1.0)	15.0 (0.9)	16.7 (1.0)
Non-dependent abuse											
Alcohol	8.7 (0.8)	12.1 (0.9)	14.7 (1.0)	15.2 (1.0)	16.0 (1.0)	18.0 (1.0)	21.3 (1.1)	25.0 (1.2)	23.7 (1.2)	18.5 (1.0)	18.7 (1.0)
Other drugs	0.5 (0.2)	1.9 (0.4)	1.7 (0.3)	1.9 (0.4)	2.4 (0.4)	1.8 (0.3)	4.2 (0.5)	5.0 (0.6)	4.7 (0.5)	4.7 (0.5)	4.3 (0.5)
All mental disorders											
All drugs	199.9 (3.8)	202.5 (3.8)	173.9 (3.4)	140.4 (3.0)	131.9 (2.9)	125.4 (2.8)	129.1 (2.8)	125.1 (2.7)	117.7 (2.6)	115.0 (2.5)	108.5 (2.4)

Source: Health Department of Western Australia, Hospital Morbidity Data System
Note: Figures in brackets are standard errors.

Table A3.31
Number of hospital admissions (principal diagnosis) due to conditions wholly attributable to alcohol by condition and sex, Western Australia, 1982-1992

Condition		1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
Polyneuropathy	M	12	16	16	15	10	6	8	6	9	5	6	109
	F	3	3	3	3	6	6	6	5	5	3	4	47
	Persons	15	19	19	18	16	12	14	11	14	8	10	156
Cardiomyopathy	M	7	17	16	15	15	13	21	24	13	11	18	170
	F	1	2	2	2	6	1	2	1	2	2	0	21
	Persons	8	19	18	17	21	14	23	25	15	13	18	191
Gastritis	M	75	90	101	111	86	66	74	91	75	123	72	964
	F	13	22	14	18	18	9	23	25	13	22	17	194
	Persons	88	112	115	129	104	75	97	116	88	145	89	1158
Liver cirrhosis	M	104	119	130	100	144	116	232	243	166	176	200	1730
	F	53	37	46	35	41	51	67	57	83	51	65	586
	Persons	157	156	176	135	185	167	299	300	249	227	265	2316
All conditions	M	198	242	263	241	255	201	335	364	263	315	296	2973
	F	70	64	65	58	71	67	98	88	103	78	86	848
	Persons	268	306	328	299	326	268	433	452	366	393	382	3821

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.32
Number of hospital admissions (principal diagnosis) due to conditions wholly attributable to alcohol by age group, males, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	0	0	0	0	0	0	0	0	0	0	0
10-19 years	4	6	11	5	5	6	5	3	3	5	4	57
20-29 years	17	25	28	37	27	20	29	40	35	29	29	316
30-39 years	41	53	50	39	45	38	60	51	32	59	42	510
40-49 years	49	53	63	60	46	39	66	68	55	89	67	655
50-59 years	46	49	57	52	64	43	74	87	59	58	74	663
60-69 years	34	42	40	39	51	33	78	90	64	58	61	590
70+ years	7	14	14	9	17	22	23	25	15	17	19	182
All ages	**198**	**242**	**263**	**241**	**255**	**201**	**335**	**364**	**263**	**315**	**296**	**2973**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.33
Number of hospital admissions (principal diagnosis) due to conditions wholly attributable to alcohol by age group, females, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	0	0	0	0	0	0	0	0	0	0	0
10-19 years	2	2	0	1	2	2	1	3	1	2	1	17
20-29 years	4	6	3	3	6	5	10	9	10	5	10	71
30-39 years	6	7	10	11	14	20	24	19	15	17	24	167
40-49 years	24	12	16	17	12	10	17	10	11	14	15	158
50-59 years	18	20	18	16	19	10	28	25	39	19	19	231
60-69 years	13	13	14	9	11	14	15	15	16	12	10	142
70+ years	3	4	4	1	7	6	3	7	11	9	7	62
All ages	**70**	**64**	**65**	**58**	**71**	**67**	**98**	**88**	**103**	**78**	**86**	**848**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A3.34
Number of hospital admissions (principal diagnosis) due to conditions wholly attributable to alcohol by age group, persons, Western Australia, 1982-1992

Age groups	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
0-9 years	0	0	0	0	0	0	0	0	0	0	0	0
10-19 years	6	8	11	6	7	8	6	6	4	7	5	74
20-29 years	21	31	31	40	33	25	39	49	45	34	39	387
30-39 years	47	60	60	50	59	58	84	70	47	76	66	677
40-49 years	73	65	79	77	58	49	83	78	66	103	82	813
50-59 years	64	69	75	68	83	53	102	112	98	77	93	894
60-69 years	47	55	54	48	62	47	93	105	80	70	71	732
70+ years	10	18	18	10	24	28	26	32	26	26	26	244
All ages	**268**	**306**	**328**	**299**	**326**	**268**	**433**	**452**	**366**	**393**	**382**	**3821**

Source: Health Department of Western Australia, Hospital Morbidity Data System

Table A4.1
Numbers of HIV/AIDS notifications by risk group and year of first diagnosis, Western Australia, 1983-1992

