



MONASH University

Accident Research Centre

HOSPITALISED INJURIES VICTORIA, JULY 1992 – JUNE 1998

by

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October 1999

Report No. 160

MONASH UNIVERSITY ACCIDENT RESEARCH CENTRE
REPORT DOCUMENTATION PAGE

Report No.	Date	ISBN	Pages
160	October 1999	0 7326 1459 7	120

Title and sub-title:

Hospitalised Injuries Victoria, July 1992 – June 1998

Author(s)

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Type of Report & Period Covered:

General, July 1992 to June 1998 and
July 1987 to June 1998 (trend analysis only)

Sponsoring Organisation(s):

This project was funded by the Victorian Health Promotion Foundation.

Abstract:

The aim of this report was to describe the all-age epidemiology of hospitalised injuries in Victorian public hospitals. This was done by frequencies and rates for the 6-year period July 1992 to June 1998, and by trend analysis for the 11-year period July 1987 to June 1998. A further aim was to identify potential areas for reducing the frequency and severity of injuries in the community.

Injury admissions to public hospitals recorded in the Victorian Inpatient Minimum Database (VIMD) were selected for analysis. Private hospital data were excluded as their coverage was not complete over the chosen study periods. The effect of Casemix funding on injury frequencies, rates and trends has been discussed and highlighted throughout the report. No adjustments to the data have been made since it was felt that such work would be beyond the scope of this project. Therefore, caution should be exercised with regard to the interpretation of the trends presented in this report.

The major causes of all-age injury hospitalisation were found to be falls, motor vehicle traffic accidents, intentional self-inflicted, hit/struck/crush, cutting/piercing and assault injuries. Falls were the leading cause of injury for all age groups except 15-24 year olds, for whom motor vehicle traffic related injuries were the leading cause of hospital admission. Injury rates were generally increasing over the study period from about age 60 years and upwards. Two other broad peaks in frequency occur in late adolescence/early adult years and the other in older age. In the previous 6-year time period, July 1987 to June 1993, the age groups among whom injury hospitalisations were most frequent were all younger than 35 years (20-24, 15-19, 25-29, 30-34, 10-14). For the time period July 1992 to June 1998, only two of the corresponding age groups were younger than 35 years and the remaining top five were over 65 years (70-74, 20-24, 75-79, 65-69, 25-29). This has significant implications for prevention programs and for the type of care required by the hospitalised injured population. The average annual all-age all-cause injury admission rate was 2,175 per 100,000 persons, representing a 34% increase on the same rate for the previous six-year period, of 1,620 per 100,000.

A log-linear regression model of rate data assuming a Poisson distribution of injuries was used to analyse trends for the 11-year period. It was found that the all-age all-cause injury rate was steadily climbing at a statistically significant rate. Transport injury rates, however, were declining annually by approximately 1.6%. Other significant increasing trends were observed for all-age falls, intentional self-inflicted injuries and assault injuries. The highest estimated annual percentage increase was observed for all-age intentional self-inflicted injuries at 8.6%. Trends for age-specific rates were varied, but most were significantly increasing or decreasing for selected injury causes. Notable changes included the decline in fire/burn injuries among under 5 year olds (-6.0% p.a.), increases in self-inflicted injuries among 15-24 (7.2% p.a.) and 25-64 (10.3% p.a.) year olds and most strikingly, the increasing trend for medical injuries among over 65 year olds with an annual percentage increase 13.2%.

Several recommendations have been made in the report including the necessity for further research and the review of progress towards present injury prevention targets and the setting of new targets. Recommendations have also been made with regard to data and coding issues relating to ICD9/ICD10 coding and the VIMD. The total cost and burden on society of injury needs to be quantified to facilitate the appropriate allocation of resources towards the development and implementation of effective injury prevention strategies.

Key Words:

Epidemiology, injury, overview, trends, hospital use, morbidity, all ages, unintentional injury, intentional injury, medical injury

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Contents

ACKNOWLEDGEMENTS	XI
EXECUTIVE SUMMARY	XIII
1. INTRODUCTION	1
1.1 AIM.....	1
1.2 OBJECTIVES.....	1
1.3 BACKGROUND	1
2. RESEARCH DESIGN.....	3
2.1 DATA SOURCE: VICTORIAN INPATIENT MINIMUM DATABASE	3
2.2 DATA CLEANING.....	3
2.3 METHOD	4
2.4 BIASES AND LIMITATIONS	4
2.5 POPULATION STATISTICS	5
2.6 STATISTICAL METHODS.....	5
3. RESULTS: FREQUENCY, RATES AND MALE/FEMALE DISTRIBUTION.....	7
3.1 FREQUENCY AND RATE BY 5-YEAR AGE GROUP	7
3.2 FREQUENCY AND RATE BY 5-YEAR AGE GROUP AND SEX: OVERVIEW	9
3.3 MAJOR CAUSES OF INJURY: ALL AGES	32
3.4 MAJOR CAUSES OF INJURY BY 5-YEAR AGE GROUP AND SEX.....	37
4. RESULTS: JULY 1987 TO JUNE 1998, 11-YEAR TRENDS FOR INJURY RATES	45
4.1 ALL AGES	45
4.2 0-4 YEARS	46
4.3 5-14 YEARS	46
4.4 15-24 YEARS	46
4.5 25-64 YEARS	46
4.6 OVER 65 YEARS	46
4.7 FALLS AMONG OLDER PERSONS BY 5-YEAR AGE GROUPS (60-64, 65-69, 70-74, 75-79, 80-84 & ≥85 YEARS)	47

Contents

5. DISCUSSION AND RECOMMENDATIONS	75
5.1 METHOD	75
5.2 IMPLICATIONS FOR PREVENTION	76
5.3 FUTURE DIRECTIONS	76
5.4 RECOMMENDATIONS.....	78
6. REFERENCES	81
APPENDIX 1	85
APPENDIX 2	93
APPENDIX 3	99

Tables

TABLE 1: PUBLIC HOSPITAL INJURY ADMISSIONS, VICTORIA, SIX YEARS, 1 JULY 1992 TO 30 JUNE 1998, TOTAL FREQUENCY, PERSONS (N=592,150)	11
TABLE 2: PUBLIC HOSPITAL INJURY ADMISSIONS, VICTORIA, SIX YEARS, 1 JULY 1992 TO 30 JUNE 1998, TOTAL FREQUENCY, MALES (N=320,299)	14
TABLE 3: PUBLIC HOSPITAL INJURY ADMISSIONS, VICTORIA, SIX YEARS, 1 JULY 1992 TO 30 JUNE 1998, TOTAL FREQUENCY, FEMALES (N=271,851).....	17
TABLE 4: PUBLIC HOSPITAL INJURY ADMISSIONS, VICTORIA, SIX YEARS, 1 JULY 1992 TO 30 JUNE 1998, AVERAGE ANNUAL FREQUENCY, PERSONS	20
TABLE 5: PUBLIC HOSPITAL INJURY ADMISSIONS, VICTORIA, SIX YEARS, 1 JULY 1992 TO 30 JUNE 1998, AVERAGE ANNUAL RATE, PERSONS.....	23
TABLE 6: PUBLIC HOSPITAL INJURY ADMISSIONS, VICTORIA, SIX YEARS, 1 JULY 1992 TO 30 JUNE 1998, AVERAGE ANNUAL RATE, MALES.....	26
TABLE 7: PUBLIC HOSPITAL INJURY ADMISSIONS, VICTORIA, SIX YEARS, 1 JULY 1992 TO 30 JUNE 1998, AVERAGE ANNUAL RATE, FEMALES	29
TABLE 8: TRENDS FOR RATES, SELECTED INJURY CAUSES AND AGE GROUPS	48

Figures

Frequencies and rates of injury

FIGURE 1A: ALL INJURIES, AVERAGE ANNUAL FREQUENCY AND RATE	8
FIGURE 1B: ALL INJURIES, AVERAGE ANNUAL FREQUENCY AND RATE.....	8
FIGURE 2: MALE TO FEMALE INJURY RATE RATIOS, UNINTENTIONAL INJURIES	10
FIGURE 3: MALE TO FEMALE INJURY RATE RATIOS, INTENTIONAL INJURIES	10

Six major injury causes, average annual frequency

FIGURE 4: SIX MAJOR INJURY CAUSES, ALL AGES, AVERAGE ANNUAL FREQUENCY	32
FIGURE 5: SIX MAJOR INJURY CAUSES, <1 YEAR, AVERAGE ANNUAL FREQUENCY	33
FIGURE 6: SIX MAJOR INJURY CAUSES, 1-4 YEARS, AVERAGE ANNUAL FREQUENCY	33
FIGURE 7: SIX MAJOR INJURY CAUSES, 5-14 YEARS, AVERAGE ANNUAL FREQUENCY	34
FIGURE 8: SIX MAJOR INJURY CAUSES, 15-24 YEARS, AVERAGE ANNUAL FREQUENCY	34
FIGURE 9: SIX MAJOR INJURY CAUSES, 25-64 YEARS, AVERAGE ANNUAL FREQUENCY	35
FIGURE 10: SIX MAJOR INJURY CAUSES, ≥65 YEARS, AVERAGE ANNUAL FREQUENCY	35

Average annual rates by age group and sex

FIGURE 11: TRANSPORT (TOTAL), AVERAGE ANNUAL RATES BY AGE GROUP AND SEX	38
FIGURE 12: MOTOR VEHICLE TRAFFIC, AVERAGE ANNUAL RATES BY AGE GROUP AND SEX	38
FIGURE 13: OTHER VEHICLE, AVERAGE ANNUAL RATES BY AGE GROUP AND SEX	39
FIGURE 14: FALLS (TOTAL), AVERAGE ANNUAL RATES BY AGE GROUP AND SEX	39
FIGURE 15: SPORT FALLS AND COLLISIONS, AVERAGE ANNUAL RATES BY AGE GROUP AND SEX	40
FIGURE 16: POISONING (TOTAL), AVERAGE ANNUAL RATES BY AGE GROUP AND SEX	40
FIGURE 17: FIRE/BURNS/SCALDS, AVERAGE ANNUAL RATES BY AGE GROUP AND SEX	41
FIGURE 18: CHOKING/SUFFOCATION/FOREIGN BODY, AVERAGE ANNUAL RATES BY AGE GROUP AND SEX	41
FIGURE 19: MACHINERY, AVERAGE ANNUAL RATES BY AGE GROUP AND SEX	42
FIGURE 20: INTENTIONAL, SELF-INFLICTED (TOTAL), AVERAGE ANNUAL RATES BY AGE GROUP AND SEX	42
FIGURE 21: INTENTIONAL, INFLICTED BY OTHER (TOTAL), AVERAGE ANNUAL RATES BY AGE GROUP AND SEX	43
FIGURE 22: MEDICAL INJURIES (TOTAL), AVERAGE ANNUAL RATES BY AGE GROUP AND SEX	43

11-year trends for injury rates (July 1987 to June 1998)

All ages

FIGURE 23: ALL INJURIES, ALL AGES, RATES AND TREND	50
FIGURE 24: TRANSPORT (TOTAL), ALL AGES, RATES AND TREND.....	50
FIGURE 25: ALL INJURIES LESS TRANSPORT, ALL AGES, RATES AND TREND	51
FIGURE 26: ALL UNINTENTIONAL INJURIES, ALL AGES, RATES AND TREND.....	51
FIGURE 27: ALL UNINTENTIONAL INJURIES LESS TRANSPORT, ALL AGES, RATES AND TREND	52
FIGURE 28: PEDESTRIAN INJURIES (TOTAL), ALL AGES, RATES AND TREND	52
FIGURE 29: BICYCLE INJURIES (TOTAL), ALL AGES, RATES AND TREND	53
FIGURE 30: FALLS (TOTAL), ALL AGES, RATES AND TREND.....	53
FIGURE 31: ANIMAL BEING RIDDEN, ALL AGES, RATES AND TREND	54
FIGURE 32: INTENTIONAL INJURIES (TOTAL), ALL AGES, RATES AND TREND.....	54
FIGURE 33: INTENTIONAL, SELF-INFLICTED INJURIES, ALL AGES, RATES AND TREND	55
FIGURE 34: INTENTIONAL, INFLICTED BY OTHER (ASSAULT INJURIES), ALL AGES, RATES AND TREND	55

0-4 years

FIGURE 35: ALL INJURIES, 0-4 YEARS, RATES AND TREND	56
FIGURE 36: FALLS (TOTAL), 0-4 YEARS, RATES AND TREND	56
FIGURE 37: POISONINGS (TOTAL), 0-4 YEARS, RATES AND TREND	57
FIGURE 38: NEAR DROWNING INJURIES, 0-4 YEARS, RATES AND TREND	57
FIGURE 39: FIRE/BURN INJURIES, 0-4 YEARS, RATES AND TREND	58
FIGURE 40: SCALDS, 0-4 YEARS, RATES AND TREND.....	58
FIGURE 41: DOG BITE INJURIES, 0-4 YEARS, RATES AND TREND	59
FIGURE 42: MOTOR VEHICLE TRAFFIC INJURIES, 0-4 YEARS, RATES AND TREND	59

5-14 years

FIGURE 43: ALL INJURIES, 5-14 YEARS, RATES AND TREND	60
FIGURE 44: PEDESTRIAN INJURIES, 5-14 YEARS, RATES AND TREND	60
FIGURE 45: BICYCLE INJURIES, 5-14 YEARS, RATES AND TREND.....	61
FIGURE 46: FALLS (TOTAL), 5-14 YEARS, RATES AND TREND	61
FIGURE 47: PLAYGROUND FALLS, 5-14 YEARS, RATES AND TREND	62

15-24 years

FIGURE 48: ALL INJURIES, 15-24 YEARS, RATES AND TREND	62
FIGURE 49: MOTOR VEHICLE TRAFFIC INJURIES, 15-24 YEARS, RATES AND TREND	63
FIGURE 50: MOTORCYCLE INJURIES (TOTAL), 15-24 YEARS, RATES AND TREND	63
FIGURE 51: SPORTS FALL AND COLLISION INJURIES, 15-24 YEARS, RATES AND TREND.....	64
FIGURE 52: INTENTIONAL, SELF-INFLICTED INJURIES, 15-24 YEARS, RATES AND TREND.....	64
FIGURE 53: INTENTIONAL, INFLICTED BY OTHER (ASSAULT) INJURIES, 15-24 YEARS, RATES & TREND.....	65

25-64 years

FIGURE 54: ALL INJURIES, 25-64 YEARS, RATES AND TREND	65
FIGURE 55: MOTOR VEHICLE TRAFFIC INJURIES, 25-64 YEARS, RATES AND TREND	66
FIGURE 56: CUTTING AND PIERCING INJURIES, 25-64 YEARS, RATES AND TREND	66
FIGURE 57: SPORTS FALL AND COLLISION INJURIES, 25-64 YEARS, RATES AND TREND.....	67
FIGURE 58: MACHINERY INJURIES, 25-64 YEARS, RATES AND TREND.....	67
FIGURE 59: INTENTIONAL, SELF-INFLICTED INJURIES, 25-64 YEARS, RATES AND TREND.....	68
FIGURE 60: INTENTIONAL, INFLICTED BY OTHER (ASSAULT) INJURIES, 25-64 YEARS, RATES AND TREND	68

≥65 years

FIGURE 61: ALL INJURIES, ≥65 YEARS, RATES AND TREND	69
FIGURE 62: PEDESTRIAN INJURIES (TOTAL), ≥65 YEARS, RATES AND TREND	69
FIGURE 63: FALLS (TOTAL), ≥65 YEARS, RATES AND TREND	70
FIGURE 64: MEDICAL INJURIES (TOTAL), ≥65 YEARS, RATES AND TREND.....	70
FIGURE 65: FIRE/BURN/SCALD INJURIES, ≥65 YEARS, RATES AND TREND	71
FIGURE 66: INTENTIONAL, SELF-INFLICTED INJURIES, ≥65 YEARS, RATES AND TREND.....	71

Falls - Older persons 5-year age groups

FIGURE 67: FALLS (TOTAL), 60-64 YEARS, RATES AND TREND	72
FIGURE 68: FALLS (TOTAL), 65-69 YEARS, RATES AND TREND	72
FIGURE 69: FALLS (TOTAL), 70-74 YEARS, RATES AND TREND	73
FIGURE 70: FALLS (TOTAL), 75-79 YEARS, RATES AND TREND	73
FIGURE 71: FALLS (TOTAL), 80-84 YEARS, RATES AND TREND	74
FIGURE 72: FALLS (TOTAL), ≥85 YEARS, RATES AND TREND	74

ACKNOWLEDGEMENTS

This report would not have been possible without the data obtained from the Victorian Department of Human Services. The use of the data is gratefully acknowledged. This project was supported by funding from the Victorian Health Promotion Foundation (VicHealth).

Many thanks to Ruth Zupo for formatting and preparing the report for publication. Special thanks to Joan Ozanne-Smith, Lesley Day and Stuart Newstead for their useful comments and advice.

EXECUTIVE SUMMARY

This report describes the all-age epidemiology of hospitalised injuries in Victorian public hospitals by frequencies and rates for the 6-year period July 1992 to June 1998 and by trend analysis for the 11-year period July 1987 to June 1998. Graphical representations for the entire VIMD collection, 11 years (July 1987 to June 1998) are also provided. A change of funding arrangements (Casemix) for public hospitals was introduced in July 1993. Any possible Casemix effects, covering the period 1992/93 to 1994/95, are highlighted on each graph, while the data itself has not been modified in any way. It appears that the Casemix effect for hospital admissions dissipates from the period 1995/96 onwards, however, in many instances, rates are still higher than pre-Casemix levels.