	Year of notification										1983-1992	
Risk group	**1983**	**1984**	**1985**	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**N**	**%**
Homosexual male	2	8	77	82	56	43	59	65	78	45	515	67.2
Bisexual male		-	13	9	16	14	6	-	1	2	61	8.0
Intravenous drug use & homosexusal/bisexual male		-	1	2	6	8	8	6	3	3	37	4.8
Intravenous drug use & female and heterosexual male		-	-	3	3	3	9	6	8	4	36	4.7
Intravenous drug use & female prostitute		-	-	2	1	-	-	-	-	-	3	0.4
Female prostitute		-	-	1	1	-	-	-	-	-	2	0.3
Heterosexual contact		-	5	2	6	-	-	10	13	11	47	6.1
Infant of infected mother		-	-	-	1	-	-	-	-	-	1	0.1
Haemophilia/coagulation disorder		7	10	3	-	-	-	-	-	-	20	2.6
Recipient of blood transfusion		-	-	1	-	3	2	3	-	-	9	1.2
Other/undetermined		-	2	8	1	5	10	3	3	3	35	4.6
All notifications	**2**	**15**	**108**	**113**	**91**	**76**	**94**	**93**	**106**	**68**	**766**	**100.0**

Source: Health Department of WA, HIV/AIDS database

Table A4.2
Number of notifications of drug addiction by age group and sex, Western Australia, 1982-1992

Age group	Sex	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1982-1992
10-19	M	8	6	9	8	2	6	9	7	5	4	2	66
	F	10	6	12	9	2	3	6	8	4	5	1	66
	Total	**18**	**12**	**21**	**17**	**4**	**9**	**15**	**15**	**9**	**9**	**3**	**132**
20-29	M	75	94	134	87	86	82	153	100	81	61	51	1004
	F	42	46	81	75	67	52	87	66	45	30	34	625
	Total	**117**	**140**	**215**	**162**	**153**	**134**	**240**	**166**	**126**	**91**	**85**	**1629**
30-39	M	22	18	33	46	32	34	80	56	41	55	32	449
	F	8	10	24	18	17	15	34	30	20	17	26	219
	Total	**30**	**28**	**57**	**64**	**49**	**49**	**114**	**86**	**61**	**72**	**58**	**668**
40+	M	7	5	5	9	5	5	8	10	3	3	4	64
	F	2	3	3	4	1	1	7	8	1	1	4	35
	Total	**9**	**8**	**8**	**13**	**6**	**6**	**15**	**18**	**4**	**4**	**8**	**99**
Age Missing	M	11	3	1	-	1	3	1	-	-	-	-	20
	F	3	2	-	-	1	1	1	1	1	-	-	10
	Total	**14**	**5**	**1**	-	**2**	**4**	**2**	**1**	**1**	-	-	**30**
All ages	M	123	126	182	150	126	130	251	173	130	123	89	1603
	F	65	67	120	106	88	72	135	113	71	53	65	955
	Persons	**188**	**193**	**302**	**256**	**214**	**202**	**386**	**286**	**201**	**176**	**154**	**2558**

Source: Department of Health, Housing and Community Services, Drugs of Dependence Branch.

Table A4.3
Number of needles/syringes distributed, Western Australia, 1987-1992

Year	Quarter	Chemists	ADA	Western Australian AIDS Council programs			Total
				PSST van	WAAC office	Sauna	
1987	January-March						
	April-June	1,284					1,284
	July September	4,080		*	*	*	4,080
	October-December	8,610		*	*	*	8,610
	Total	**13,974**					**13,974**
1988	January-March	4,180		*	*	*	4,180
	April-June	14,345		*	*	*	14,345
	July-September	15,270		*	*	*	15,270
	October-December	25,140		*	*	*	25,140
	Total	**58,935**					**58,935**
1989	January-March	23,190	75	*	*	*	23,265
	April-June	22,395	275	8,925	5,000	24,000	60,595
	July September	23,755	350	7,793	2,894	5,900	40,692
	October-December	41,405	725	9,754	2,107	8,200	62,191
	Total	**110,745**	**1425**	**26,472**	**10,001**	**38,100**	**186,743**
1990	January-March	63,790	2,065	13,867	1,743	9,000	90,465
	April-June	69,455	2,025	10,863	3,264	21,990	107,597
	July-September	106,720	1,970	14,435	5,159	23,300	151,584
	October-December	110,625	3,375	16,443	9,467	41,500	181,410
	Total	**350,590**	**9,435**	**55,608**	**19,633**	**95,790**	**531,056**
1991	January-March	107,280	2,030	20,092	14,323	55,500	199,225
	April-June	99,360	2,820	22,251	18,469	57,000	199,900
	July-September	117,490	7,866	26,959	24,897	64,000	241,212
	October-December	110,450	8,570	24,247	32,701	62,500	238,468
	Total	**434,580**	**21,286**	**93,549**	**90,390**	**239,000**	**878,805**
1992	January-March	194,650	9,148	19,582	27,074	42,500	292,954
	April-June	142,300	11,357	12,504	18,364	38,000	222,525
	July-September	80,245	17,027	6,785	16,942	43,400	164,399
	October-December	164,465	20,958	7,483	26,097	31,560	250,563
	Total	**581,660**	**58,490**	**46,354**	**88,477**	**155,460**	**930,441**
Total needles & syringes 1987-1992		**1,550,484**	**90,636**	**221,983**	**208,501**	**528,350**	**2,599,954**

Source: Pharmaceutical Council; Western Australian AIDS Council; Alcohol and Drug Authority.
Note: * WA AIDS Council programs monthly data for period July 1987-June 1989 not available, entered as total in April-June 1989 period.

Table A5.1
Number of drug-related telephone calls per quarter, licit drugs, Western Australia, 1986-1992

Year	Quarter	Alcohol	Tobacco	Caffeine	Analgesics	Tranquillisers	Sedatives	Anti-depressants	Prescription drugs	Other drugs
1986	April-June	132	12	-	-	102	-	-	-	162
	July-September	371	20	-	-	99	-	-	-	229
	October-December	474	15	-	-	52	-	-	-	160
	Total	977	47	-	-	253	-	-	-	551
1987	January-March	486	20	-	-	77	-	-	-	100
	April-June	479	34	-	-	78	-	-	-	123
	July-September	515	62	-	-	91	-	-	-	179
	October-December	808	65	-	-	100	-	-	-	232
	Total	2288	181	-	-	346	-	-	-	634
1988	January-March	721	35	-	-	134	-	-	-	183
	April-June	831	67	-	-	143	-	-	-	125
	July September	875	70	-	-	136	-	-	-	285
	October-December	810	43	-	-	135	-	-	-	244
	Total	3237	215	-	-	548	-	-	-	837
1989	January-March	706	28	-	-	73	-	-	-	208
	April-June	790	217	21	37	364	14	94	127	64
	July September	767	218	12	31	189	11	40	84	48
	October-December	685	105	6	22	110	12	31	75	56
	Total	2948	568	39	90	736	37	165	286	376
1990	January-March	822	129	7	32	138	16	28	83	42
	April-June	820	210	17	37	322	17	66	135	53
	July-September	859	172	3	34	171	14	39	102	49
	October-December	725	97	4	21	175	12	44	93	58
	Total	3226	608	31	124	806	59	177	413	202
1991	January-March	824	103	5	19	161	20	69	85	52
	April-June	719	128	6	50	253	30	46	116	76
	July-September	770	136	17	54	179	11	51	142	43
	October-December	837	78	7	40	177	10	68	114	38
	Total	3150	445	35	163	770	71	234	457	209
1992	January-March	965	128	6	31	142	6	68	105	45
	April-June	806	196	6	41	165	4	57	89	52
	July-September	805	125	9	27	126	16	45	76	80
	October-December	837	64	5	52	152	10	56	112	56
	Total	3413	513	26	151	585	36	226	382	233

Source: Western Australian Alcohol & Drug Authority, Alcohol & Drug Information Service

Table A5.2
Number of drug-related telephone calls per quarter, illicit drugs, Western Australia, 1986-1992

Year	Quarter	Heroin	Cannabis	Cocaine	Psychostimulants	Hallucinogens	Inhalants	Polydrug	MDMA	All illicit drugs
1986	April-June	124	293	-	-	-	-	74	-	491
	July-September	166	200	-	36	22	-	-	-	424
	October-December	169	145	-	32	3	-	192	-	541
	Total	**459**	**638**	**-**	**68**	**25**	**-**	**266**	**-**	**1456**
1987	January-March	166	190	6	30	4	-	118	-	514
	April-June	163	246	14	27	8	-	66	-	524
	July-September	147	212	13	21	11	-	62	3	469
	October-December	196	257	23	60	17	-	70	15	638
	Total	**672**	**905**	**56**	**138**	**40**	**-**	**316**	**18**	**2145**
1988	January-March	214	289	16	54	18	-	75	25	691
	April-June	185	236	16	26	6	-	92	20	581
	July September	196	264	18	97	29	-	87	44	735
	October-December	186	219	21	102	23	-	100	24	675
	Total	**781**	**1008**	**71**	**279**	**76**	**-**	**354**	**113**	**2682**
1989	January-March	162	206	11	72	10	-	55	16	532
	April-June	201	298	21	122	31	40	56	29	798
	July September	178	263	16	103	23	43	35	20	681
	October-December	190	211	21	109	20	49	32	13	645
	Total	**731**	**978**	**69**	**406**	**84**	**132**	**178**	**78**	**2656**
1990	January-March	169	265	10	158	26	41	59	14	742
	April-June	190	350	16	201	19	40	52	26	894
	July-September	207	290	17	273	43	45	35	17	927
	October-December	181	279	18	305	46	37	25	16	907
	Total	**747**	**1184**	**61**	**937**	**134**	**163**	**171**	**73**	**3470**
1991	January-March	177	369	17	310	45	55	72	13	1058
	April-June	201	411	15	283	54	54	54	30	1102
	July-September	202	439	20	416	80	81	56	45	1339
	October-December	203	386	10	342	74	42	29	47	1133
	Total	**783**	**1605**	**62**	**1351**	**253**	**232**	**211**	**135**	**4632**
1992	January-March	202	474	21	308	90	47	42	49	1233
	April-June	193	500	17	370	83	51	26	64	1304
	July-September	183	496	23	378	86	48	16	103	1333
	October-December	239	436	13	442	73	54	27	87	1371
	Total	**817**	**1906**	**74**	**1498**	**332**	**200**	**111**	**303**	**5241**

Source: Western Australian Alcohol & Drug Authority, Alcohol & Drug Information Service

Table A6.1
Expenditure by Alcohol and Drug Authority on drug and alcohol services: 1976-1992
(Year ended 30 June)