The section of this report relating to frequencies and rates of hospitalised injury is largely an update of the report *Hospitalised Injuries Victoria, July 1987 to June 1993*, (Watt¹).

MAJOR CAUSES OF INJURY, FREQUENCY, RATES AND MALE/FEMALE DISTRIBUTION

- The major causes of all-age injury were falls, motor vehicle traffic accidents, intentional self-inflicted, hit/struck/crush, cutting/piercing and intentional assault injuries. Falls ranked first for all age groups except for 15-24 year olds, for whom motor vehicle traffic accidents headed the list ahead of falls at fourth position.
- The average annual frequency of admission to hospital for injury was 98,692, representing an average annual all-age all-cause rate of 2,175 per 100,000 persons, a 34% increase on the same rate for the previous six-year period (July 1987 to June 1993) of 1,620 per 100,000 persons.
- This time period is characterised by increasing rates of injury from about 60 years upwards and two broad peaks in injury frequency by 5-year age groups: one in late adolescence/early adult years, and the other in older age.
- Comparisons with the previous 6-year time period (July 1987-June 1993), revealed that injury rates were now generally higher, most noticeably from about age 55 years. Similarly, frequencies for each age group were higher particularly from about age 55 years onwards.
- These changes in frequency are due to the combined effect of increased rates and demographic changes. In the previous time period, July 1987 to June 1993, the age groups among whom injury hospitalisations were most frequent were all younger than 35 years (20-24, 15-19, 25-29, 30-34, 10-14). For the time period July 1992 to June 1998, only two of the corresponding age groups were younger than 35 years and the remaining top five were over 65 years (70-74, 20-24, 75-79, 65-69, 25-29).
- Females had a lower rate of admission for almost all causes of injury, the notable exceptions being various types of falls, horse riding and some means of self-inflicted injury.

TRENDS FOR INJURY RATES – 11 YEARS (JULY 1987 TO JUNE 1998)

- The all-cause all-age injury rate was steadily climbing at a statistically significant rate (6.1% p.a.); average difference in rates over the 11-year period was +77 per 100,000. Excluding transport injuries, the increase in the all-cause all-age rate becomes slightly greater with an average difference of +88 per 100,000 and estimated annual percentage change of 7.0%.
- Transport injury rates were decreasing overall, but not significantly, the average difference over the 11-year period was –4 per 100,000 or –1.6% p.a.
- Other significantly increasing trends were observed for all-age falls, intentional self-inflicted and assault injuries. The highest estimated annual percentage change was observed for intentional self-inflicted injuries at 8.6%.
- The 0-4 year old all-cause injury rate was increasing significantly (2.9% p.a.), as was the trend for the 0-4 year old poisoning rate (3.2% p.a.). Significantly decreasing trends for this age group were recorded for near drowning, fire/burns, scalds, dog bites and motor vehicle traffic injury rates. There was also a non-significant increase in falls.
- For the 5-14 year age group, injuries overall appeared to be increasing. This significant increase also extended to falls, except for playground fall rates, which were increasing but not significantly. Decreasing rates were observed for pedestrian injuries (significant) and bicycle injury rates although not at a significant level.
- The all-cause injury rate for 15-24 year olds was increasing significantly at 2.3% p.a., as were intentional self-inflicted (7.2% p.a.) and assault injuries (3.5% p.a.), both displaying marked increases. Motor vehicle traffic and motorcycle rates (-4.3% p.a.) were declining while a non-significant increase was found for sports related fall and collision injury rates.
- For the 25-64 year age group, the all-cause injury rate was increasing significantly with an estimated annual increase of 6.4%, along with cutting/piercing (3.7% p.a.) and assault injuries (4.1% p.a.). The highest significant increase, however, was seen for intentional self-inflicted injury rates with an estimated annual percentage increase of 10.3%.
- Significant increases in the all-cause (8.7% p.a.), falls (4.6% p.a.), medical (13.2% p.a.) and intentional self-inflicted (4.0%) injury rates were observed for persons 65 years and over. Pedestrian injury rates had fallen significantly (-2.9% p.a.).

RECOMMENDATIONS

1. *Use should be made of the data presented here to contribute to the review of progress towards meeting injury prevention targets and the setting of new targets for the next 5 years.*
2. *Future hospitalised injury reports should include public and private hospital data.*
3. *A formal detailed descriptive epidemiological study should be undertaken to determine the validity of data and reasons for the high and rising rate of medical injuries. This may provide useful information for the evaluation of medical procedures and hospital quality control programs.*
4. *A formal study should be undertaken to thoroughly determine the effect of Casemix funding on admission policy in public hospitals and how this might affect any analysis of the VIMD for injury prevention purposes.*
5. *Casemix effect modeling for public hospital admissions is strongly needed for accurate trend analysis studies.*
6. *The Department of Human Services should continue to monitor the quality of all the data being included in the VIMD (now known as the VAED), and make the results of their monitoring readily available. This is particularly important considering the changeover to ICD10 coding. Particular attention should be paid to place and activity codes for injury cases.*
7. *These coding validation studies need to be repeated on a regular basis for comparison purposes for all coding fields including E-codes at all character levels, i.e. the entire code.*
8. *Existing coding systems should be improved to facilitate identification of all product-related injury, and more specific identification of occupational and sports injury.*
9. *Consumer product safety seems to have been relatively neglected in research and prevention of injury. There are a sufficient number of injuries apparently resulting from consumer products to warrant further major effort in this area.*
10. *The data presented in this report indicate the need for further investment in injury prevention.*
11. *Linkage of health surveillance systems is recommended to clearly enable the identification of sequences and causes of injury events, to provide more detail for each case, and to improve data reliability.*
12. *Hospital admission data should be used to inform the development of an Injury Cost and Consequences Model.*

1. INTRODUCTION

1.1 AIM

To describe the all-age epidemiology of hospitalised injuries in Victorian public hospitals by frequencies and rates for the six-year period July 1992 to June 1998, and by trend analysis for the 11-year period July 1987 to June 1998. Graphical representations for the entire VIMD collection, 11 years (July 1987 to June 1998) are also provided.

1.2 OBJECTIVES

1.2.1 To analyse and describe the data in the Victorian Inpatient Minimum Database (VIMD) relating to all-age injury hospital admissions in Victoria for the 6-year period, July 1992 to June 1998, and describe the frequency, rates and distribution of these admissions by external causes, 5-year age groups (<1, 1-4, 5-9 ... 80-84, ≥85 years) and sex.

1.2.2 To plot the trends in injury hospitalisation rates over the 11 year (July 1987-June 1998) period, for a selected, but wide range of leading external causes for persons of:

- i) All ages;
- ii) 0-4 years;
- iii) 5-14 years;
- iv) 15-24 years;
- v) 25-64 years;
- vi) 65 years and older.

1.2.3 To identify where there is potential for reducing the frequency and severity of injuries in the community.

1.3 BACKGROUND

This is the latest in a series of reports on hospitalised injuries in Victoria by the Monash University Accident Research Centre, the first being a report by Langlois et al in December 1992 entitled *Nonfatal Injuries in Victoria: an overview*², followed by three reports^{1,3,4} by Graeme Watt from 1992 to 1995. The VIMD data collection held by MUARC has grown considerably, currently spanning 11 years.

2. RESEARCH DESIGN

2.1 DATA SOURCE: VICTORIAN INPATIENT MINIMUM DATABASE

The Victorian Inpatient Minimum Database is a collection of data on admissions to Victorian hospitals. To fund public hospitals equitably under the casemix system and to maintain morbidity data on all Victorians, the Department of Human Services requires a minimum dataset which accurately reflects health service activities, meets the requirement of the Victorian *Annual Reporting Act 1983*, and is consistent with the State's reporting requirements under the National Health Information Agreement. To meet these objectives, all public and private acute hospitals, including acute facilities in rehabilitation, extended care institutions and day procedure centres, are required to report the relevant minimum dataset of admitted patient activity. Each hospital collects data at admission and at separation. This is entered by the hospital and checked and corrected by the hospital. This information is then transmitted to Allegiance Systems (previously Health Computing Services-Victoria Limited) and compiled into the Victorian Inpatient Minimum Database (VIMD). The database is primarily used for health policy and planning in the Victorian Health Department.

VIMD consists of data on all separations/admissions from Victorian public hospitals, and from 1 July 1992, about 60% of Victorian private hospitals also contributed data. This proportion increased to 95% of all private hospitals for the 1993/94 period and 100% for the years following.

Monash University Accident Research Centre (MUARC) has accessed a subset of VIMD data consisting of those cases with an external cause of injury code (ICD-9-CM E-code⁵) among the diagnosis codes accompanying either the principal or a secondary diagnosis. This subset data is considered to be "injury data", as it contains only cases where an injury is coded for the patient.

The VIMD held by MUARC contains 924,030 records for the 11-year period.

2.2 DATA CLEANING

Cases of re-admissions to the same public hospital by the same patient for the same external cause of injury are included in the original database. To include only one of these admissions, all cases except the first with the same unit record (UR) number, postcode, E-code, sex and age were removed. A patient may be transferred between and within hospitals for various episodes of care and will therefore be represented by more than one record. Examination of the VIMD for the 11-year period July 1987 to June 1998 showed that 9.7% of patients were admitted from other hospitals. It is not possible to recognise transferred patients in the VIMD since patient identification has been removed before supply to MUARC. Therefore, transfers between hospitals were not excluded. The proportion of transferees varies with age group, with young patients being transferred less frequently than older ones¹. The non-exclusion of transferred patients represents a potential source of bias.

Cases have been selected by year of hospital admission, as this date is closer to the actual date of the injury event when compared to separation date which is when the patient's record is entered into the electronic patient record system. Selecting cases by year of separation would include, on average, 1.9% of patients admitted in the previous year.

2.3 METHOD

Categories of injury cause were based on ICD-9-CM E-code⁵ groupings as used in other Monash University Accident Research Centre studies. See Appendices 2 and 3 for definitions and descriptions of these groups.

The data for all-age admissions for the 6-year period, July 1992 to June 1998 were analysed by external causes using frequencies and rates. For the period July 1987 to June 1998, admissions were analysed by selected external causes and by age-specific groups using rates and trends.

For the purposes of this report, all injuries have been divided into two broad categories, following the methods of previous MUARC authors¹⁻⁴. Non-incident, non-true injuries includes medical injuries and late effects due to injury. Medical injuries are iatrogenic in nature and include medical misadventure, post-operative complications and adverse effects of therapeutic drugs given in therapeutic doses. Late effects due to injury includes cases where re-admission for the same injury occurred one year or more after the initial event. The remaining group of injuries are defined as incident true injuries and are an estimation of injury occurrence in Victoria.

2.4 BIASES AND LIMITATIONS

The VIMD data are derived from information supplied by medical records in Victorian public hospitals. From July 1992, data from private hospitals were also included in the database. For the purposes of analysis, these data were excluded so that only public hospital data were used, to enable proper comparisons with previous work. In 1997/98, 24.6% of all injury admissions were to private hospitals.

There are two main effects of the exclusion of private hospital admissions on the patterns of injury described in this report. Firstly, the rates will be an underestimation of all hospitalised injury in Victoria, because the numerator does not include private hospital admissions. Secondly, the spectrum of injury treated in private hospitals differs somewhat from that treated in public hospitals. Some understanding of this spectrum was gained by an analysis of 18 months of data spanning 1993/94. For two thirds of this time period the VIMD only captured 60% of all private hospital admissions³. Private hospitals were more likely to treat patients over 25 years of age and less likely to treat children and adolescents. Therefore, injury rates for younger age groups based on public hospital data do not necessarily pose a significant problem. The report by Watt³ also found that admissions for transport and intentional injuries were much lower for private hospitals while sport injuries were not uncommon. The coverage of private hospital data in the VIMD increased to 95% in 1994, and 100% for subsequent years. A complete appreciation of the full spectrum of injury treated in private hospitals would require a separate investigation of the four full years of private hospital data. There are as yet, however, insufficient full years of private hospital admissions data for trend analysis.

Cases with a postcode of residence outside Victoria were included as they were treated in Victorian public hospitals. Victorians injured but treated outside the state were not included in the data as they could not be identified. Together these may bias the calculation of rates, but the effect is considered to be insignificant

Casemix funding for public hospitals was introduced in Victoria in July 1993. Unless the unusually high increase represents a real increase in injuries, at least some of the 1992/93 –

1994/95 results appear to be abnormally higher than previous years. However, this effect appears to diminish from 1995/96 and onwards, except for some types of injury causes where it seems to have re-set the level around which the rates fluctuate.

Another issue for consideration is the accuracy and reliability of ICD-9-CM⁵ coding in the VIMD. Errors in admission data can be made at many stages prior to being entered into the VIMD⁶. These include mistakes made at clinical diagnosis, by the doctor providing the discharge summary, by the hospital coder and finally, during transmission from the hospital to the VIMD. A study⁶ using VIMD data from 1993/94 reported discrepancy rates for coding in any field at 53% and discrepancies in the principal diagnosis field at 22%. A discrepancy was defined as any coding field for which the original coder and the external coder did not agree on the same code⁶. A subset of injury diagnosis codes were also audited and an overall discrepancy rate of 56% was found along with a 25% discrepancy rate in principal diagnosis. The 1994/95 study specifically evaluated the accuracy of injury diagnosis codes and E-codes. Although the overall discrepancy rate for the injury diagnosis codes was 73%, there was only a 19% discrepancy rate for the principal diagnosis code. The discrepancy rate for the E-code⁷ (cause of injury code) was 16%. The discrepancy rate for principal injury diagnosis code (19%) was lower than that for the principal diagnosis code for all disease types within the VIMD at 22%. Therefore the use of the principal injury diagnosis code and E-codes for injury surveillance is reasonably reliable.

2.5 POPULATION STATISTICS

Australian Bureau of Statistics (ABS) estimated resident population figures were obtained for 30 June of each year required. To obtain 31 December figures, averages were found of the two surrounding 30 June figures.

2.6 STATISTICAL METHODS

Rates were calculated by dividing the appropriate number of injury admissions by the age-group specific population, derived from Australian Bureau of Statistics estimates as discussed in 2.5 above, and multiplying by 100,000. Average annual rates were calculated by the rate for each of the individual financial years, summing and dividing by six.

Trends were determined using a log-linear regression model of rate data assuming a Poisson distribution of injuries. The statistics relating to the trend curves, slope and intercept, 95% confidence intervals around the slope, estimated annual percentage change and the p-value, were calculated using the regression model in SAS⁸. A negative slope indicates a decreasing trend whereas an increasing trend has a positive slope. A trend was considered to be statistically significant if the p-value of the slope of the regression model was less than 0.05.

The log-linear model is represented by:

$$\text{Log (Y or rate)} = \beta(\text{x or year}) + \alpha, \text{ where } \beta = \text{slope of curve and } \alpha = \text{constant}$$

Taking anti-logs gives the equation for the trend curve (exponential) :

$$\text{Y (rate)} = \exp(\alpha + \beta\text{x})$$

3. RESULTS: FREQUENCY, RATES AND MALE/FEMALE DISTRIBUTION

3.1 FREQUENCY AND RATE BY 5-YEAR AGE GROUP

In the VIMD, there were 592,150 all-age admissions to public hospitals coded with a primary cause of injury E-code available for analysis over the period July 1992 to June 1998. This is an annual average frequency of admission of 98,692, and an average annual admission rate of 2,175 per 100,000.

Frequencies and rates for each financial year and for the six-year period by 5-year age groups and sex are shown in Appendix 1, Tables A to E.

This time period is characterised by increasing rates of injury from 60 years upwards, and two broad peaks in injury frequency by 5-year age groups: one in late adolescence/early adult years, and the other in older age (Figure 1a).

Comparison with the previous 6-year time period (Figure 1b) reveals some interesting changes. Overall, the injury rates for July 1992 to June 1998 were generally higher, most noticeably from about age 55 years. The increase in the injury rate for older persons is quite striking. Similarly, the frequencies for each age group are higher, again most noticeably from about age 55 years.

These changes in frequency are due to the combined effect of increased rates and demographic changes. The resulting changes in the burden of injury are dramatic. In the previous 6-year time period, July 1987 to June 1993, the age groups among whom injury hospitalisations were most frequent were all younger than 35 years (20-24, 15-19, 25-29, 30-34, 10-14).

For the time period July 1992 to June 1998, only two of the corresponding age groups were younger than 35 years and the remaining top five were over 65 years (70-74, 20-24, 75-79, 65-69, 25-29). This has significant implications for prevention programs and for the type of care required by the hospitalised injured population.

Figure 1a: All injuries, average annual frequency and rate
Public Hospital Admissions, Victoria, July 1992 to June 1998

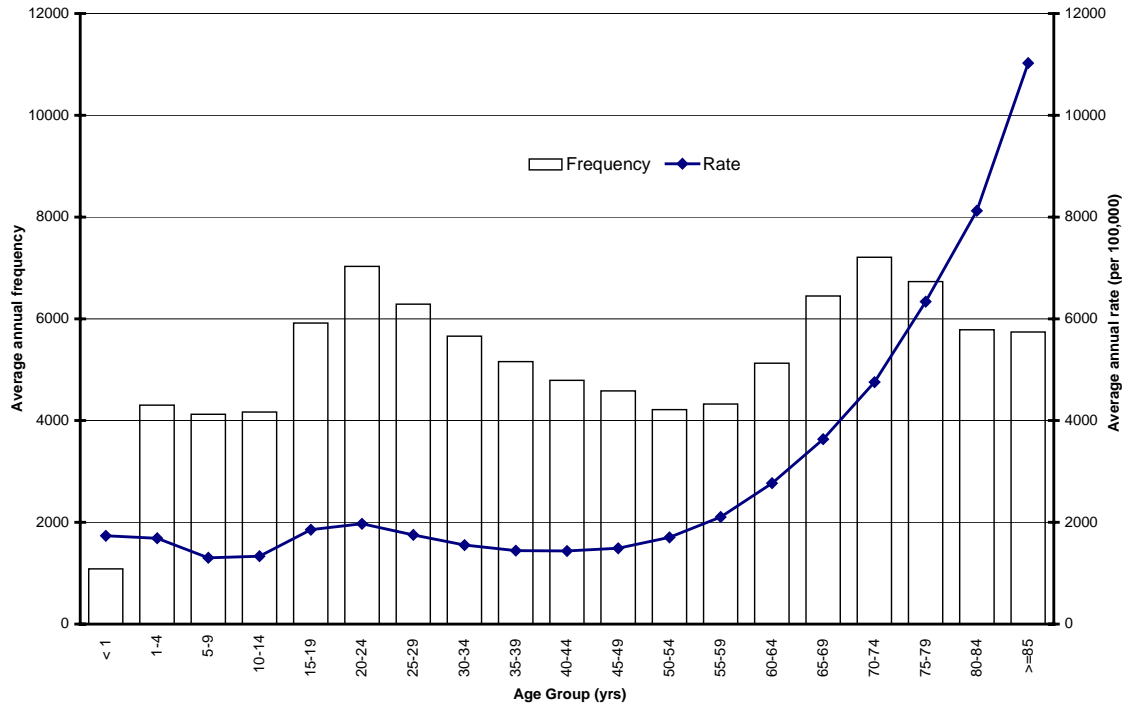
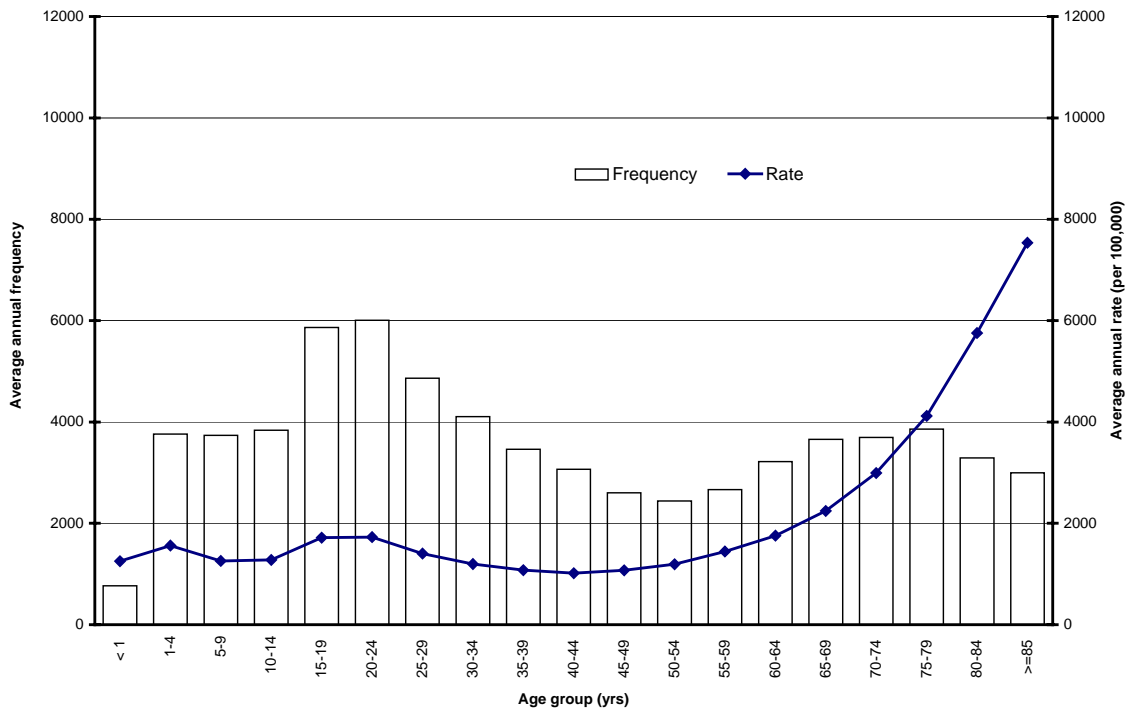


Figure 1b: All injuries, average annual frequency and rate
Public Hospital Admissions, Victoria, July 1987 to June 1993



3.2 FREQUENCY AND RATE BY 5-YEAR AGE GROUP AND SEX: OVERVIEW

Tables 1 to 3 display the frequency of injury for males and females combined (total), for males, and for females for the six-year period, July 1992 to June 1998. Table 4 gives the average annual total frequency for the six-year period for males and females combined. The annual average age group-specific rates per 100,000 are shown for all persons, males and females respectively in Tables 5, 6 and 7.

Females had a lower rate of admission for almost all causes of injury, the notable exceptions being various types of falls, horse riding, unintentional poisonings and some means of self-inflicted injury. With respect to unintentional injuries, the male to female injury rate ratios were extremely high for motorcycle injuries, machinery injuries, sport-related falls and collisions, bicycle injuries, hit/struck and cutting/piercing injuries (Figure 2). Male to female injury rate ratios for intentional injuries overall, were much higher for males particularly for assault injuries, however, the self-inflicted injury rate was slightly higher for females.

Figure 2: Male to Female injury rate ratios, unintentional injuries
Public Hospital Admissions, Victoria, July 1992 to June 1998

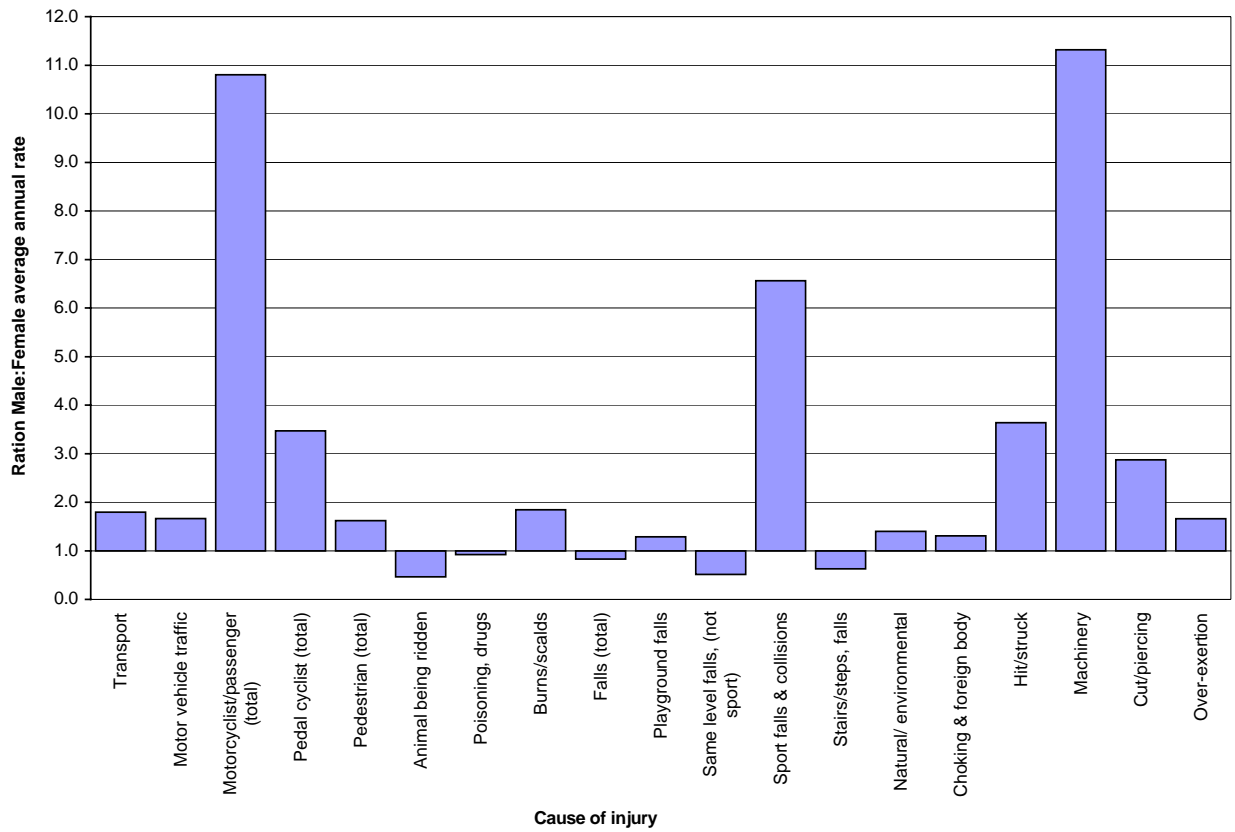


Figure 3: Male to Female injury rate ratios, intentional injuries
Public Hospital Admissions, Victoria, July 1992 to June 1998

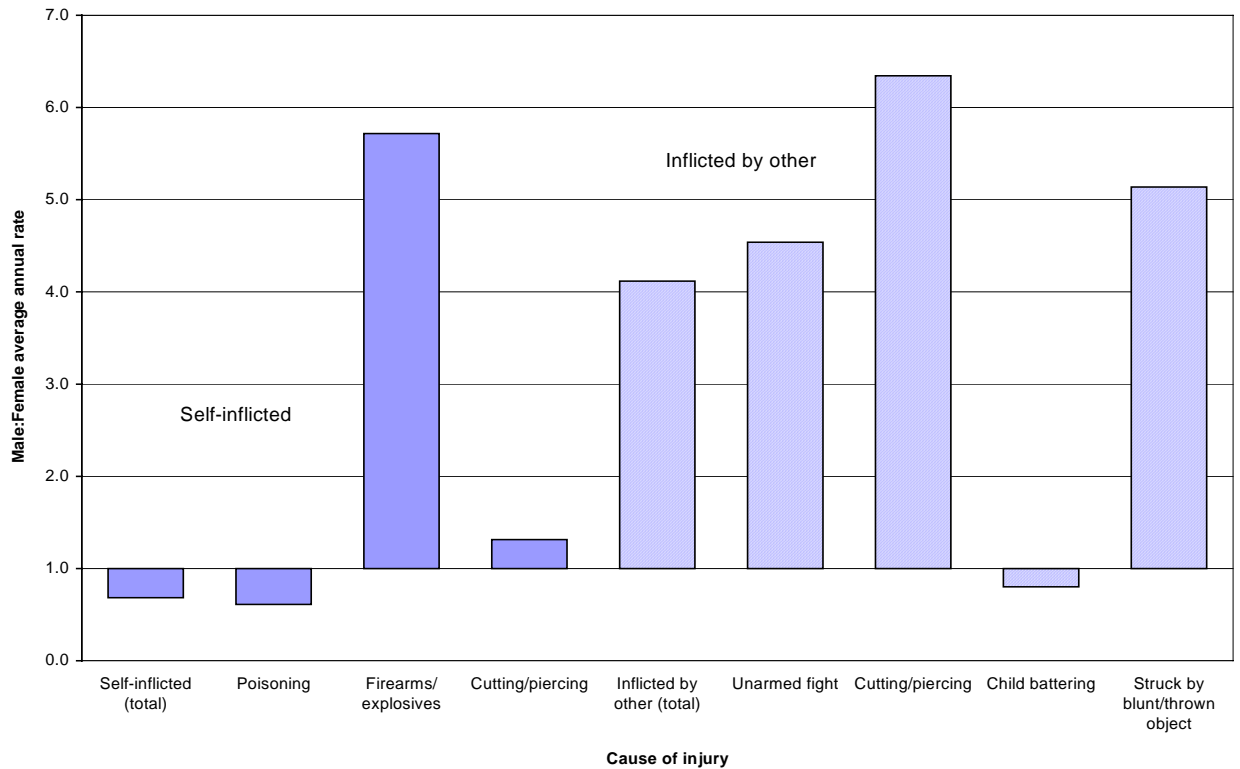


Table 1: Public Hospital Injury Admissions, Victoria, Six years, 1 July 1992 to 30 June 1998, Total Frequency, Persons (n=592,150)

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total
Injury Cause																				
<i>Unintentional (Total)</i>	2657	20915	20587	20195	23681	25920	21001	17243	14631	12800	11405	9812	9209	9557	11367	13786	16040	17968	23353	302127
Transport (Total)	86	1267	3119	5509	7754	8412	5770	4381	3410	2927	2313	1936	1545	1420	1384	1332	1257	872	608	55302
Motor Vehicle Traffic (total)	71	649	1072	1536	5098	6613	4402	3232	2525	2165	1745	1458	1218	1138	1155	1117	1088	747	503	37532
Driver	6	19	21	50	1622	3008	1973	1575	1254	1171	909	767	647	538	536	523	494	297	167	15577
Passenger	57	328	397	447	1531	1268	750	468	340	316	323	305	277	301	279	268	282	175	146	8258
Motorcyclist/passenger	0	10	78	266	1004	1481	1051	700	518	307	198	104	52	34	23	26	15	10	6	5883
Pedal cyclist	0	15	139	280	199	149	115	76	69	66	32	32	26	23	22	12	13	9	6	1283
Pedestrian	5	259	400	436	527	447	324	257	214	211	201	199	154	189	238	230	228	224	141	4884
Other person	3	18	37	57	215	260	189	156	130	94	82	51	62	53	57	58	56	32	37	1647
Motor Vehicle Non-Traffic (total)	2	156	279	639	813	588	392	337	235	191	161	126	99	78	69	86	71	62	43	4427
Occupant	1	38	56	91	158	151	110	105	69	82	61	50	44	38	31	50	46	40	31	1252
Motorcyclist/passenger	0	28	167	480	568	357	223	173	120	74	55	36	20	15	13	10	2	1	2	2344
Pedestrian	0	53	20	17	12	16	13	17	14	7	13	12	12	5	9	12	12	10	6	260
Other person	1	37	36	51	75	64	46	42	32	28	32	28	23	20	16	14	11	11	4	571
Other Vehicle (total)	13	462	1768	3334	1843	1211	976	812	650	571	407	352	228	204	160	129	98	63	62	13343
Railway	2	1	4	11	28	14	18	17	14	10	9	14	10	13	8	8	12	12	7	212
Bicycle	3	364	1245	2025	951	411	329	266	221	211	141	139	91	97	86	69	39	23	13	6724
Animal being ridden	0	50	278	720	530	485	377	332	258	221	163	117	62	37	22	8	4	2	5	3671
Water transport	0	9	10	43	85	120	109	64	47	46	30	31	23	11	10	9	7	2	1	657
Air transport	0	2	4	5	17	67	59	55	39	33	17	16	8	10	4	4	4	2	7	353
Vehicle NEC	8	36	227	530	232	114	84	78	71	50	47	35	34	36	30	31	32	22	29	1726
Near drowning (Total)	38	206	64	34	39	40	28	28	19	18	19	13	9	7	10	10	5	2	3	592
Pool	12	143	21	7	8	8	5	4	2	6	3	2	3	2	1	1	0	0	1	229
Sport/rec activity (No diving equipment)	0	23	28	18	18	14	4	8	7	7	2	4	1	1	1	2	1	1	1	141
Other drowning	26	40	15	9	13	18	19	16	10	5	14	7	5	4	8	7	4	1	1	222
Poisoning (Total)	407	4117	289	471	1587	1832	1705	1403	1186	989	687	468	343	271	314	325	280	269	200	17143
Drugs, medicinal substances & biologicals (total)	220	3071	163	272	1229	1518	1387	1147	963	784	502	353	236	177	232	249	232	235	175	13145
Heroin/Opiates	2	35	2	6	159	273	265	207	118	77	31	31	14	16	13	20	15	9	19	1312
Paracetamol	24	541	14	56	264	200	159	113	89	83	48	23	11	11	7	7	8	6	4	1668
Tranquillisers	8	309	14	39	234	382	425	395	336	281	195	112	66	41	35	37	41	33	28	3011
Other drugs/medications	186	2186	133	171	572	663	538	432	420	343	228	187	145	109	177	185	168	187	124	7154
Other solid & liquid substances, gases & vapours (total)	187	1046	126	199	358	314	318	256	223	205	185	115	107	94	82	76	48	34	25	3998
Other solids/liquids	176	999	117	169	306	258	242	199	178	153	154	90	87	84	71	65	43	30	21	3442
Gas/vapour	11	47	9	30	52	56	76	57	45	52	31	25	20	10	11	11	5	4	4	556
Falls (Total)	869	6329	11431	8021	4926	4625	4012	3663	3451	3413	3534	3540	4086	4998	6933	9570	12225	14832	20522	130980
Falls, different level (total)	679	4092	7628	2890	1137	1303	1148	1230	1243	1264	1296	1285	1260	1282	1490	1746	1907	2143	2745	37768
Stairs/steps	48	256	168	124	167	240	259	233	241	246	269	269	295	311	378	508	530	505	487	5534
Ladders/scaffolds	0	55	47	26	41	156	157	258	272	337	390	380	383	362	355	259	185	132	46	3841
Building/structure	2	197	277	197	196	275	217	189	187	165	147	142	109	83	83	55	35	14	13	2583
Playground equipment	4	1120	4399	1061	93	28	12	22	20	17	8	11	1	4	4	6	8	11	18	6847
Chair or bed	272	1259	668	212	69	65	78	100	132	117	120	150	194	273	419	635	864	1210	1871	8708
Different level, other	353	1205	2069	1270	571	539	425	428	391	382	362	333	278	249	251	283	285	271	310	10255