Year	Total NCADA grant	Funding of non-government organisations				Total non-capital expenditure by ADA	Per capita expenditure	
		NCADA contribution	Non-government agency support program	Aboriginal Advancement Program	Total grants to NGOs		Actual	Adjusted to 1975-76 prices
1976	-	-	-	-	$ 34,436	$ 984,670	$0.84	$0.84
1977	-	-	-	-	$ 19,249	$ 2,265,346	$1.89	$1.67
1978	-	-	-	-	$ 65,052	$ 1,761,276	$1.44	$1.19
1979	-	-	-	-	$ 98,514	$ 2,173,872	$1.75	$1.34
1980	-	-	-	-	$ 145,577	$ 2,664,384	$2.10	$1.49
1981	-	-	-	-	$ 209,409	$ 2,917,412	$2.24	$1.50
1982	-	-	-	-	$ 242,251	$ 3,074,277	$2.30	$1.43
1983	-	-	-	-	$ 446,405	$ 3,746,755	$2.74	$1.60
1984	-	-	-	-	$ 521,681	$ 4,102,406	$2.95	$1.66
1985	-	-	-	-	$ 705,934	$ 4,911,194	$3.46	$1.87
1986	$ 461,000	$ 437,269	$1,234,335	$ 127,125	$1,376,428	$ 6,468,691	$4.43	$2.30
1987	$ 883,090	$ 590,000	$1,487,580	$ 425,000	$1,785,674	$ 8,265,493	$5.51	$2.72
1988	$1,027,808	$ 628,171	$1,636,178	$ 565,665	$2,496,000	$ 9,484,128	$6.14	$2.93
1989	$1,439,066	$ 687,308	$2,137,716	$ 377,316	$2,782,550	$12,914,376	$8.10	$3.72
1990	$1,217,931	$ 833,368	$2,361,824	$ 382,557	$3,746,000	$11,968,685	$7.33	$3.25
1991	$1,295,890	$884,722	$2,550,336	$415,478	$3,850,536	$13,071,018	$7.79	$3.41
1992	$1,345,100	$933,186	$2,720,869	$331,228	$3,985,283	$12,731,012	$7.39	$3.22

Source: Annual Reports WA Alcohol & Drug Authority

Note: NCADA funding available from July 1985.
Adjusted expenditure calculated from published June quarter (weighted average of 8 capital cities) CPI in Consumer Price Index (Quarterly Series), Cat. No. 6401.0. Australian Bureau of Statistics.

Table A6.2
Annual methadone consumption (kgs), Western Australia and Australia, 1982-1992

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Western Australia											
Tablets (5 mg + 10 mg)	0.37	0.44	0.55	0.51	0.58	0.70	0.76	0.99	1.33	1.64	1.86
Syrup 5mg/ml	1.91	2.22	3.05	4.14	1.87	1.67	2.47	2.90	3.61	7.76	8.80
Ampoules 10 mg	0.01	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Total WA (kgs)	**2.29**	**2.66**	**3.60**	**4.66**	**2.45**	**2.38**	**3.22**	**3.89**	**4.94**	**9.40**	**10.66**
Australia											
Tablets (5 mg + 10 mg)	10.03	11.48	12.11	10.85	13.37	12.45	14.04	15.81	16.68	18.07	20.28
Syrup 5mg/ml	28.68	32.25	36.63	52.08	86.80	82.06	98.03	110.15	134.86	157.74	193.67
Ampoules 10 mg	0.62	0.66	0.65	0.51	0.47	0.31	0.24	0.29	0.30	0.30	0.31
Total Australia (kgs)	**39.33**	**44.39**	**49.39**	**63.44**	**100.65**	**94.83**	**112.31**	**126.24**	**151.84**	**176.11**	**214.26**
WA % of Aust. consumption	5.8%	6.0%	7.3%	7.3%	2.4%	2.5%	2.9%	3.1%	3.3%	5.3%	5.0%

Source: Department of Health, Housing and Community Services, Drugs of Dependence Branch

Table A6.3
Numbers of people on methadone treatment program by sex and admission status, Western Australia, 1982-1992

Year	Quarter	All admissions				New admissions
		Males	Females	Persons	% females	
1982	January-March	77	41	118	34.7	26
	April-June	80	50	130	38.5	18
	July-September	88	57	145	39.3	36
	October-December	92	59	151	39.1	20
1983	January-March	93	56	149	37.6	27
	April-June	81	51	132	38.6	20
	July-September	82	52	134	38.8	15
	October-December	78	48	126	38.1	15
1984	January-March	87	52	139	37.4	26
	April-June	124	76	200	38.0	49
	July-September	141	92	233	39.5	49
	October-December	145	94	239	39.3	34
1985	January-March	148	90	238	37.8	33
	April-June	182	113	295	38.3	58
	July-September	194	136	330	41.2	73
	October-December	202	156	358	43.6	73
1986	January-March	179	144	323	44.6	60
	April-June	171	129	300	43.0	29
	July-September	163	121	284	42.6	19
	October-December	174	122	284	42.9	47
1987	January-March	160	110	270	40.7	26
	April-June	150	119	269	44.2	26
	July-September	166	130	296	43.9	36
	October-December	181	137	318	43.1	37
1988	January-March	201	149	350	42.6	37
	April-June	207	157	364	43.1	47
	July-September	243	165	408	40.4	66
	October-December	274	183	457	40.0	80
1989	January-March	262	193	455	42.4	47
	April-June	271	204	475	42.9	54
	July-September	250	182	432	42.1	25
	October-December	246	183	429	42.6	20
1990	January-March	259	188	447	42.1	38
	April-June	254	192	446	43.0	26
	July-September	265	204	469	43.5	46
	October-December	266	201	467	43.0	39
1991	January-March	270	202	472	42.8	34
	April-June	294	220	514	42.8	47
	July-September	303	212	515	41.2	31
	October-December	294	214	508	42.1	41
1992	January-March	295	215	510	42.2	34
	April-June	292	213	505	42.2	34
	July-September	301	216	517	41.8	53
	October-December	308	227	535	42.4	42

Source: Western Australia Alcohol & Drug Authority.
Note: New admissions are people not treated previously by the WA program.