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total
Falls, same level (total)	190	2237	3803	5131	3789	3322	2864	2433	2208	2149	2238	2255	2826	3716	5443	7824	10318	12689	17777	93212
Same level, not sport	60	905	1465	1713	814	845	841	853	835	970	1068	1145	1447	1868	2784	3828	4814	5790	7469	39514
Falls in sport	2	21	253	1215	1184	826	620	347	192	83	51	21	20	13	15	14	12	7	9	4905
Fracture, unspecified	40	187	482	676	746	630	503	354	277	195	173	142	184	210	244	375	457	484	665	7024
Other falls	88	1124	1603	1527	1045	1021	900	879	904	901	946	947	1175	1625	2400	3607	5035	6408	9634	41769
Fires/ burns/ scalds (Total)	339	1356	274	282	374	505	446	405	339	318	259	220	183	159	172	188	172	148	192	6331
House fires	6	16	8	5	14	26	23	25	11	16	18	13	11	9	13	7	3	6	12	242
Clothing ignition	2	28	22	14	19	27	8	12	11	15	5	6	8	6	4	3	15	6	5	216
Hot liquids/vapors/steam	224	1028	152	76	111	166	148	146	107	113	97	81	61	67	67	93	76	72	85	2970
Caustic/corrosive substances & other hot objects	92	200	43	41	60	100	82	99	93	83	63	48	47	39	39	40	33	38	53	1293
Other fires/burns	15	84	49	146	170	186	185	123	117	91	76	72	56	38	49	45	45	26	37	1610
Natural/ environmental (Total)	79	1168	742	600	513	552	562	495	560	491	511	418	335	347	299	331	285	305	325	8918
Excessive heat/cold	9	12	16	19	55	45	30	26	29	26	27	23	40	46	56	88	127	165	222	1061
Venomous animals/plants	7	216	240	215	205	200	216	211	237	184	185	131	99	97	56	67	34	22	8	2630
Dog bite	6	546	293	133	59	74	89	69	65	55	72	53	42	42	52	59	35	29	23	1796
Other bite/injury caused by animal	19	377	191	228	188	230	221	185	217	221	222	201	146	155	127	106	80	76	47	3237
Other natural/ environmental	38	17	2	5	6	3	6	4	12	5	5	10	8	7	8	11	9	13	25	194
Choking/ suffocation/ foreign body (Total)	368	1491	726	289	182	219	272	323	349	348	387	336	337	359	364	326	316	235	185	7412
Aspiration of food	144	163	24	24	15	14	21	27	30	42	47	39	70	43	46	45	61	46	43	944
Aspiration of other object	77	195	59	22	15	9	18	15	18	9	10	10	8	11	19	22	21	17	15	570
Mechanical suffocation	16	14	3	8	2	2	1	0	3	1	1	0	1	0	0	0	1	1	0	54
Foreign body in eye	8	183	73	26	24	42	47	29	33	38	30	14	9	9	7	4	6	1	1	584
Foreign body in other orifice	123	936	567	209	126	152	185	252	265	258	299	273	249	296	292	255	227	170	126	5260
Hit/ struck/ crush (Total)	220	2421	1863	2638	3768	3780	2945	2026	1415	1093	830	649	523	396	382	331	331	316	355	26282
Struck by falling object	19	230	120	84	113	214	205	264	205	209	174	149	125	81	73	48	41	24	34	2412
Struck/knocked in sport	9	101	432	1459	2604	2328	1709	911	496	253	141	71	32	18	28	18	27	25	19	10681
Caught/crushed in or between objects	107	1227	500	206	203	288	281	274	256	260	211	205	132	107	80	61	46	36	45	4525
Other hit/struck/crush	85	863	811	889	848	950	750	577	458	371	304	224	234	190	201	204	217	231	257	8664
Machinery (Total)	2	123	73	97	492	780	760	740	717	648	619	539	424	309	227	144	88	37	15	6834
Agricultural/farm	0	23	24	21	28	52	49	46	53	40	42	41	49	31	29	16	13	4	2	563
Lifting machines and appliances	0	9	5	3	26	45	56	49	41	53	52	33	23	9	6	2	1	0	0	413
Metalworking machines	0	1	2	6	74	100	101	88	85	61	73	60	43	30	24	8	2	4	0	762
Woodworking and forming machines	0	6	4	19	176	232	228	260	228	233	224	190	170	142	124	96	58	22	10	2422
Earth moving machines	0	0	0	1	3	5	7	9	6	10	7	11	7	3	3	0	0	1	0	73
Other machinery	2	84	38	47	185	346	319	288	304	251	221	204	132	94	41	22	14	6	3	2601
Cutting/ piercing (Total)	75	1667	1351	1204	2157	2821	2311	1806	1572	1236	1073	845	696	594	488	397	269	200	153	20915
Powered lawn mower	0	22	30	39	48	46	60	70	67	68	55	51	70	60	55	44	22	13	1	821
Other powered hand tools	0	10	9	22	97	163	161	160	178	142	155	137	111	109	92	49	25	16	1	1637
Powered household appliances	0	34	10	9	20	16	13	18	12	8	9	11	15	15	12	8	3	0	1	214
Knives/daggers	1	83	77	112	336	481	361	297	222	202	156	99	77	43	30	17	9	6	2	2611
Other hand tools/implements	8	149	141	174	152	154	160	150	152	112	99	106	72	81	54	41	17	16	8	1846
Other cutting/piercing instruments/objects	66	1369	1084	848	1504	1961	1556	1111	941	704	599	441	351	286	245	238	193	149	140	13786

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total
Other unintentional (Total)	174	770	655	1050	1889	2354	2190	1973	1613	1319	1173	848	728	697	794	832	812	752	795	21418
Firearms	0	4	9	32	57	59	39	26	22	23	15	10	3	5	1	2	1	1	1	310
Explosion	1	1	15	57	61	74	60	51	27	28	39	24	8	9	10	3	1	2	2	473
Electric current	1	37	26	40	58	100	90	71	67	53	47	37	22	9	11	6	2	4	7	688
Overexertion/strenuous movements	10	33	59	305	655	915	870	844	741	567	480	305	245	239	232	252	231	194	196	7373
Other unintentional	162	695	546	616	1058	1206	1131	981	756	648	592	472	450	435	540	569	577	551	589	12574
Intentional (Total)	220	215	112	918	6053	8154	7003	5885	4798	3747	2670	1462	871	597	486	360	263	213	195	44222
Self-Inflicted (Total)	4	11	9	533	3322	4260	4126	3718	3272	2667	1903	1006	629	414	366	261	205	154	139	26999
Poisoning (Tranquillisers/Psychotropic agents)	1	0	3	123	915	1735	1999	1919	1725	1468	1049	550	322	216	177	126	96	60	53	12537
Poisoning (Other solids/liquids)	2	10	0	352	1999	1837	1439	1235	1121	880	637	316	224	139	123	88	71	52	53	10578
Poisoning (MV Exhaust gas)	0	0	0	0	16	71	77	76	61	47	44	24	16	9	3	4	3	3	0	454
Poisoning (Other gases/vapours)	0	0	0	9	16	15	11	14	7	15	8	7	3	1	0	2	0	3	2	113
Firearms/explosives	1	0	0	0	5	25	9	13	8	5	14	3	3	6	9	3	2	0	0	106
Cutting/piercing	0	0	1	24	269	393	395	330	250	180	101	59	32	25	39	16	16	30	20	2180
Other means	0	1	5	25	102	184	196	131	100	72	50	47	29	18	15	22	17	6	11	1031
Inflicted by other (Total)	216	204	103	385	2731	3894	2877	2167	1526	1080	767	456	242	183	120	99	58	59	56	17223
Unarmed fight/brawl	8	9	25	271	1879	2758	1978	1392	996	680	505	277	144	119	64	61	29	33	31	11259
Firearms/explosives	1	3	1	3	14	15	26	12	8	7	8	2	8	2	4	2	2	3	2	123
Cutting/piercing	0	2	4	11	367	447	283	250	173	127	72	50	21	16	13	4	4	2	2	1848
Child battering/maltreatment	193	170	59	29	24	21	17	33	19	12	6	5	1	1	3	1	3	2	2	601
Struck by blunt/thrown object	5	4	5	19	209	302	262	227	153	114	70	51	33	19	13	13	4	6	5	1514
Other means	9	16	9	52	238	351	311	253	177	140	106	71	35	26	23	18	16	13	14	1878
Undetermined/ other intent (Total)	14	26	10	42	165	230	206	158	134	111	81	42	35	30	21	14	16	28	13	1376
Undetermined, poisoning (solids/liquids)	2	3	1	25	104	146	119	99	85	75	52	30	21	12	8	10	8	12	6	818
Undetermined, firearm/explosive	0	0	0	0	6	15	12	10	0	4	3	1	1	3	2	0	2	3	1	63
Other undetermined/other intent	12	23	9	17	55	69	75	49	49	32	26	11	13	15	11	4	6	13	6	495
ALL INCIDENT TRUE INJURIES	2891	21156	20709	21155	29899	34304	28210	23286	19563	16658	14156	11316	10115	10184	11874	14160	16319	18209	23561	347725
Medical injuries (Total)	3617	4443	3633	3280	4665	6645	8230	9489	10342	11181	12598	13420	15350	20207	26453	28720	23805	16302	10725	233105
Medical misadventure	197	111	100	71	67	157	260	314	308	249	258	225	262	329	459	438	326	187	115	4433
Post-Operative complications	2659	3124	2761	2476	3553	5138	6268	7244	8187	8897	10071	10593	12114	16082	21028	22282	17907	11530	6946	178860
Adverse drug effects	761	1208	772	733	1045	1350	1702	1931	1847	2035	2269	2602	2974	3796	4966	6000	5572	4585	3664	49812
Late effects	12	218	396	583	935	1238	1293	1173	1046	911	742	548	489	370	372	378	256	200	160	11320
ALL NON-INCIDENT NON-TRUE INJURIES	3629	4661	4029	3863	5600	7883	9523	10662	11388	12092	13340	13968	15839	20577	26825	29098	24061	16502	10885	244425
ALL INJURIES	6520	25817	24738	25018	35499	42187	37733	33948	30951	28750	27496	25284	25954	30761	38699	43258	40380	34711	34446	592150

Table 2: Public Hospital Injury Admissions, Victoria, Six years, 1 July 1992 to 30 June 1998, Total Frequency, Males (n=320,299)

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total
Injury Cause																				
<i>Unintentional (Total)</i>	1468	12229	12603	13965	17433	19088	15050	12001	10010	8414	7418	6052	5242	4951	5264	5311	5116	4861	5356	171832
Transport (Total)	53	797	1923	3721	5331	5712	3876	2921	2274	1860	1410	1141	872	771	729	660	551	408	256	35266
Motor Vehicle Traffic (total)	42	398	680	1035	3372	4498	2932	2156	1648	1323	1010	801	632	565	568	537	480	353	223	23253
Driver	4	14	13	36	1039	1867	1161	957	744	654	517	424	375	328	312	309	263	176	101	9294
Passenger	33	175	203	231	771	688	386	213	151	137	112	108	69	67	62	48	63	35	38	3590
Motorcyclist/passenger	0	8	58	225	925	1369	965	657	480	285	178	90	44	28	21	21	11	7	5	5377
Pedal cyclist	0	13	116	225	164	103	84	65	54	60	27	24	21	20	17	12	13	9	6	1033
Pedestrian	3	172	266	277	326	308	227	184	141	135	124	126	88	93	130	122	105	112	56	2995
Other person	2	16	24	41	147	163	109	80	78	52	52	29	35	29	26	25	25	14	17	964
Motor Vehicle Non-Traffic (total)	2	94	215	544	722	519	350	284	207	158	133	96	78	59	53	43	27	26	12	3622
Occupant	1	21	33	66	125	122	87	78	55	67	49	34	37	28	23	23	19	12	10	890
Motorcyclist/passenger	0	19	141	419	527	338	213	164	115	67	49	29	19	14	13	8	2	1	1	2139
Pedestrian	0	31	15	14	10	9	10	8	11	4	10	7	8	3	7	5	2	7	0	161
Other person	1	23	26	45	60	50	40	34	26	20	25	26	14	14	10	7	4	6	1	432
Other Vehicle (total)	9	305	1028	2142	1237	695	594	481	419	379	267	244	162	147	108	80	44	29	21	8391
Railway	1	1	1	9	23	12	14	11	9	9	5	8	5	9	3	2	3	3	2	130
Bicycle	2	257	838	1597	841	309	256	212	173	161	107	104	64	67	62	51	24	18	8	5151
Animal being ridden	0	15	68	103	108	152	129	104	112	107	77	66	42	30	17	8	2	0	4	1144
Water transport	0	7	6	31	60	87	91	53	40	37	23	24	18	9	6	4	1	1	1	499
Air transport	0	1	3	4	10	47	46	49	35	30	17	14	8	8	2	3	1	1	0	279
Vehicle NEC	6	24	112	398	195	88	58	52	50	35	38	28	25	24	18	12	13	6	6	1188
Near drowning (Total)	21	122	33	25	30	33	24	20	16	10	16	9	5	6	5	1	5	0	1	382
Pool	6	88	10	5	7	5	5	4	1	2	3	2	0	2	0	0	0	0	0	140
Sport/rec activity (NDE)	0	15	15	13	15	13	3	6	6	6	2	1	1	0	0	1	0	1	0	98
Other drowning	15	19	8	7	8	15	16	10	9	2	11	6	4	4	5	1	4	0	0	144
Poisoning (Total)	216	2300	166	222	686	953	898	728	571	453	331	227	167	144	160	132	109	89	72	8624
Drugs, medicinal substances & biologicals (total)	115	1646	93	103	482	766	701	563	423	332	221	153	107	94	119	99	85	73	63	6238
Heroin/Opiates	1	19	2	3	85	188	176	144	79	45	17	18	5	11	6	6	7	4	7	823
Paracetamol	17	290	8	14	50	61	58	35	28	31	21	9	3	5	4	3	1	1	2	641
Tranquillisers	5	168	10	16	110	183	199	167	132	108	89	46	24	22	17	18	15	6	8	1343
Other drugs/medications	92	1169	73	70	237	334	268	217	184	148	94	80	75	56	92	72	62	62	46	3431
Other solid & liquid substances, gases & vapours (total)	101	654	73	119	204	187	197	165	148	121	110	74	60	50	41	33	24	16	9	2386
Other solids/liquids	98	626	67	103	171	147	141	115	108	84	87	55	46	45	33	28	21	14	7	1996
Gas/vapour	3	28	6	16	33	40	56	50	40	37	23	19	14	5	8	5	3	2	2	390
Falls (Total)	463	3659	6807	5550	3817	3381	2735	2392	2182	2073	2099	1887	1882	2139	2664	3205	3481	3698	4504	58618
Falls, different level (total)	341	2311	4521	1905	844	985	852	909	921	925	959	855	787	744	809	803	681	679	715	21546
Stairs/steps	26	132	97	75	94	127	141	121	117	113	121	102	95	106	110	155	120	121	131	2104
Ladders/scaffolds	0	37	28	22	36	138	143	236	246	304	352	318	321	304	292	193	117	101	32	3220
Building/structure	2	127	201	152	154	239	192	162	171	145	133	122	98	72	71	41	28	8	7	2125
Playground equipment	3	628	2434	606	64	20	6	9	9	13	7	4	0	3	3	5	2	1	4	3821
Chair or bed	132	675	370	128	37	31	40	46	71	45	66	70	73	117	187	270	299	370	452	3479
Different level, other	178	712	1391	922	459	430	330	335	307	305	280	239	200	142	146	139	115	78	89	6797

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total
Falls, same level (total)	122	1348	2286	3645	2973	2396	1883	1483	1261	1148	1140	1032	1095	1395	1855	2402	2800	3019	3789	37072
Same level, not sport	42	541	828	1111	545	487	446	437	395	463	466	440	457	603	843	1047	1172	1308	1552	13183
Falls in sport	1	14	190	1006	1059	735	532	282	137	57	35	14	7	6	4	3	1	0	2	4085
Fracture, unspecified	30	114	266	492	649	535	403	270	188	113	112	75	85	87	87	111	116	123	125	3981
Other falls	49	679	1002	1036	720	639	502	494	541	515	527	503	546	699	921	1241	1511	1588	2110	15823
Fires/ burns/ scalds (Total)	202	836	159	220	288	380	317	288	229	219	172	158	118	87	101	94	80	57	68	4073
House fires	3	7	5	5	10	25	12	20	7	12	14	10	6	7	4	3	2	1	9	162
Clothing ignition	0	14	11	10	13	19	5	11	5	9	2	5	4	3	2	1	3	1	0	118
Hot liquids/vapors/steam	142	640	69	50	73	104	88	76	59	64	52	48	29	30	34	41	31	20	22	1672
Caustic/corrosive substances & other hot objects	48	121	30	29	46	73	61	78	77	60	48	37	35	25	24	21	19	18	23	873
Other fires/burns	9	54	44	126	146	159	151	103	81	74	56	58	44	22	37	28	25	17	14	1248
Natural/ environmental (Total)	44	659	454	364	311	337	362	302	373	313	311	259	208	194	178	167	110	118	90	5154
Excessive heat/cold	7	8	7	12	32	33	28	18	19	17	19	21	31	30	36	45	38	66	57	524
Venomous animals/plants	3	136	168	146	140	133	143	138	172	127	115	78	59	59	36	36	15	10	2	1716
Dog bite	3	309	175	86	37	52	61	44	43	32	38	31	26	21	29	22	11	9	7	1036
Other bite/injury caused by animal	11	199	104	118	99	118	125	99	132	133	134	121	86	78	74	54	40	30	13	1768
Other natural/ environmental	20	7	0	2	3	1	5	3	7	4	5	8	6	6	3	10	6	3	11	110
Choking/ suffocation/ foreign body (Total)	205	813	403	187	102	142	163	189	224	211	224	195	194	211	214	170	155	97	58	4157
Aspiration of food	78	96	17	15	6	6	13	18	17	25	27	27	37	26	31	25	37	21	15	537
Aspiration of other object	38	107	31	14	9	7	8	6	11	4	4	8	5	8	11	14	10	10	7	312
Mechanical suffocation	11	10	1	7	2	1	0	0	2	1	0	0	1	0	0	0	1	1	0	38
Foreign body in eye	4	98	43	18	20	40	38	25	31	32	23	11	8	4	4	3	6	0	1	409
Foreign body in other orifice	74	502	311	133	65	88	104	140	163	149	170	149	143	173	168	128	101	65	35	2861
Hit/ struck/ crush (Total)	121	1431	1306	2061	3328	3365	2582	1705	1156	891	684	521	397	286	256	157	118	76	72	20513
Struck by falling object	11	150	82	65	102	190	185	234	182	177	155	135	112	68	56	27	24	7	11	1973
Struck/knocked in sport	5	70	336	1219	2388	2157	1575	808	409	201	104	53	25	7	16	10	9	3	3	9398
Caught/crushed in or between objects	61	671	305	146	173	255	243	225	213	224	182	164	102	84	61	35	26	12	9	3191
Other hit/struck/crush	44	540	583	631	665	763	579	438	352	289	243	169	158	127	123	85	59	54	49	5951
Machinery (Total)	2	84	53	78	446	711	697	697	656	581	570	499	400	297	224	140	84	36	13	6268
Agricultural/farm	0	16	15	15	25	44	41	39	44	39	39	36	46	29	29	15	13	4	2	491
Lifting machines and appliances	0	8	3	3	26	42	55	49	41	47	45	30	23	8	6	2	1	0	0	389
Metalworking machines	0	1	2	5	71	95	97	85	81	56	71	57	42	30	24	8	2	4	0	731
Woodworking and forming machines	0	5	4	14	171	227	222	256	226	225	217	187	167	140	124	96	57	22	10	2370
Earth moving machines	0	0	0	1	2	5	7	8	6	10	7	11	7	3	3	0	0	1	0	71
Other machinery	2	54	29	40	151	298	275	260	258	204	191	178	115	87	38	19	11	5	1	2216
Cutting/ piercing (Total)	46	1062	862	826	1736	2316	1812	1394	1204	907	809	621	555	445	352	229	131	87	32	15426
Powered lawn mower	0	16	24	33	40	34	42	48	49	54	38	38	51	49	44	29	15	10	0	614
Other powered hand tools	0	9	9	19	94	159	157	154	177	139	150	135	109	106	90	49	25	16	1	1598
Powered household appliances	0	20	3	3	7	11	7	13	4	1	5	4	10	8	5	3	1	0	0	105
Knives/daggers	0	51	54	87	265	377	258	214	151	126	102	60	60	29	14	10	5	4	1	1868
Other hand tools/implements	5	81	81	101	114	118	118	104	113	86	71	71	54	53	36	21	11	9	3	1250
Other cutting/piercing instruments/objects	41	885	691	583	1216	1617	1230	861	710	501	443	313	271	200	163	117	74	48	27	9991

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total
Other unintentional (Total)	95	466	437	711	1358	1758	1584	1365	1125	896	792	535	444	371	381	356	292	195	190	13351
Firearms	0	3	7	31	49	57	32	25	20	19	14	9	3	5	1	2	1	1	0	279
Explosion	1	1	14	55	59	69	46	45	21	25	35	19	8	7	9	2	1	2	0	419
Electric current	0	24	21	27	39	76	69	52	59	42	40	29	21	8	9	6	1	2	1	526
Overexertion/strenuous movements	7	19	31	176	440	661	618	549	504	376	316	194	143	135	102	116	78	48	49	4562
Other unintentional	87	419	364	422	771	895	819	694	521	434	387	284	269	216	260	230	211	142	140	7565
Intentional (Total)	131	111	76	389	3325	5173	4138	3289	2399	1855	1397	783	460	334	284	179	111	98	89	24621
Self-Inflicted (Total)	1	4	9	106	973	1836	1831	1594	1238	1029	786	434	271	193	192	115	81	71	61	10825
Poisoning (Tranquillisers/Psychotropic agents)	0	0	3	28	262	663	789	721	578	488	377	208	129	89	78	38	26	17	22	4516
Poisoning (Other solids/liquids)	0	4	0	49	492	717	617	512	421	349	266	132	83	62	63	44	29	20	22	3882
Poisoning (MV Exhaust gas)	0	0	0	0	15	57	59	62	44	41	32	17	14	9	3	3	3	3	0	362
Poisoning (Other gases/vapours)	0	0	0	4	6	12	8	10	3	10	6	4	2	1	0	2	0	3	0	71
Firearms/explosives	1	0	0	0	1	25	8	10	6	5	11	3	3	4	9	2	2	0	0	90
Cutting/piercing	0	0	1	9	127	230	217	190	130	98	60	38	20	18	28	14	11	25	10	1226
Other means	0	0	5	16	70	132	133	89	56	38	34	32	20	10	11	12	10	3	7	678
Inflicted by other (Total)	130	107	67	283	2352	3337	2307	1695	1161	826	611	349	189	141	92	64	30	27	28	13796
Unarmed fight/brawl	5	5	20	229	1628	2371	1593	1092	742	529	415	209	116	97	51	43	12	13	20	9190
Firearms/explosives	1	3	1	3	12	14	22	11	8	6	4	2	7	2	3	1	2	2	0	104
Cutting/piercing	0	1	4	7	335	396	243	205	152	102	54	42	17	13	9	3	3	2	1	1589
Child battering/maltreatment	116	90	30	7	6	3	0	1	5	0	1	0	0	0	0	1	0	1	0	261
Struck by blunt/thrown object	3	1	4	11	189	275	216	201	127	92	57	44	28	15	11	9	3	5	4	1295
Other means	5	7	8	26	182	278	233	185	127	97	80	52	21	14	18	8	9	5	2	1357
Undetermined/ other intent (Total)	9	15	4	15	102	140	126	89	71	57	46	23	14	15	14	7	9	10	3	769
Undetermined, poisoning (solids/liquids)	1	2	0	6	51	74	64	43	37	35	25	14	5	2	5	4	5	4	2	379
Undetermined, firearm/explosive	0	0	0	0	6	11	11	9	0	4	3	1	1	3	0	0	2	2	1	54
Other undetermined/other intent	8	13	4	9	45	55	51	37	34	18	18	8	8	10	9	3	2	4	0	336
ALL INCIDENT TRUE INJURIES	1608	12355	12683	14369	20860	24401	19314	15379	12480	10326	8861	6858	5716	5300	5562	5497	5236	4969	5448	197222
Medical injuries (Total)	2225	2826	2121	1730	2213	2920	3194	3600	3805	4342	5277	6570	8350	11548	14994	15758	12201	7573	4407	115654
Medical misadventure	128	66	54	42	23	34	40	54	47	53	71	102	129	170	238	232	147	86	41	1757
Post-Operative complications	1671	2055	1596	1308	1741	2360	2491	2793	2969	3356	4232	5283	6774	9501	12292	12612	9570	5812	3232	91648
Adverse drug effects	426	705	471	380	449	526	663	753	789	933	974	1185	1447	1877	2464	2914	2484	1675	1134	22249
Late effects	9	119	248	377	656	905	957	861	722	611	477	365	289	223	201	179	95	72	57	7423
ALL NON-INCIDENT NON-TRUE INJURIES	2234	2945	2369	2107	2869	3825	4151	4461	4527	4953	5754	6935	8639	11771	15195	15937	12296	7645	4464	123077
ALL INJURIES	3842	15300	15052	16476	23729	28226	23465	19840	17007	15279	14615	13793	14355	17071	20757	21434	17532	12614	9912	320299

Table 3: Public Hospital Injury Admissions, Victoria, Six years, 1 July 1992 to 30 June 1998, Total Frequency, Females (n=271,851)

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total
Injury Cause																				
<i>Unintentional (Total)</i>	1189	8686	7984	6230	6248	6832	5951	5242	4621	4386	3987	3760	3967	4606	6103	8475	10924	13107	17997	130295
Transport (Total)	33	470	1196	1788	2423	2700	1894	1460	1136	1067	903	795	673	649	655	672	706	464	352	20036
Motor Vehicle Traffic (total)	29	251	392	501	1726	2115	1470	1076	877	842	735	657	586	573	587	580	608	394	280	14279
Driver	2	5	8	14	583	1141	812	618	510	517	392	343	272	210	224	214	231	121	66	6283
Passenger	24	153	194	216	760	580	364	255	189	179	211	197	208	234	217	220	219	140	108	4668
Motorcyclist/passenger	0	2	20	41	79	112	86	43	38	22	20	14	8	6	2	5	4	3	1	506
Pedal cyclist	0	2	23	55	35	46	31	11	15	6	5	8	5	3	5	0	0	0	0	250
Pedestrian	2	87	134	159	201	139	97	73	73	76	77	73	66	96	108	108	123	112	85	1889
Other person	1	2	13	16	68	97	80	76	52	42	30	22	27	24	31	33	31	18	20	683
Motor Vehicle Non-Traffic (total)	0	62	64	95	91	69	42	53	28	33	28	30	21	19	16	43	44	36	31	805
Occupant	0	17	23	25	33	29	23	27	14	15	12	16	7	10	8	27	27	28	21	362
Motorcyclist/passenger	0	9	26	61	41	19	10	9	5	7	6	7	1	1	0	2	0	0	1	205
Pedestrian	0	22	5	3	2	7	3	9	3	3	3	5	4	2	2	7	10	3	6	99
Other person	0	14	10	6	15	14	6	8	6	8	7	2	9	6	6	7	7	5	3	139
Other Vehicle (total)	4	157	740	1192	606	516	382	331	231	192	140	108	66	57	52	49	54	34	41	4952
Railway	1	0	3	2	5	2	4	6	5	1	4	6	5	4	5	6	9	9	5	82
Bicycle	1	107	407	428	110	102	73	54	48	50	34	35	27	30	24	18	15	5	5	1573
Animal being ridden	0	35	210	617	422	333	248	228	146	114	86	51	20	7	5	0	2	2	1	2527
Water transport	0	2	4	12	25	33	18	11	7	9	7	7	5	2	4	5	6	1	0	158
Air transport	0	1	1	1	7	20	13	6	4	3	0	2	0	2	2	1	3	1	7	74
Vehicle NEC	2	12	115	132	37	26	26	26	21	15	9	7	9	12	12	19	19	16	23	538
Near drowning (Total)	17	84	31	9	9	7	4	8	3	8	3	4	4	1	5	9	0	2	2	210
Pool	6	55	11	2	1	3	0	0	1	4	0	0	3	0	1	1	0	0	1	89
Sport/rec activity (NDE)	0	8	13	5	3	1	1	2	1	1	0	3	0	1	1	2	0	1	0	43
Other drowning	11	21	7	2	5	3	3	6	1	3	3	1	1	0	3	6	0	1	1	78
Poisoning (Total)	191	1817	123	249	901	879	807	675	615	536	356	241	176	127	154	193	171	180	128	8519
Drugs, medicinal substances & biologicals (total)	105	1425	70	169	747	752	686	584	540	452	281	200	129	83	113	150	147	162	112	6907
Heroin/Opiates	1	16	0	3	74	85	89	63	39	32	14	13	9	5	7	14	8	5	12	489
Paracetamol	7	251	6	42	214	139	101	78	61	52	27	14	8	6	3	4	7	5	2	1027
Tranquillisers	3	141	4	23	124	199	226	228	204	173	106	66	42	19	18	19	26	27	20	1668
Other drugs/medications	94	1017	60	101	335	329	270	215	236	195	134	107	70	53	85	113	106	125	78	3723
Other solid & liquid substances, gases & vapours (total)	86	392	53	80	154	127	121	91	75	84	75	41	47	44	41	43	24	18	16	1612
Other solids/liquids	78	373	50	66	135	111	101	84	70	69	67	35	41	39	38	37	22	16	14	1446
Gas/vapour	8	19	3	14	19	16	20	7	5	15	8	6	6	5	3	6	2	2	2	166
Falls (Total)	406	2670	4624	2471	1109	1244	1277	1271	1269	1340	1435	1653	2204	2859	4269	6365	8744	11134	16018	72362
Falls, different level (total)	338	1781	3107	985	293	318	296	321	322	339	337	430	473	538	681	943	1226	1464	2030	16222
Stairs/steps	22	124	71	49	73	113	118	112	124	133	148	167	200	205	268	353	410	384	356	3430
Ladders/scaffolds	0	18	19	4	5	18	14	22	26	33	38	62	62	58	63	66	68	31	14	621
Building/structure	0	70	76	45	42	36	25	27	16	20	14	20	11	11	12	14	7	6	6	458
Playground equipment	1	492	1965	455	29	8	6	13	11	4	1	7	1	1	1	1	6	10	14	3026
Chair or bed	140	584	298	84	32	34	38	54	61	72	54	80	121	156	232	365	565	840	1419	5229
Different level, other	175	493	678	348	112	109	95	93	84	77	82	94	78	107	105	144	170	193	221	3458

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total
Falls, same level (total)	68	889	1517	1486	816	926	981	950	947	1001	1098	1223	1731	2321	3588	5422	7518	9670	13988	56140
Same level, not sport	18	364	637	602	269	358	395	416	440	507	602	705	990	1265	1941	2781	3642	4482	5917	26331
Falls in sport	1	7	63	209	125	91	88	65	55	26	16	7	13	7	11	11	11	7	7	820
Fracture, unspecified	10	73	216	184	97	95	100	84	89	82	61	67	99	123	157	264	341	361	540	3043
Other falls	39	445	601	491	325	382	398	385	363	386	419	444	629	926	1479	2366	3524	4820	7524	25946
Fires/ burns/ scalds (Total)	137	520	115	62	86	125	129	117	110	99	87	62	65	72	71	94	92	91	124	2258
House fires	3	9	3	0	4	1	11	5	4	4	4	3	5	2	9	4	1	5	3	80
Clothing ignition	2	14	11	4	6	8	3	1	6	6	3	1	4	3	2	2	12	5	5	98
Hot liquids/vapors/steam	82	388	83	26	38	62	60	70	48	49	45	33	32	37	33	52	45	52	63	1298
Caustic/corrosive substances & other hot objects	44	79	13	12	14	27	21	21	16	23	15	11	12	14	15	19	14	20	30	420
Other fires/burns	6	30	5	20	24	27	34	20	36	17	20	14	12	16	12	17	20	9	23	362
Natural/ environmental (Total)	35	509	288	236	202	215	200	193	187	178	200	159	127	153	121	164	175	187	235	3764
Excessive heat/cold	2	4	9	7	23	12	2	8	10	9	8	2	9	16	20	43	89	99	165	537
Venomous animals/plants	4	80	72	69	65	67	73	73	65	57	70	53	40	38	20	31	19	12	6	914
Dog bite	3	237	118	47	22	22	28	25	22	23	34	22	16	21	23	37	24	20	16	760
Other bite/injury caused by animal	8	178	87	110	89	112	96	86	85	88	88	80	60	77	53	52	40	46	34	1469
Other natural/ environmental	18	10	2	3	3	2	1	1	5	1		2	2	1	5	1	3	10	14	84
Choking/ suffocation/ foreign body (Total)	163	678	323	102	80	77	109	134	125	137	163	141	143	148	150	156	161	138	127	3255
Aspiration of food	66	67	7	9	9	8	8	9	13	17	20	12	33	17	15	20	24	25	28	407
Aspiration of other object	39	88	28	8	6	2	10	9	7	5	6	2	3	3	8	8	11	7	8	258
Mechanical suffocation	5	4	2	1	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	16
Foreign body in eye	4	85	30	8	4	2	9	4	2	6	7	3	1	5	3	1	0	1	0	175
Foreign body in other orifice	49	434	256	76	61	64	81	112	102	109	129	124	106	123	124	127	126	105	91	2399
Hit/ struck/ crush (Total)	99	990	557	577	440	415	363	321	259	202	146	128	126	110	126	174	213	240	283	5769
Struck by falling object	8	80	38	19	11	24	20	30	23	32	19	14	13	13	17	21	17	17	23	439
Struck/knocked in sport	4	31	96	240	216	171	134	103	87	52	37	18	7	11	12	8	18	22	16	1283
Caught/crushed in or between objects	46	556	195	60	30	33	38	49	43	36	29	41	30	23	19	26	20	24	36	1334
Other hit/struck/crush	41	323	228	258	183	187	171	139	106	82	61	55	76	63	78	119	158	177	208	2713
Machinery (Total)	0	39	20	19	46	69	63	43	61	67	49	40	24	12	3	4	4	1	2	566
Agricultural/farm	0	7	9	6	3	8	8	7	9	1	3	5	3	2	0	1	0	0	0	72
Lifting machines and appliances	0	1	2	0	0	3	1	0	0	6	7	3	0	1	0	0	0	0	0	24
Metalworking machines	0	0	0	1	3	5	4	3	4	5	2	3	1	0	0	0	0	0	0	31
Woodworking and forming machines	0	1	0	5	5	5	6	4	2	8	7	3	3	2	0	0	1	0	0	52
Earth moving machines	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Other machinery	0	30	9	7	34	48	44	28	46	47	30	26	17	7	3	3	3	1	2	385
Cutting/ piercing (Total)	29	605	489	378	421	505	499	412	368	329	264	224	141	149	136	168	138	113	121	5489
Powered lawn mower	0	6	6	6	8	12	18	22	18	14	17	13	19	11	11	15	7	3	1	207
Other powered hand tools	0	1	0	3	3	4	4	6	1	3	5	2	2	3	2	0	0	0	0	39
Powered household appliances	0	14	7	6	13	5	6	5	8	7	4	7	5	7	7	5	2	0	1	109
Knives/daggers	1	32	23	25	71	104	103	83	71	76	54	39	17	14	16	7	4	2	1	743
Other hand tools/implements	3	68	60	73	38	36	42	46	39	26	28	35	18	28	18	20	6	7	5	596
Other cutting/piercing instruments/objects	25	484	393	265	288	344	326	250	231	203	156	128	80	86	82	121	119	101	113	3795