Table A6.4
Numbers of people on methadone treatment program by length of stay, Western Australia, 1986-1992

Year	Quarter	Length of stay (months)									Mean months	Total
		<1	1-2.9	3-5.9	6-8.9	9-11.9	12-23.9	24-35.9	36-59.9	60+		
1986	January-March	23	42	41	45	44	66	30	26	6	15.3	323
	April- June	11	27	44	32	30	81	39	29	7	17.4	300
	July-September	14	20	33	33	27	86	36	26	9	18.8	284
	October-December	33	38	23	23	25	81	38	24	11	18.4	296
1987	January-March	20	28	42	12	14	67	38	37	12	20.9	270
	April-June	11	33	37	29	11	47	45	43	13	21.8	269
	July-September	18	43	33	29	25	42	50	40	16	21.3	296
	October-December	14	25	43	22	19	46	46	44	19	21.0	278
1988	January-March	12	24	53	36	21	51	41	49	23	20.5	310
	April-June	21	47	55	38	28	64	28	56	27	20.7	364
	July-September	31	61	55	46	34	76	21	56	28	19.6	408
	October-December	49	67	65	50	41	77	23	59	26	18.5	457
1989	January-March	42	33	87	52	40	81	34	49	37	19.8	455
	April-June	37	61	50	67	42	94	41	43	40	20.2	475
	July-September	13	36	75	38	51	94	44	41	40	22.5	432
	October-December	15	38	39	65	30	109	43	45	45	24.1	429
1990	January-March	22	50	48	34	53	100	42	47	51	24.0	447
	April-June	21	39	60	35	32	114	53	34	58	24.4	446
	July-September	30	52	52	49	29	112	59	32	54	22.6	469
	October-December	28	43	57	41	45	95	66	40	52	23.6	467
1991	January-March	29	42	56	50	36	102	55	47	55	24.2	472
	April-June	25	55	63	48	49	95	68	55	56	24.0	514
	July-September	25	40	61	55	43	107	66	64	54	24.9	515
	October-December	29	45	50	49	42	112	56	74	51 51	25.3	508
1992	January-March	24	46	54	46	42	110	63	74	51	24.2	510
	April-June	21	43	54	40	43	118	54	80	52	24.2	505
	July-September	33	38	54	42	33	110	72	81	54	27.1	517
	October-December	32	44	61	43	39	109	71	81	55	26.8	535

Source: Western Australian Alcohol & Drug Authority
Note: Length of stay breakdown not available prior to 1986.

Table A6.5
Number of new admissions to ADA programs by primary drug type and sex, Western Australia, 1988-1992

Primary drug type	1988			1989			1990			1991			1992			1988-1992		
	M	F	All	M	F	All	M	F	All	M	F	All	M	F	All	M	F	All
Alcohol	447	109	556	553	157	710	528	122	650	480	139	619	522	143	665	2530	670	3200
Illicit Opiates	165	82	247	100	69	169	90	58	148	102	61	163	96	62	158	553	332	885
Prescribed Opiates	17	9	26	8	6	14	12	4	16	16	10	26	10	7	17	63	36	99
Barbiturates	2	4	6	-	-	-	-	-	-	1	-	1	-	-	-	3	4	7
Benzodiazepines	12	33	45	10	31	41	17	20	37	24	25	49	12	18	30	75	127	202
Amphetamines	13	4	17	25	14	39	48	22	70	99	51	150	134	52	186	319	143	462
Cocaine	1	2	-	-	-	-	1	-	1	1	-	1	1	-	1	4	2	6
Cannabis	17	8	25	24	14	38	21	2	23	59	11	70	99	23	122	220	58	278
Other drugs	14	14	28	7	16	23	8	12	20	7	21	28	24	10	34	60	73	133
Not available	234	74	308	111	63	174	136	72	208	123	98	221	120	77	197	724	384	1108
Total new admissions	**922**	**339**	**1261**	**838**	**370**	**1208**	**861**	**312**	**1173**	**912**	**416**	**1328**	**1018**	**392**	**1410**	**4551**	**1829**	**6380**

Source: Western Australian Alcohol & Drug Authority
Note: Accurate data not available prior to March 1988 (excluded)

Table A6.6
Number of new admissions to ADA programs by primary drug type by age group, Western Australia, 1988-1992

Primary drug type	Year	Age group						
		10-19	20-29	30-39	40-49	50-59	60+	Total
Alcohol	1988	52	189	144	126	27	18	556
	1989	62	212	226	125	50	35	710
	1990	54	200	215	123	29	29	650
	1991	73	210	162	111	37	26	619
	1992	64	244	184	116	38	19	665
	1988-1992	305	1055	931	601	181	127	3200
Illicit Opiates	1988	6	159	75	5	-	2	247
	1989	7	103	54	4	1	-	169
	1990	7	80	56	4	-	1	148
	1991	4	90	62	5	-	2	163
	1992	3	88	57	9	1	-	158
	1988-1992	27	520	304	27	2	5	885
Prescribed opiates	1988	-	12	7	5	2	-	26
	1989	-	5	6	3	-	-	14
	1990	-	10	5	1	-	-	16
	1991	-	13	9	4	-	-	26
	1992	2	4	9	2	-	-	17
	1988-1992	2	44	36	15	2	0	99
Benzodiazepines	1988	2	7	13	7	8	8	45
	1989	-	11	12	7	4	7	41
	1990	2	13	6	9	6	1	37
	1991	3	15	7	14	5	5	49
	1992	3	5	13	6	1	2	30
	1988-1992	10	51	51	43	24	23	202
Amphetamines	1988	1	13	3	-	-	-	17
	1989	6	29	4	-	-	-	39
	1990	15	40	15	-	-	-	70
	1991	34	94	17	1	2	2	150
	1992	38	115	28	2	-	3	186
	1988-1992	94	291	67	3	2	5	462
Cannabis	1988	6	12	6	-	-	1	25
	1989	6	26	3	2	1	-	38
	1990	5	12	3	2	-	-	23
	1991	25	29	13	2	-	1	70
	1992	45	52	16	4	-	5	122
	1988-1992	87	131	41	10	1	7	278

Source: Western Australian Alcohol & Drug Authority
Note: Accurate data not available prior to March 1988. Barbiturates, cocaine and other drug group excluded.

Table A6.7
Admissions to sobering-up shelters by Aboriginality, Western Australia, 1990-1992

Year	Quarter	Perth			South Hedland			Halls Creek			All centres		
		Aborigines	Other	Total	Aborigines	Other	Total	Aborigines	Other	Total	Aborigines	Other	Total
1990	April-June	6	42	48							6	42	48
	July-September	12	88	100							12	88	100
	October-December	74	186	260							74	186	260
1991	January-March	107	210	317							107	210	317
	April-June	104	180	284	72	0	72				176	180	356
	July-September	64	230	294	168	4	172				232	234	466
	October-December	101	242	343	185	1	186				286	243	529
1992	January-March	106	311	417	391	1	392				497	312	809
	April-June	91	305	396	309	7	316				400	312	712
	July-September	89	233	322	328	1	329	178	0	178	595	234	829
	October-December	72	293	365	294	7	301	596	0	596	962	300	1262
1990-1992		826	2320	3146	1747	21	1768	774	0	774	3347	2341	5688

Source: Alcohol and Drug Authority
Note: Perth centre opened May 1990; South Hedland centre opened April 1991; Halls Creek opened September 1992.

Table A7.1
Annual sales by type of alcohol, Western Australia, 1988-1992
(Year ended 30 June)

Type of alcohol	Breakdown of sales	1988	1989	1990	1991	1992
High beer	Value ($)	$278,921,000	$252,479,000	$254,328,000	$245,134,000	$236,071,000
	Volume (litres)	158,766,000	145,482,000	139,041,000	117,294,000	119,206,000
	Absolute alcohol (litres)	7,620,768	6,983,136	6,673,968	5,630,112	5,721,888
Low beer	Value ($)	$61,056,000	$84,339,000	$99,341,000	$108,235,000	$117,026,000
	Volume (litres)	36,118,000	54,765,,000	61,035,000	58,446,000	67,706,000
	Absolute alcohol (litres)	1,264,130	1,916,775	2,136,225	2,045,610	2,369,710
Total beer	Value ($)	$339,977,000	$336,818,000	$353,669,000	$353,369,000	$353,097,000
	Volume (litres)	194,884,000	200,247,000	200,076,000	175,740,000	186,912,000
	Absolute alcohol (litres)	8,884,898	8,899,911	8,810,193	7,675,722	8,091,598
High wine	Value ($)	$82,636,000	$90,143,000	$98,868,000	$98,206,000	$106,794,000
	Volume (litres)	24,574,000	26,908,000	27,495,000	23,384,000	27,955,000
	Absolute alcohol (litres)	2,924,306	3,202,052	3,271,905	2,782,696	3,326,645
Low wine	Value ($)	$1,686,000	$2,258,000	$3,013,000	$3,661,000	$4,473,000
	Volume (litres)	853,000	1,076,000	1,334,000	1,530,000	1,608,000
	Absolute alcohol (litres)	51,180	64,560	80,040	91,800	96,480
Total wine	Value ($)	$84,322,000	$92,401,000	$101,881,000	$101,867,000	$111,267,000
	Volume (litres)	25,427,000	27,984,000	28,829,000	24,914,000	29,563,000
	Absolute alcohol (litres)	2,975,486	3,266,612	3,351,945	2,874,496	3,423,125
Spirits	Value ($)	$85,034,000	$97,705,000	$115,419,000	$113,222,000	$116,830,000
	Volume (litres)	5,541,000	6,198,000	7,088,000	6,017,000	6,764,000
	Absolute alcohol (litres)	2,133,285	2,386,230	2,728,880	2,316,545	2,604,140
Total	**Value ($)**	**$509,333,000**	**$526,924,000**	**$570,969,000**	**$568,458,000**	**$581,194,000**
	Absolute alcohol (litres)	**13,993,669**	**14,552,753**	**14,891,018**	**12,866,763**	**14,118,863**

Source: Office of Racing and Gaming Annual Reports
Note: Conversion factors for the calculation of absolute alcohol: low beer 0.035, high beer 0.048, low wine 0.06, high wine 0.119, spirits 0.385.

Table A7.2
Distribution of average daily alcohol consumption (%) by age group, level of consumption and year of survey, persons, Western Australia, 1977-1991

Level of consumption (mls absolute alcohol/day)	Age group (years)														
	18-24			25-44			45-64			65 +			Total		
	1977	1985	1991	1977	1985	1991	1977	1985	1991	1977	1985	1991	1977	1985	1991
None	-	28.7	31.2	-	27.1	29.3	-	35.3	34.7	-	54.4	52.9	29.4	32.8	34.1
< 50 mls	-	57.3	58.1	-	59.9	60.9	-	54.9	56.5	-	44.1	44.6	57.6	56.3	57.2
50-99 mls	-	9.8	7.3	-	10.1	7.5	-	8.0	6.7	-	1.5	2.2	9.6	8.5	6.6
100+ mls	-	4.2	3.4	-	2.9	2.3	-	1.8	2.0	-	-	0.4	3.4	2.5	2.2
Total drinkers	-	71.3	68.8	-	72.9	70.7	-	64.7	65.2	-	45.6	47.2	70.6	67.2	66.0
Total persons	-	100.0	100.0	-	100.0	100.0	-	100.0	100.0	-	100.0	100.0	100.0	100.0	100.0

Source: *Alcohol and Tobacco Consumption Patterns February 1977, Cat. 4312.* Australian Bureau of Statistics
Alcohol Consumption Patterns Western Australia October 1985, Cat. 4301.5. Australian Bureau of Stastistics
Alcohol Consumption Patterns Western Australia March 1991. Australian Bureau of Statistics/Health Promotions Services Branch, Health Department of WA.