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total
Other unintentional (Total)	79	304	218	339	531	596	606	608	488	423	381	313	284	326	413	476	520	557	605	8067
Firearms	0	1	2	1	8	2	7	1	2	4	1	1	0	0	0	0	0	0	1	31
Explosion	0	0	1	2	2	5	14	6	6	3	4	5	0	2	1	1	0	0	2	54
Electric current	1	13	5	13	19	24	21	19	8	11	7	8	1	1	2	0	1	2	6	162
Overexertion/strenuous movements	3	14	28	129	215	254	252	295	237	191	164	111	102	104	130	136	153	146	147	2811
Other unintentional	75	276	182	194	287	311	312	287	235	214	205	188	181	219	280	339	366	409	449	5009
Intentional (Total)	89	104	36	529	2728	2981	2865	2596	2399	1892	1273	679	411	263	202	181	152	115	106	19601
Self-Inflicted (Total)	3	7	0	427	2349	2424	2295	2124	2034	1638	1117	572	358	221	174	146	124	83	78	16174
Poisoning (Tranquillisers/Psychotropic agents)	1	0	0	95	653	1072	1210	1198	1147	980	672	342	193	127	99	88	70	43	31	8021
Poisoning (Other solids/liquids)	2	6	0	303	1507	1120	822	723	700	531	371	184	141	77	60	44	42	32	31	6696
Poisoning (MV Exhaust gas)	0	0	0	0	1	14	18	14	17	6	12	7	2	0	0	1	0	0	0	92
Poisoning (Other gases/vapours)	0	0	0	5	10	3	3	4	4	5	2	3	1	0	0	0	0	0	2	42
Firearms/explosives	0	0	0	0	4	0	1	3	2	0	3	0	0	2	0	1	0	0	0	16
Cutting/piercing	0	0	0	15	142	163	178	140	120	82	41	21	12	7	11	2	5	5	10	954
Other means	0	1	0	9	32	52	63	42	44	34	16	15	9	8	4	10	7	3	4	353
Inflicted by other (Total)	86	97	36	102	379	557	570	472	365	254	156	107	53	42	28	35	28	32	28	3427
Unarmed fight/brawl	3	4	5	42	251	387	385	300	254	151	90	68	28	22	13	18	17	20	11	2069
Firearms/explosives	0	0	0	0	2	1	4	1	0	1	4	0	1	0	1	1	0	1	2	19
Cutting/piercing	0	1	0	4	32	51	40	45	21	25	18	8	4	3	4	1	1	0	1	259
Child battering/maltreatment	77	80	29	22	18	18	17	32	14	12	5	5	1	1	3	1	2	2	1	340
Struck by blunt/thrown object	2	3	1	8	20	27	46	26	26	22	13	7	5	4	2	4	1	1	1	219
Other means	4	9	1	26	56	73	78	68	50	43	26	19	14	12	5	10	7	8	12	521
Undetermined/ other intent (Total)	5	11	6	27	63	90	80	69	63	54	35	19	21	15	7	7	7	18	10	607
Undetermined, poisoning (solids/liquids)	1	1	1	19	53	72	55	56	48	40	27	16	16	10	3	6	3	8	4	439
Undetermined, firearm/explosive	0	0	0	0	0	4	1	1	0	0	0	0	0	0	2	0	0	1	0	9
Other undetermined/other intent	4	10	5	8	10	14	24	12	15	14	8	3	5	5	2	1	4	9	6	159
ALL INCIDENT TRUE INJURIES	1283	8801	8026	6786	9039	9903	8896	7907	7083	6332	5295	4458	4399	4884	6312	8663	11083	13240	18113	150503
Medical injuries (Total)	1392	1617	1512	1550	2452	3725	5036	5889	6537	6839	7321	6850	7000	8659	11459	12962	11604	8729	6318	117451
Medical misadventure	69	45	46	29	44	123	220	260	261	196	187	123	133	159	221	206	179	101	74	2676
Post-Operative complications	988	1069	1165	1168	1812	2778	3777	4451	5218	5541	5839	5310	5340	6581	8736	9670	8337	5718	3714	87212
Adverse drug effects	335	503	301	353	596	824	1039	1178	1058	1102	1295	1417	1527	1919	2502	3086	3088	2910	2530	27563
Late effects	3	99	148	206	279	333	336	312	324	300	265	183	200	147	171	199	161	128	103	3897
ALL NON-INCIDENT NON-TRUE INJURIES	1395	1716	1660	1756	2731	4058	5372	6201	6861	7139	7586	7033	7200	8806	11630	13161	11765	8857	6421	121348
ALL INJURIES	2678	10517	9686	8542	11770	13961	14268	14108	13944	13471	12881	11491	11599	13690	17942	21824	22848	22097	24534	271851

Table 4: Public Hospital Injury Admissions, Victoria, Six years, 1 July 1992 to 30 June 1998, Average Annual Frequency, Persons

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total	
Injury Cause																					
<i>Unintentional (Total)</i>	443	3486	3431	3366	3947	4320	3500	2874	2439	2133	1901	1635	1535	1593	1895	2298	2673	2995	3892	50355	
Transport (Total)	14	211	520	918	1292	1402	962	730	568	488	386	323	258	237	231	222	210	145	101	9217	
Motor Vehicle Traffic (total)	12	108	179	256	850	1102	734	539	421	361	291	243	203	190	193	186	181	125	84	6255	
Driver	1	3	4	8	270	501	329	263	209	195	152	128	108	90	89	87	82	50	28	2596	
Passenger	10	55	66	75	255	211	125	78	57	53	54	51	46	50	47	45	47	29	24	1376	
Motorcyclist/passenger	0	2	13	44	167	247	175	117	86	51	33	17	9	6	4	4	3	2	1	981	
Pedal cyclist	0	3	23	47	33	25	19	13	12	11	5	5	4	4	4	2	2	2	1	214	
Pedestrian	1	43	67	73	88	75	54	43	36	35	34	33	26	32	40	38	38	37	24	814	
Other person	1	3	6	10	36	43	32	26	22	16	14	9	10	9	10	10	9	5	6	275	
Motor Vehicle Non-Traffic (total)	0	26	47	107	136	98	65	56	39	32	27	21	17	13	12	14	12	10	7	738	
Occupant	0	6	9	15	26	25	18	18	12	14	10	8	7	6	5	8	8	7	5	209	
Motorcyclist/passenger	0	5	28	80	95	60	37	29	20	12	9	6	3	3	2	2	0	0	0	391	
Pedestrian	0	9	3	3	2	3	2	3	2	1	2	2	2	1	2	2	2	2	1	43	
Other person	0	6	6	9	13	11	8	7	5	5	5	5	4	3	3	2	2	2	1	95	
Other Vehicle (total)	2	77	295	556	307	202	163	135	108	95	68	59	38	34	27	22	16	11	10	2224	
Railway	0	0	1	2	5	2	3	3	2	2	2	2	2	2	1	1	2	2	1	35	
Bicycle	1	61	208	338	159	69	55	44	37	35	24	23	15	16	14	12	7	4	2	1121	
Animal being ridden	0	8	46	120	88	81	63	55	43	37	27	20	10	6	4	1	1	0	1	612	
Water transport	0	2	2	7	14	20	18	11	8	8	5	5	4	2	2	2	1	0	0	110	
Air transport	0	0	1	1	3	11	10	9	7	6	3	3	1	2	1	1	1	0	1	59	
Vehicle NEC	1	6	38	88	39	19	14	13	12	8	8	6	6	6	5	5	5	4	5	288	
Near drowning (Total)	6	34	11	6	7	7	5	5	3	3	3	2	2	1	2	2	1	0	1	99	
Pool	2	24	4	1	1	1	1	1	0	1	1	0	1	0	0	0	0	0	0	38	
Sport/rec activity (No diving equipment)	0	4	5	3	3	2	1	1	1	1	0	1	0	0	0	0	0	0	0	24	
Other drowning	4	7	3	2	2	3	3	3	2	1	2	1	1	1	1	1	1	0	0	37	
Poisoning (Total)	68	686	48	79	265	305	284	234	198	165	115	78	57	45	52	54	47	45	33	2857	
Drugs, medicinal substances & biologicals (total)	37	512	27	45	205	253	231	191	161	131	84	59	39	30	39	42	39	39	29	2191	
Heroin/Opiates	0	6	0	1	27	46	44	35	20	13	5	5	2	3	2	3	3	2	3	219	
Paracetamol	4	90	2	9	44	33	27	19	15	14	8	4	2	2	1	1	1	1	1	278	
Tranquillisers	1	52	2	7	39	64	71	66	56	47	33	19	11	7	6	6	7	6	5	502	
Other drugs/medications	31	364	22	29	95	111	90	72	70	57	38	31	24	18	30	31	28	31	21	1192	
Other solid & liquid substances, gases & vapours (total)	31	174	21	33	60	52	53	43	37	34	31	19	18	16	14	13	8	6	4	666	
Other solids/liquids	29	167	20	28	51	43	40	33	30	26	26	15	15	14	12	11	7	5	4	574	
Gas/vapour	2	8	2	5	9	9	13	10	8	9	5	4	3	2	2	2	1	1	1	93	
Falls (Total)	145	1055	1905	1337	821	771	669	611	575	569	589	590	681	833	1156	1595	2038	2472	3420	21830	
Falls, different level (total)	113	682	1271	482	190	217	191	205	207	211	216	214	210	214	248	291	318	357	458	6295	
Stairs/steps	8	43	28	21	28	40	43	39	40	41	45	45	49	52	63	85	88	84	81	922	
Ladders/scaffolds	0	9	8	4	7	26	26	43	45	56	65	63	64	60	59	43	31	22	8	640	
Building/structure	0	33	46	33	33	46	36	32	31	28	25	24	18	14	14	9	6	2	2	431	
Playground equipment	1	187	733	177	16	5	2	4	3	3	1	2	0	1	1	1	1	2	3	1141	
Chair or bed	45	210	111	35	12	11	13	17	22	20	20	25	32	46	70	106	144	202	312	1451	
Different level, other	59	201	345	212	95	90	71	71	65	64	60	56	46	42	42	47	48	45	52	1709	

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total
Falls, same level (total)	32	373	634	855	632	554	477	406	368	358	373	376	471	619	907	1304	1720	2115	2963	15535
Same level, not sport	10	151	244	286	136	141	140	142	139	162	178	191	241	311	464	638	802	965	1245	6586
Falls in sport	0	4	42	203	197	138	103	58	32	14	9	4	3	2	3	2	2	1	2	818
Fracture, unspecified	7	31	80	113	124	105	84	59	46	33	29	24	31	35	41	63	76	81	111	1171
Other falls	15	187	267	255	174	170	150	147	151	150	158	158	196	271	400	601	839	1068	1606	6962
Fires/ burns/ scalds (Total)	57	226	46	47	62	84	74	68	57	53	43	37	31	27	29	31	29	25	32	1055
House fires	1	3	1	1	2	4	4	4	2	3	3	2	2	2	2	1	1	1	2	40
Clothing ignition	0	5	4	2	3	5	1	2	2	3	1	1	1	1	1	1	3	1	1	36
Hot liquids/vapors/steam	37	171	25	13	19	28	25	24	18	19	16	14	10	11	11	16	13	12	14	495
Caustic/corrosive substances & other hot objects	15	33	7	7	10	17	14	17	16	14	11	8	8	7	7	7	6	6	9	216
Other fires/burns	3	14	8	24	28	31	31	21	20	15	13	12	9	6	8	8	8	4	6	268
Natural/ environmental (Total)	13	195	124	100	86	92	94	83	93	82	85	70	56	58	50	55	48	51	54	1486
Excessive heat/cold	2	2	3	3	9	8	5	4	5	4	5	4	7	8	9	15	21	28	37	177
Venomous animals/plants	1	36	40	36	34	33	36	35	40	31	31	22	17	16	9	11	6	4	1	438
Dog bite	1	91	49	22	10	12	15	12	11	9	12	9	7	7	9	10	6	5	4	299
Other bite/injury caused by animal	3	63	32	38	31	38	37	31	36	37	37	34	24	26	21	18	13	13	8	540
Other natural/ environmental	6	3	0	1	1	1	1	1	2	1	1	2	1	1	1	2	2	2	4	32
Choking/ suffocation/ foreign body (Total)	61	249	121	48	30	37	45	54	58	58	65	56	56	60	61	54	53	39	31	1235
Aspiration of food	24	27	4	4	3	2	4	5	5	7	8	7	12	7	8	8	10	8	7	157
Aspiration of other object	13	33	10	4	3	2	3	3	3	2	2	2	1	2	3	4	4	3	3	95
Mechanical suffocation	3	2	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	9
Foreign body in eye	1	31	12	4	4	7	8	5	6	6	5	2	2	2	1	1	1	0	0	97
Foreign body in other orifice	21	156	95	35	21	25	31	42	44	43	50	46	42	49	49	43	38	28	21	877
Hit/ struck/ crush (Total)	37	404	311	440	628	630	491	338	236	182	138	108	87	66	64	55	55	53	59	4380
Struck by falling object	3	38	20	14	19	36	34	44	34	35	29	25	21	14	12	8	7	4	6	402
Struck/knocked in sport	2	17	72	243	434	388	285	152	83	42	24	12	5	3	5	3	5	4	3	1780
Caught/crushed in or between objects	18	205	83	34	34	48	47	46	43	43	35	34	22	18	13	10	8	6	8	754
Other hit/struck/crush	14	144	135	148	141	158	125	96	76	62	51	37	39	32	34	34	36	39	43	1444
Machinery (Total)	0	21	12	16	82	130	127	123	120	108	103	90	71	52	38	24	15	6	3	1139
Agricultural/farm	0	4	4	4	5	9	8	8	9	7	7	7	8	5	5	3	2	1	0	94
Lifting machines and appliances	0	2	1	1	4	8	9	8	7	9	9	6	4	2	1	0	0	0	0	69
Metalworking machines	0	0	0	1	12	17	17	15	14	10	12	10	7	5	4	1	0	1	0	127
Woodworking and forming machines	0	1	1	3	29	39	38	43	38	39	37	32	28	24	21	16	10	4	2	404
Earth moving machines	0	0	0	0	1	1	1	2	1	2	1	2	1	1	1	0	0	0	0	12
Other machinery	0	14	6	8	31	58	53	48	51	42	37	34	22	16	7	4	2	1	1	434
Cutting/ piercing (Total)	13	278	225	201	360	470	385	301	262	206	179	141	116	99	81	66	45	33	26	3486
Powered lawn mower	0	4	5	7	8	8	10	12	11	11	9	9	12	10	9	7	4	2	0	137
Other powered hand tools	0	2	2	4	16	27	27	27	30	24	26	23	19	18	15	8	4	3	0	273
Powered household appliances	0	6	2	2	3	3	2	3	2	1	2	2	3	3	2	1	1	0	0	36
Knives/daggers	0	14	13	19	56	80	60	50	37	34	26	17	13	7	5	3	2	1	0	435
Other hand tools/implements	1	25	24	29	25	26	27	25	25	19	17	18	12	14	9	7	3	3	1	308
Other cutting/piercing instruments/objects	11	228	181	141	251	327	259	185	157	117	100	74	59	48	41	40	32	25	23	2298