Note: Alcohol consumption by specific age group not separately available for WA in 1977 survey.

Table A7.3
Distribution of average daily alcohol consumption (%) by age group, level of consumption and year of survey, males, Western Australia, 1977-1991

Level of consumption (mls absolute alcohol/day)	Age group (years)														
	18-24			25-44			45-64			65 +			Total		
	1977	1985	1991	1977	1985	1991	1977	1985	1991	1977	1985	1991	1977	1985	1991
None	-	22.3	25.9	-	16.2	18.9	-	24.6	24.4	-	40.5	38.0	17.5	22.0	23.6
< 50 mls	-	55.2	55.7	-	60.7	63.8	-	58.1	60.	-	57.3	58.0	59.1	58.7	60.8
50-99 mls	-	15.4	12.1	-	17.8	13.1	-	14.1	11.8	-	2.2	3.3	17.2	14.8	11.5
100+ mls	-	7.1	6.3	-	5.4	4.2	-	3.2	3.8	-	-	0.8	6.2	4.5	4.1
Total male drinkers	-	77.7	74.1	-	83.8	81.1	-	75.4	75.6	-	59.5	62.1	82.5	78.0	76.4
Total males	-	100.0	100.0	-	100.0	100.0	-	100.0	100.0	-	100.0	100.0	100.0	100.0	100.0

Source: *Alcohol and Tobacco Consumption Patterns February 1977, Cat. 4312.* Australian Bureau of Statistics
Alcohol Consumption Patterns Western Australia October 1985, Cat. 4301.5. Australian Bureau of Stastistics
Alcohol Consumption Patterns Western Australia March 1991. Australian Bureau of Statistics/Health Promotions Services Branch, Health Department of WA.

Note: Alcohol consumption by specific age group not separately available for WA in 1977 survey.

Table A7.4
Distribution of average daily alcohol consumption (%)by age group, level of consumption and year of survey, females, Western Australia, 1977-1991

Level of consumption (mls absolute alcohol/day)	Age group (years)														
	18-24			25-44			45-64			65 +			Total		
	1977	1985	1991	1977	1985	1991	1977	1985	1991	1977	1985	1991	1977	1985	1991
None	-	35.4	36.8	-	38.5	40.1	-	46.4	45.8	-	64.6	64.4	41.6	43.6	44.6
< 50 mls	-	59.4	60.5	-	59.0	57.9	-	51.5	52.9	-	34.4	34.3	55.9	53.8	53.6
50-99 mls	-	4.0	2.3	-	2.2	1.6	-	1.6	1.4	-	1.0	1.3	1.9	2.2	1.6
100+ mls	-	1.2	0.5	-	0.3	0.3	-	0.4	-	-	-	-	-	0.4	0.2
Total female drinkers	-	64.6	63.3	-	61.5	59.8	-	53.6	54.3	-	35.4	35.6	58.4	56.4	55.4
Total females	-	100.0	100.0	-	100.0	100.0	-	100.0	100.0	-	100.0	100.0	100.0	100.0	100.0

Source: *Alcohol and Tobacco Consumption Patterns February 1977, Cat. 4312.* Australian Bureau of Statistics
Alcohol Consumption Patterns Western Australia October 1985, Cat. 4301.5. Australian Bureau of Stastistics
Alcohol Consumption Patterns Western Australia March 1991. Australian Bureau of Statistics/Health Promotions Services Branch, Health Department of WA.

Note: Alcohol consumption by specific age group not separately available for WA in 1977 survey.

Table A7.5
Average daily alcohol consumption (mls absolute alcohol) by type of alcohol, age group and year of survey, persons, Western Australia, 1985-1991

Daily consumption of: (mls absolute alcohol)	Age group (years)									
	18-24		25-44		45-64		65 +		All ages	
	1985	1991	1985	1991	1985	1991	1985	1991	1985	1991
Beer	21.4	18.0	20.2	16.7	15.7	13.8	7.4	9.6	18.3	15.3
Wine	3.8	4.2	5.5	5.6	6.6	7.6	3.3	4.0	5.3	5.6
Fortified wine	0.3	0.1	0.6	0.2	0.8	0.4	1.2	1.0	0.6	0.3
Spirits	5.4	5.0	1.8	1.7	1.3	1.5	2.1	2.5	2.3	2.2
Other alcohol	1.5	1.4	0.6	0.9	0.9	0.7	0.4	0.6	0.8	0.9
Total per all drinkers	32.4	28.6	28.6	25.1	25.2	23.8	14.4	17.7	27.3	24.4
Total per person	23.1	19.2	20.9	17.6	16.3	15.4	6.6	8.3	18.4	16.1

Source: *Alcohol Consumption Patterns Western Australia October 1985, Cat. 4301.5.* Australian Bureau of Statistics
Alcohol Consumption Patterns Western Australia March 1991. Australian Bureau of Statistics/Health Promotions Services Branch, Health Department of WA.

Table A7.6
Average daily alcohol consumption (mls absolute alcohol) by type of alcohol, age group and year of survey, males, Western Australia, 1985-1991

Daily consumption of: (mls absolute alcohol)	Age group (years)									
	18-24		25-44		45-64		65 +		All ages	
	1985	1991	1985	1991	1985	1991	1985	1991	1985	1991
Beer	35.5	28.6	30.9	26.8	23.1	21.0	9.9	13.3	28.0	24.0
Wine	1.9	3.2	4.5	3.9	7.0	7.4	4.1	4.3	4.7	4.7
Fortified wine	0.3	-	0.6	0.3	0.6	0.3	1.0	0.4	0.6	0.3
Spirits	5.6	5.9	2.0	1.7	1.3	1.7	1.9	2.8	2.4	2.4
Other alcohol	0.9	0.8	0.4	1.1	0.7	0.9	0.4	0.5	0.6	0.9
Total per male drinker	44.2	38.5	38.4	33.7	32.6	31.3	17.3	21.3	36.3	32.3
Total per male	34.3	27.8	32.2	27.1	24.6	23.4	10.3	13.1	28.3	24.6

Source: *Alcohol Consumption Patterns Western Australia October 1985, Cat. 4301.5.* Australian Bureau of Statistics
Alcohol Consumption Patterns Western Australia March 1991. Australian Bureau of Statistics/Health Promotions Services Branch, Health Department of WA.

Table A7.7
Average daily alcohol consumption (mls absolute alcohol) by type of alcohol, age group and year of survey, females, Western Australia, 1985-1991

Daily consumption of: (mls absolute alcohol)	Age group (years)									
	18-24		25-44		45-64		65 +		All ages	
	1985	1991	1985	1991	1985	1991	1985	1991	1985	1991
Beer	4.2	5.2	5.0	2.7	4.9	2.9	4.3	4.7	4.8	3.3
Wine	6.2	5.4	6.9	7.9	5.9	7.8	2.3	3.6	6.1	7.0
Fortified wine	0.2	0.2	0.5	0.2	1.0	0.5	1.4	1.7	0.7	0.4
Spirits	5.1	4.0	1.5	1.8	1.4	1.1	2.2	2.2	2.2	2.0
Other alcohol	2.2	2.1	0.8	0.6	1.2	0.3	0.5	0.8	1.1	0.8
Total per female drinker	18.0	16.8	14.7	13.1	14.3	12.6	10.7	12.9	14.9	13.5
Total per female	11.6	10.3	9.0	7.8	7.7	6.9	3.8	4.6	8.4	7.5

Source: *Alcohol Consumption Patterns Western Australia October 1985, Cat. 4301.5.* Australian Bureau of Statistics
Alcohol Consumption Patterns Western Australia March 1991. Australian Bureau of Statistics/Health Promotions Services Branch, Health Department of WA.

Table A8.1
Smoking prevalence (%) among adults by age group, smoking status and year of survey, Western Australia, 1984-1991

	Age group																			
	18-24 years				25-44 years				45-66 years				65+ years				All ages			
	1984	1985	1987	1991	1984	1985	1987	1991	1984	1985	1987	1991	1984	1985	1987	1991	1984	1985	1987	1991
Males																				
Current smoker	41.9	37.7	38.4	32.8	36.4	37.5	33.1	29.5	31.5	29.9	31.8	25.6	22.3	23.1	18.8	14.6	34.4	33.9	32.0	27.3
Ex-smoker	12.9	11.4	14.6	14.9	27.6	25.2	26.6	32.9	40.3	38.7	42.4	43.5	51.8	52.5	58.0	53.7	31.2	29.5	32.3	35.1
Non-smoker	45.2	50.9	47.0	52.3	36.1	37.2	40.3	37.6	28.2	31.4	25.8	30.9	25.9	24.4	23.1	31.7	34.4	36.5	35.7	37.6
Females																				
Current smoker	39.6	41.8	37.8	30.5	27.4	25.8	29.0	23.7	26.4	23.6	22.8	22.4	13.0	11.5	12.9	12.4	26.9	25.6	26.4	22.8
Ex-smoker	19.6	13.9	17.0	16.8	20.1	21.1	25.7	24.3	18.8	16.2	20.2	25.8	15.3	22.1	20.4	23.9	19.0	18.9	22.2	23.4
Non-smoker	40.8	44.3	45.2	52.7	52.5	53.1	45.3	51.9	54.8	60.1	57.0	51.8	71.8	66.4	66.7	63.7	54.1	55.4	51.3	53.8
Persons																				
Current smoker	41.6	42.0	38.8	31.5	32..3	32.3	31.6	26.3	29.7	27.4	27.4	23.8	17.2	16.6	15.4	13.2	31.2	30.5	29.5	24.5
Ex-smoker	16.9	13.5	16.2	16.0	24.1	23.8	26.8	28.2	29.7	27.5	30.9	33.8	30.4	35.1	35.5	35.0	25.2	24.6	27.3	28.5
Non-smoker	41.4	44.5	45.0	52.5	43.5	43.9	41.6	45.5	40.6	45.1	41.7	42.4	52.4	48.3	49.0	51.7	43.6	44.9	43.2	46.7

Sources: Anti-Cancer Council of Victoria national surveys, WA data provided Health Promotion Services Branch, Health Department of WA.

Alcohol Consumption Patterns Western Australia October 1985, Cat. 4301.5. Australian Bureau of Statistics.

Note: Size of samples: 1984 - 3370, 1985 - 3191, 1987 - 3316, 1991 - 3254.