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total	
Other unintentional (Total)	29	128	109	175	315	392	365	329	269	220	196	141	121	116	132	139	135	125	133	3570	
Firearms	0	1	2	5	10	10	7	4	4	4	3	2	1	1	0	0	0	0	0	0	52
Explosion	0	0	3	10	10	12	10	9	5	5	7	4	1	2	2	1	0	0	0	0	79
Electric current	0	6	4	7	10	17	15	12	11	9	8	6	4	2	2	1	0	1	1	1	115
Overexertion/strenuous movements	2	6	10	51	109	153	145	141	124	95	80	51	41	40	39	42	39	32	33	33	1229
Other unintentional	27	116	91	103	176	201	189	164	126	108	99	79	75	73	90	95	96	92	98	98	2096
Intentional (Total)	37	36	19	153	1009	1359	1167	981	800	625	445	244	145	100	81	60	44	36	33	7370	
Self-Inflicted (Total)	1	2	2	89	554	710	688	620	545	445	317	168	105	69	61	44	34	26	23	4500	
Poisoning (Tranquillisers/Psychotropic agents)	0	0	1	21	153	289	333	320	288	245	175	92	54	36	30	21	16	10	9	9	2090
Poisoning (Other solids/liquids)	0	2	0	59	333	306	240	206	187	147	106	53	37	23	21	15	12	9	9	9	1763
Poisoning (MV Exhaust gas)	0	0	0	0	3	12	13	13	10	8	7	4	3	2	1	1	1	1	0	0	76
Poisoning (Other gases/vapours)	0	0	0	2	3	3	2	2	1	3	1	1	1	0	0	0	0	1	0	0	19
Firearms/explosives	0	0	0	0	1	4	2	2	1	1	2	1	1	1	2	1	0	0	0	0	18
Cutting/piercing	0	0	0	4	45	66	66	55	42	30	17	10	5	4	7	3	3	5	3	3	363
Other means	0	0	1	4	17	31	33	22	17	12	8	8	5	3	3	4	3	1	2	2	172
Inflicted by other (Total)	36	34	17	64	455	649	480	361	254	180	128	76	40	31	20	17	10	10	9	2871	
Unarmed fight/brawl	1	2	4	45	313	460	330	232	166	113	84	46	24	20	11	10	5	6	5	5	1877
Firearms/explosives	0	1	0	1	2	3	4	2	1	1	1	0	1	0	1	0	0	1	0	0	21
Cutting/piercing	0	0	1	2	61	75	47	42	29	21	12	8	4	3	2	1	1	0	0	0	308
Child battering/maltreatment	32	28	10	5	4	4	3	6	3	2	1	1	0	0	1	0	1	0	0	0	100
Struck by blunt/thrown object	1	1	1	3	35	50	44	38	26	19	12	9	6	3	2	2	1	1	1	1	252
Other means	2	3	2	9	40	59	52	42	30	23	18	12	6	4	4	3	3	2	2	2	313
Undetermined/ other intent (Total)	2	4	2	7	28	38	34	26	22	19	14	7	6	5	4	2	3	5	2	229	
Undetermined, poisoning (solids/liquids)	0	1	0	4	17	24	20	17	14	13	9	5	4	2	1	2	1	2	1	1	136
Undetermined, firearm/explosive	0	0	0	0	1	3	2	2	0	1	1	0	0	1	0	0	0	1	0	0	11
Other undetermined/other intent	2	4	2	3	9	12	13	8	8	5	4	2	2	3	2	1	1	2	1	1	83
ALL INCIDENT TRUE INJURIES	482	3526	3452	3526	4983	5717	4702	3881	3261	2776	2359	1886	1686	1697	1979	2360	2720	3035	3927	57954	
Medical injuries (Total)	603	741	606	547	778	1108	1372	1582	1724	1864	2100	2237	2558	3368	4409	4787	3968	2717	1788	38851	
Medical misadventure	33	19	17	12	11	26	43	52	51	42	43	38	44	55	77	73	54	31	19	19	739
Post-Operative complications	443	521	460	413	592	856	1045	1207	1365	1483	1679	1766	2019	2680	3505	3714	2985	1922	1158	1158	29810
Adverse drug effects	127	201	129	122	174	225	284	322	308	339	378	434	496	633	828	1000	929	764	611	611	8302
Late effects	2	36	66	97	156	206	216	196	174	152	124	91	82	62	62	63	43	33	27	1887	
ALL NON-INCIDENT NON-TRUE INJURIES	605	777	672	644	933	1314	1587	1777	1898	2015	2223	2328	2640	3430	4471	4850	4010	2750	1814	40738	
ALL INJURIES	1087	4303	4123	4170	5917	7031	6289	5658	5159	4792	4583	4214	4326	5127	6450	7210	6730	5785	5741	98692	

Table 5: Public Hospital Injury Admissions, Victoria, Six years, 1 July 1992 to 30 June 1998, Average Annual Rate*, Persons

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total
Injury Cause																				
<i>Unintentional (Total)</i>	706	1366	1084	1078	1237	1210	976	788	684	640	620	663	749	861	1068	1519	2522	4213	7491	1110
Transport (Total)	23	83	164	294	405	393	268	200	159	146	126	131	126	128	130	147	198	205	194	203
Motor Vehicle Traffic (total)	19	42	56	82	266	309	204	148	118	108	95	99	99	102	109	123	171	175	161	138
Driver	2	1	1	3	85	140	92	72	59	59	49	52	52	48	50	58	78	70	53	57
Passenger	15	21	21	24	80	59	35	21	16	16	18	21	23	27	26	30	44	41	47	30
Motorcyclist/passenger	0	1	4	14	52	69	49	32	24	15	11	7	4	3	2	3	2	2	2	22
Pedal cyclist	0	1	7	15	10	7	5	3	3	3	2	2	2	2	2	1	2	2	2	5
Pedestrian	1	17	21	23	28	21	15	12	10	11	11	13	13	17	22	25	36	53	45	18
Other person	1	1	2	3	11	12	9	7	6	5	4	3	5	5	5	6	9	8	12	6
Motor Vehicle Non-Traffic (total)	1	10	15	34	42	27	18	15	11	10	9	8	8	7	6	9	11	15	13	16
Occupant	0	2	3	5	8	7	5	5	3	4	3	3	4	3	3	5	7	9	10	5
Motorcyclist/passenger	0	2	9	26	30	17	10	8	6	4	3	2	2	1	1	1	0	0	1	9
Pedestrian	0	3	1	1	1	1	1	1	0	1	1	1	1	0	1	1	2	2	2	1
Other person	0	2	2	3	4	3	2	2	1	1	2	2	2	2	2	2	2	3	1	2
Other Vehicle (total)	3	30	93	178	96	57	45	37	30	29	22	24	19	18	15	14	16	15	20	49
Railway	1	0	0	1	1	1	1	1	1	0	0	1	1	1	1	1	2	3	2	1
Bicycle	1	24	66	108	50	19	15	12	10	11	8	9	7	9	8	8	6	5	4	25
Animal being ridden	0	3	15	38	28	23	18	15	12	11	9	8	5	3	2	1	1	0	2	14
Water transport	0	1	1	2	4	6	5	3	2	2	2	2	2	1	1	1	1	0	0	2
Air transport	0	0	0	0	1	3	3	3	2	2	1	1	1	1	0	0	1	1	2	1
Vehicle NEC	2	2	12	28	12	5	4	4	3	3	3	2	3	3	3	3	5	5	9	6
Near drowning (Total)	10	13	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	0	1	2
Pool	3	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Sport/rec activity (No diving equipment)	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Other drowning	7	3	1	0	1	1	1	1	0	0	1	1	0	0	1	1	1	0	0	1
Poisoning (Total)	108	269	15	25	83	86	79	64	55	49	37	31	28	24	29	36	44	63	63	63
Drugs, medicinal substances & biologicals (total)	59	201	9	15	64	71	64	52	45	39	27	24	19	16	22	27	36	55	55	48
Heroin/Opiates	1	2	0	0	8	13	12	10	5	4	2	2	1	1	1	2	2	2	6	5
Paracetamol	6	35	1	3	14	9	7	5	4	4	3	2	1	1	1	1	1	1	1	6
Tranquillisers	2	20	1	2	12	18	20	18	16	14	11	7	5	4	3	4	6	8	9	11
Other drugs/medications	50	143	7	9	30	31	25	20	20	17	12	13	12	10	17	20	26	44	39	26
Other solid & liquid substances, gases & vapours (total)	50	68	7	11	19	15	15	12	10	10	10	8	9	8	8	8	8	8	8	15
Other solids/liquids	47	65	6	9	16	12	11	9	8	8	8	6	7	8	7	7	7	7	7	13
Gas/vapour	3	3	0	2	3	3	4	3	2	3	2	2	2	1	1	1	1	1	1	2
Falls (Total)	231	413	602	428	258	216	186	167	161	171	192	240	333	450	651	1055	1923	3479	6588	481
Falls, different level (total)	181	267	402	154	59	61	53	56	58	63	70	87	103	115	140	192	299	501	876	139
Stairs/steps	13	17	9	7	9	11	12	11	11	12	15	18	24	28	36	56	83	118	155	20
Ladders/scaffolds	0	4	2	1	2	7	7	12	13	17	21	26	31	33	33	29	29	31	15	14
Building/structure	1	13	15	11	10	13	10	9	8	8	10	9	7	8	6	5	3	3	4	9
Playground equipment	1	73	232	57	5	1	1	1	1	1	0	1	0	0	0	1	1	3	6	25
Chair or bed	72	82	35	11	4	3	4	5	6	6	7	10	16	25	39	70	136	283	600	32
Different level, other	94	79	109	68	30	25	20	20	18	19	20	23	23	22	24	31	44	63	96	38

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total
Falls, same level (total)	50	146	200	274	198	155	133	111	103	108	122	153	230	335	511	863	1624	2977	5712	342
Same level, not sport	16	59	77	92	43	39	39	39	39	49	58	78	118	168	262	423	760	1362	2410	145
Falls in sport	1	1	13	65	62	39	29	16	9	4	3	1	2	1	2	2	2	2	3	18
Fracture, unspecified	11	12	25	36	39	29	23	16	13	10	9	10	15	19	23	41	72	113	212	26
Other falls	23	73	84	82	55	48	42	40	42	45	51	64	96	146	225	397	791	1501	3086	153
Fires/ burns/ scalds (Total)	90	88	14	15	20	24	21	19	16	16	14	15	15	14	16	21	27	35	62	23
House fires	2	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	4	1
Clothing ignition	1	2	1	1	1	1	0	1	1	1	0	0	1	1	0	0	2	1	2	1
Hot liquids/vapors/steam	59	67	8	4	6	8	7	7	5	6	5	5	5	6	6	10	12	17	27	11
Caustic/corrosive substances & other hot objects	24	13	2	2	3	5	4	5	4	4	3	3	4	4	4	4	5	9	17	5
Other fires/burns	4	5	3	8	9	9	9	6	5	5	4	5	4	3	5	5	7	6	12	6
Natural/ environmental (Total)	21	76	39	32	27	26	26	23	26	25	28	28	27	31	28	36	45	71	103	33
Excessive heat/cold	2	1	1	1	3	2	1	1	1	1	1	2	3	4	5	10	20	38	70	4
Venomous animals/plants	2	14	13	11	11	9	10	10	11	9	10	9	8	9	5	7	5	5	3	10
Dog bite	2	36	15	7	3	3	4	3	3	3	4	4	3	4	5	7	5	7	7	7
Other bite/injury caused by animal	5	25	10	12	10	11	10	8	10	11	12	14	12	14	12	12	13	18	15	12
Other natural/ environmental	10	1	0	0	0	0	0	0	1	0	0	1	1	1	1	1	1	3	8	1
Choking/ suffocation/ foreign body (Total)	98	97	38	15	10	10	13	15	16	17	21	23	27	32	34	36	50	55	59	27
Aspiration of food	38	11	1	1	1	1	1	1	1	2	3	3	6	4	4	5	9	11	14	3
Aspiration of other object	21	13	3	1	1	0	1	1	1	0	1	1	1	1	2	2	3	4	5	2
Mechanical suffocation	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Foreign body in eye	2	12	4	1	1	2	2	1	2	2	2	1	1	1	1	0	1	0	0	2
Foreign body in other orifice	33	61	30	11	7	7	9	12	12	13	16	18	20	27	27	28	36	40	40	19
Hit/ struck/ crush (Total)	58	158	98	141	197	176	137	93	66	55	45	44	43	36	36	36	52	74	114	97
Struck by falling object	5	15	6	4	6	10	10	12	10	10	9	10	10	7	7	5	7	6	11	9
Struck/knocked in sport	2	7	23	78	136	108	80	42	23	13	8	5	3	2	3	2	4	6	6	39
Caught/crushed in or between objects	28	80	26	11	11	13	13	13	12	13	11	14	11	10	8	7	7	8	14	17
Other hit/struck/crush	23	56	43	47	44	44	35	26	21	19	17	15	19	17	19	22	34	54	82	32
Machinery (Total)	1	8	4	5	26	36	35	34	34	32	34	37	35	28	21	16	14	9	5	25
Agricultural/farm	0	1	1	1	1	2	2	2	2	2	2	3	4	3	3	2	2	1	1	2
Lifting machines and appliances	0	1	0	0	1	2	3	2	2	3	3	2	2	1	1	0	0	0	0	2
Metalworking machines	0	0	0	0	4	5	5	4	4	3	4	4	3	3	2	1	0	1	0	3
Woodworking and forming machines	0	0	0	1	9	11	11	12	11	12	12	13	14	13	12	11	9	5	3	9
Earth moving machines	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0
Other machinery	1	5	2	3	10	16	15	13	14	13	12	14	11	8	4	2	2	1	1	10
Cutting/ piercing (Total)	20	109	71	64	113	132	107	83	73	62	58	57	57	53	46	44	42	47	49	77
Powered lawn mower	0	1	2	2	3	2	3	3	3	3	3	3	6	5	5	5	3	3	0	3
Other powered hand tools	0	1	0	1	5	8	7	7	8	7	8	9	9	10	9	5	4	4	0	6
Powered household appliances	0	2	1	0	1	1	1	1	1	0	0	1	1	1	1	1	0	0	0	1
Knives/daggers	0	5	4	6	18	22	17	14	10	10	9	7	6	4	3	2	1	1	1	10
Other hand tools/implements	2	10	7	9	8	7	7	7	7	6	5	7	6	7	5	5	3	4	3	7
Other cutting/piercing instruments/objects	17	89	57	45	79	92	72	51	44	35	33	30	29	26	23	26	30	35	45	51

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total	
Other unintentional (Total)	46	50	34	56	99	110	102	90	75	66	64	57	59	63	75	92	127	175	252	79	
Firearms	0	0	0	2	3	3	2	1	1	1	1	1	0	0	0	0	0	0	0	0	1
Explosion	0	0	1	3	3	3	3	2	1	1	2	2	1	1	1	0	0	0	1	2	2
Electric current	0	2	1	2	3	5	4	3	3	3	3	3	2	1	1	1	0	1	2	3	3
Overexertion/strenuous movements	3	2	3	16	34	43	40	39	35	28	26	21	20	22	22	28	36	45	62	27	27
Other unintentional	43	45	29	33	55	56	53	45	35	32	32	32	36	39	51	63	90	128	187	46	46
Intentional (Total)	58	14	6	49	316	381	325	269	224	187	145	98	70	54	46	40	41	50	62	162	
Self-Inflicted (Total)	1	1	0	28	174	199	192	170	153	133	103	67	51	37	34	29	32	36	44	99	
Poisoning (Tranquillisers/Psychotropic agents)	0	0	0	7	48	81	93	88	81	73	57	37	26	19	17	14	15	14	17	46	46
Poisoning (Other solids/liquids)	1	1	0	19	105	86	67	56	52	44	34	21	18	13	12	10	11	12	17	39	39
Poisoning (MV Exhaust gas)	0	0	0	0	1	3	4	3	3	2	2	2	1	1	0	0	1	1	0	2	2
Poisoning (Other gases/vapours)	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0	0	1	1	0	0
Firearms/explosives	0	0	0	0	0	1	0	1	0	0	1	0	0	1	1	0	0	0	0	0	0
Cutting/piercing	0	0	0	1	14	18	18	15	12	9	5	4	3	2	4	2	2	7	6	8	8
Other means	0	0	0	1	5	9	9	6	5	4	3	3	2	2	1	2	3	1	3	4	4
Inflicted by other (Total)	57	13	5	21	143	182	134	99	71	54	42	31	20	16	11	11	9	14	18	63	
Unarmed fight/brawl	2	1	1	14	98	129	92	64	47	34	28	19	12	11	6	7	5	8	10	41	41
Firearms/explosives	0	0	0	0	1	1	2	1	1	1	1	0	1	0	0	0	0	1	1	1	1
Cutting/piercing	3	1	0	1	19	20	13	11	8	6	4	3	2	1	1	0	0	0	1	7	7
Child battering/maltreatment	48	10	3	2	1	1	1	2	1	1	0	0	0	0	0	0	0	0	1	2	2
Struck by blunt/thrown object	1	0	0	1	11	14	12	10	7	6	4	4	3	2	1	2	1	1	3	6	6
Other means	2	1	0	3	12	16	14	11	8	7	6	4	3	2	2	2	2	3	3	7	7
Undetermined/ other intent (Total)	4	2	1	2	9	11	10	7	6	6	4	3	3	3	2	2	3	7	4	5	
Undetermined, poisoning (solids/liquids)	1	0	0	1	5	7	6	5	4	4	3	2	2	1	1	1	1	3	2	3	3
Undetermined, firearm/explosive	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Other undetermined/other intent	3	2	0	1	3	3	3	2	2	2	1	1	1	1	1	0	1	3	2	2	2
ALL INCIDENT TRUE INJURIES	768	1382	1091	1129	1562	1602	1311	1065	915	833	769	764	823	917	1116	1561	2565	4270	7557	1278	
Medical injuries (Total)	964	290	191	175	244	311	382	434	483	559	682	903	1245	1820	2485	3152	3731	3807	3418	856	
Medical misadventure	52	7	5	4	4	7	12	14	14	12	14	15	21	30	43	48	51	43	36	16	16
Post-Operative complications	709	204	145	132	186	241	291	331	382	445	545	714	983	1449	1976	2447	2808	2695	2216	657	657
Adverse drug effects	203	79	41	39	55	63	79	88	86	102	123	175	241	342	467	658	872	1068	1165	183	183
Late effects	3	14	21	31	49	58	60	54	49	45	40	37	40	33	35	42	40	47	51	42	
ALL NON-INCIDENT NON-TRUE INJURIES	967	305	212	206	293	369	442	488	532	605	722	940	1284	1854	2520	3194	3771	3854	3469	897	
ALL INJURIES	1735	1686	1303	1336	1855	1971	1753	1552	1446	1438	1490	1704	2107	2771	3636	4755	6336	8124	11026	2175	

* (Rates are per 100,000)

Table 6: Public Hospital Injury Admissions, Victoria ,Six years, 1 July 1992 to 30 June 1998, Average Annual Rate*, Males

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total	
Injury Cause																					
<i>Unintentional (Total)</i>	759	1557	1297	1458	1775	1765	1406	1104	941	848	805	808	848	901	1026	1297	1928	3063	5820	1277	
Transport (Total)	27	101	198	388	542	528	362	269	214	187	153	153	141	140	142	161	208	257	277	262	
Motor Vehicle Traffic (total)	22	51	70	108	343	416	274	198	155	133	109	107	102	103	111	131	181	223	242	173	
Driver	2	2	1	4	106	173	108	88	70	66	56	57	60	60	61	75	99	111	110	69	
Passenger	17	22	21	24	79	64	36	20	14	14	12	14	11	12	12	12	24	22	42	27	
Motorcyclist/passenger	0	1	6	23	94	126	90	61	45	29	19	12	7	5	4	5	4	4	5	40	
Pedal cyclist	0	2	12	24	17	9	8	6	5	6	3	3	3	4	3	3	5	6	7	8	
Pedestrian	2	22	27	29	33	28	21	17	13	14	13	17	14	17	25	30	40	71	60	22	
Other person	1	2	2	4	15	15	10	7	7	5	6	4	6	5	5	6	10	9	19	7	
Motor Vehicle Non-Traffic (total)	1	12	22	57	73	48	33	26	19	16	14	13	13	11	10	11	10	16	12	27	
Occupant	1	3	3	7	13	11	8	7	5	7	5	4	6	5	4	6	7	7	10	7	
Motorcyclist/passenger	0	2	15	44	54	31	20	15	11	7	5	4	3	3	3	2	1	1	1	16	
Pedestrian	0	4	2	1	1	1	1	1	0	1	1	1	1	1	1	1	1	4	0	1	
Other person	1	3	3	5	6	5	4	3	2	2	3	3	2	3	2	2	2	4	1	3	
Other Vehicle (total)	5	39	106	224	126	64	56	44	39	38	29	32	26	27	21	20	17	18	23	62	
Railway	1	0	0	1	2	1	1	1	1	1	1	1	1	2	1	0	1	2	2	1	
Bicycle	1	33	86	167	86	29	24	20	16	16	12	14	10	12	12	13	9	11	9	38	
Animal being ridden	0	2	7	11	11	14	12	10	11	11	8	9	7	5	3	2	1	0	4	9	
Water transport	0	1	1	3	6	8	8	5	4	4	2	3	3	2	1	1	0	1	1	4	
Air transport	0	0	0	0	1	4	4	5	3	3	2	2	1	1	0	1	0	1	0	2	
Vehicle NEC	3	3	11	42	20	8	5	5	5	4	4	4	4	4	4	3	5	4	6	9	
Near drowning (Total)	11	16	3	3	3	3	2	2	2	1	2	1	1	1	1	0	2	0	1	3	
Pool	3	11	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Sport/rec activity (No diving equipment)	0	2	2	1	2	1	0	1	1	1	0	0	0	0	0	0	0	0	1	1	
Other drowning	8	2	1	1	1	1	1	1	1	0	1	1	1	1	1	0	2	0	0	1	
Poisoning (Total)	112	293	17	23	70	89	84	67	54	46	36	30	27	26	31	32	41	56	78	64	
Drugs, medicinal substances & biologicals (total)	60	210	10	11	49	71	65	52	40	33	24	20	17	17	23	24	32	46	68	46	
Heroin/Opiates	1	2	0	0	9	18	16	13	7	4	2	2	1	2	1	1	3	2	8	6	
Paracetamol	9	37	1	1	5	6	5	3	3	3	2	1	0	1	1	1	0	1	2	5	
Tranquillisers	3	21	1	2	11	17	19	15	12	11	10	6	4	4	3	4	6	4	8	10	
Other drugs/medications	48	149	7	7	24	31	25	20	17	15	10	11	12	10	18	17	23	39	50	25	
Other solid & liquid substances, gases & vapours (total)	52	83	8	12	21	17	18	15	14	12	12	10	10	9	8	8	9	10	10	18	
Other solids/liquids	51	80	7	11	17	14	13	11	10	8	9	7	7	8	6	7	8	9	8	15	
Gas/vapour	2	4	1	2	3	4	5	5	4	4	3	3	2	1	2	1	1	1	2	3	
Falls (Total)	239	466	701	580	389	313	256	220	205	209	228	252	305	389	519	783	1312	2329	4899	436	
Falls, different level (total)	177	294	465	199	86	91	80	84	87	93	104	114	127	135	158	196	256	427	772	160	
Stairs/steps	13	17	10	8	10	12	13	11	11	11	13	13	15	19	21	38	45	76	141	16	
Ladders/scaffolds	0	5	3	2	4	13	13	22	23	31	38	43	52	55	57	48	44	64	35	24	
Building/structure	1	16	21	16	16	22	18	15	16	15	14	16	16	13	14	10	10	5	7	16	
Playground equipment	2	80	251	63	7	2	1	1	1	1	1	1	0	1	1	1	1	1	5	28	
Chair or bed	68	86	38	13	4	3	4	4	7	5	7	9	12	21	36	66	113	232	489	26	
Different level, other	92	91	143	96	47	40	31	31	29	31	30	32	32	26	28	34	43	48	95	50	

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total	
Falls, same level (total)	63	172	235	381	303	222	176	137	119	116	124	138	177	254	361	587	1056	1902	4127	275	
Same level, not sport	22	69	85	116	55	45	42	40	37	47	51	60	74	110	164	257	444	827	1700	98	
Falls in sport	1	2	20	105	108	68	50	26	13	6	4	2	1	1	1	1	0	0	2	30	
Fracture, unspecified	15	15	27	51	66	50	38	25	18	11	12	10	14	16	17	27	44	77	134	30	
Other falls	25	86	103	108	73	59	47	45	51	52	57	67	88	127	179	302	568	998	2289	118	
Fires/ burns/ scalds (Total)	104	106	16	23	29	35	30	27	22	22	19	21	19	16	20	23	30	36	75	30	
House fires	2	1	1	1	1	2	1	2	1	1	2	1	1	1	1	1	1	1	1	10	1
Clothing ignition	0	2	1	1	1	2	0	1	0	1	0	1	1	1	0	0	1	1	0	1	1
Hot liquids/vapors/steam	73	81	7	5	7	10	8	7	6	6	6	6	5	5	7	10	12	13	24	12	
Caustic/corrosive substances & other hot objects	25	15	3	3	5	7	6	7	7	6	5	5	6	5	5	5	7	11	25	6	
Other fires/burns	5	7	5	13	15	15	14	9	8	7	6	8	7	4	7	7	9	11	15	9	
Natural/ environmental (Total)	23	84	47	38	32	31	34	28	35	32	34	35	34	35	35	41	41	75	98	38	
Excessive heat/cold	4	1	1	1	3	3	3	2	2	2	2	3	5	5	7	11	14	41	61	4	
Venomous animals/plants	2	17	17	15	14	12	13	13	16	13	13	10	9	11	7	9	6	6	3	13	
Dog bite	2	39	18	9	4	5	6	4	4	3	4	4	4	4	6	5	4	6	8	8	
Other bite/injury caused by animal	6	25	11	12	10	11	12	9	12	13	15	16	14	14	14	13	15	19	14	13	
Other natural/ environmental	10	1	0	0	0	0	0	0	1	0	1	1	1	1	1	2	2	2	12	1	
Choking/ suffocation/ foreign body (Total)	106	103	41	20	10	13	15	17	21	21	24	26	31	38	42	41	58	62	61	31	
Aspiration of food	40	12	2	2	1	1	1	2	2	3	3	4	6	5	6	6	14	13	16	4	
Aspiration of other object	20	14	3	1	1	1	1	1	1	0	0	1	1	1	2	3	4	6	7	2	
Mechanical suffocation	6	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
Foreign body in eye	2	12	4	2	2	4	4	2	3	3	3	1	1	1	1	1	2	0	1	3	
Foreign body in other orifice	38	64	32	14	7	8	10	13	15	15	18	20	23	31	33	31	38	41	37	21	
Hit/ struck/ crush (Total)	63	182	134	215	339	310	241	157	109	90	74	69	64	52	50	38	44	48	78	153	
Struck by falling object	6	19	8	7	10	18	17	22	17	18	17	18	18	12	11	7	9	4	12	15	
Struck/knocked in sport	3	9	35	127	243	198	148	74	39	20	11	7	4	1	3	2	3	2	4	70	
Caught/crushed in or between objects	31	85	31	15	18	24	23	21	20	23	20	21	16	15	12	9	10	8	10	24	
Other hit/struck/crush	23	69	60	66	68	71	54	40	33	29	26	23	26	23	24	21	22	34	53	44	
Machinery (Total)	1	11	5	8	45	66	65	64	62	59	62	67	65	54	44	34	32	23	14	47	
Agricultural/farm	0	2	2	2	3	4	4	4	4	4	4	5	7	5	6	4	5	2	2	4	
Lifting machines and appliances	0	1	0	0	3	4	5	5	4	5	5	4	4	1	1	0	0	0	0	3	
Metalworking machines	0	0	0	1	7	9	9	8	8	6	8	8	7	5	5	2	1	3	0	5	
Woodworking and forming machines	0	1	0	1	17	21	21	23	21	23	24	25	27	25	24	23	22	14	11	18	
Earth moving machines	0	0	0	0	0	0	1	1	1	1	1	2	1	1	1	0	0	1	0	1	
Other machinery	1	7	3	4	15	28	26	24	24	21	21	24	19	16	7	5	4	3	1	16	
Cutting/ piercing (Total)	24	135	89	86	177	214	169	128	113	91	88	82	90	81	69	56	49	55	35	115	
Powered lawn mower	0	2	2	3	4	3	4	4	5	5	4	5	8	9	9	7	5	6	0	5	
Other powered hand tools	0	1	1	2	10	15	15	14	17	14	16	18	18	19	18	12	9	10	1	12	
Powered household appliances	0	3	0	0	1	1	1	1	0	0	1	1	2	1	1	1	0	0	0	1	
Knives/daggers	0	6	6	9	27	35	24	20	14	13	11	8	10	5	3	2	2	3	1	14	
Other hand tools/implements	3	10	8	11	12	11	11	10	11	9	8	9	9	10	7	5	4	6	3	9	
Other cutting/piercing instruments/objects	21	113	71	61	124	150	115	79	67	51	48	41	44	36	32	29	28	30	30	74	

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total
Other unintentional (Total)	49	59	45	74	138	162	148	126	106	90	86	71	72	68	74	87	109	123	205	99
Firearms	0	0	1	3	5	5	3	2	2	2	2	1	1	1	0	1	0	1	0	2
Explosion	1	0	1	6	6	6	4	4	2	3	4	3	1	1	2	0	0	1	0	3
Electric current	0	3	2	3	4	7	6	5	6	4	4	4	3	1	2	1	0	1	1	4
Overexertion/strenuous movements	4	2	3	18	45	61	58	50	47	38	34	26	23	25	20	28	29	30	53	34
Other unintentional	45	53	37	44	79	83	76	64	49	44	42	38	43	39	51	56	79	89	150	56
Intentional (Total)	68	14	8	41	339	479	387	303	225	187	151	104	74	61	55	44	42	62	95	183
Self-Inflicted (Total)	1	1	1	11	99	170	171	147	116	104	85	58	43	35	37	28	30	45	65	80
Poisoning (Tranquillisers/Psychotropic agents)	0	0	0	3	27	61	74	66	54	49	41	28	21	16	15	9	10	11	24	34
Poisoning (Other solids/liquids)	0	1	0	5	50	67	58	47	39	35	29	17	13	11	12	11	11	13	23	29
Poisoning (MV Exhaust gas)	0	0	0	0	2	5	6	6	4	4	3	2	2	2	1	1	1	2	0	3
Poisoning (Other gases/vapours)	0	0	0	0	1	1	1	1	0	1	1	1	0	0	0	1	0	2	0	1
Firearms/explosives	1	0	0	0	0	2	1	1	1	1	1	0	0	1	2	0	1	0	0	1
Cutting/piercing	0	0	0	1	13	21	20	17	12	10	6	5	3	3	5	3	4	16	10	9
Other means	0	0	1	2	7	12	12	8	5	4	4	4	3	2	2	3	4	2	7	5
Inflicted by other (Total)	67	14	7	30	240	309	216	156	109	83	66	47	31	26	18	16	11	17	30	103
Unarmed fight/brawl	3	1	2	24	166	219	149	100	70	53	45	28	19	18	10	10	5	8	21	68
Firearms/explosives	1	0	0	0	1	1	2	1	1	1	0	0	1	0	1	0	1	1	0	1
Cutting/piercing	0	0	0	1	34	37	23	19	14	10	6	6	3	2	2	1	1	1	1	12
Child battering/maltreatment	60	11	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
Struck by blunt/thrown object	2	0	0	1	19	25	20	19	12	9	6	6	4	3	2	2	1	3	5	10
Other means	3	1	1	3	19	26	22	17	12	10	9	7	3	3	4	2	3	3	2	10
Undetermined/ other intent (Total)	5	2	0	2	10	13	12	8	7	6	5	3	2	3	3	2	3	6	3	6
Undetermined, poisoning (solids/liquids)	1	0	0	1	5	7	6	4	4	4	3	2	1	0	1	1	2	3	2	3
Undetermined, firearm/explosive	0	0	0	0	1	1	1	1	0	0	0	0	0	1	0	0	1	1	1	0
Other undetermined/other intent	4	2	0	1	5	5	5	3	3	2	2	1	1	2	2	1	1	3	0	2
ALL INCIDENT TRUE INJURIES	831	1573	1305	1500	2124	2256	1805	1415	1173	1041	962	916	924	964	1084	1343	1973	3131	5918	1466
Medical injuries (Total)	1153	360	218	181	226	271	298	332	357	438	571	875	1347	2103	2921	3835	4588	4753	4768	859
Medical misadventure	66	8	6	4	2	3	4	5	4	5	8	13	21	31	46	56	55	54	45	13
Post-Operative complications	867	262	164	137	177	219	233	257	279	338	458	705	1094	1730	2395	3071	3600	3653	3504	680
Adverse drug effects	220	90	48	40	46	49	62	69	74	94	106	157	233	342	480	707	932	1047	1219	165
Late effects	5	15	26	39	67	84	90	79	68	62	52	49	47	41	39	44	36	45	61	55
ALL NON-INCIDENT NON-TRUE INJURIES	1158	375	244	220	292	354	388	411	425	499	623	924	1394	2143	2960	3878	4624	4799	4829	914
ALL INJURIES	1989	1948	1549	1720	2416	2611	2193	1826	1599	1540	1584	1840	2318	3108	4044	5221	6596	7929	10747	2379

* (Rates are per 100,000)

Table 7: Public Hospital Injury Admissions, Victoria, Six years, 1 July 1992 to 30 June 1998, Average Annual Rate*, Females

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total	
Injury Cause																					
	<i>Unintentional (Total)</i>	650	1165	861	681	670	644	550	476	430	435	433	514	650	821	1107	1701	2944	4894	8186	947
Transport (Total)		18	63	129	195	260	254	175	133	106	106	98	109	110	116	119	135	190	174	160	146
Motor Vehicle Traffic (total)		16	34	42	55	185	199	136	98	82	84	80	90	96	102	106	117	164	147	127	104
Driver		1	1	1	2	63	108	75	56	47	51	43	47	44	37	41	43	62	45	30	46
Passenger		13	21	21	24	82	55	34	23	18	18	23	27	34	42	39	44	59	53	49	34
Motorcyclist/passenger		0	0	2	4	8	11	8	4	4	2	2	2	1	1	0	1	1	1	0	4
Pedal cyclist		0	0	2	6	4	4	3	1	1	1	1	1	1	1	1	0	0	0	0	2
Pedestrian		1	12	14	17	22	13	9	7	7	8	8	10	11	17	20	22	33	42	39	14
Other person		1	0	1	2	7	9	7	7	5	4	3	3	4	4	6	7	8	7	9	5
Motor Vehicle Non-Traffic (total)		0	8	7	10	10	6	4	5	3	3	3	4	3	3	3	9	12	14	14	6
Occupant		0	2	2	3	4	3	2	2	1	1	1	2	1	2	1	5	7	11	9	3
Motorcyclist/passenger		0	1	3	7	4	2	1	1	0	1	1	0	0	0	0	0	0	0	0	1
Pedestrian		0	3	1	0	0	1	0	1	0	0	0	1	1	0	0	1	3	1	3	1
Other person		0	2	1	1	2	1	1	1	1	1	1	0	1	1	1	2	2	2	1	1
Other Vehicle (total)		2	21	80	130	65	49	35	30	22	19	15	15	11	10	9	10	15	13	19	36
Railway		1	0	0	0	1	0	0	1	0	0	0	1	1	1	1	1	2	3	2	1
Bicycle		1	14	44	47	12	10	7	5	4	5	4	5	4	5	4	4	4	2	2	11
Animal being ridden		0	5	23	68	45	31	23	21	14	11	9	7	3	1	1	0	1	1	0	18
Water transport		0	0	0	1	3	3	2	1	1	1	1	1	1	0	1	2	0	0	0	1
Air transport		0	0	0	0	1	2	1	1	0	0	0	0	0	0	0	0	1	0	3	1
Vehicle NEC		1	2	12	14	4	2	2	2	1	1	1	1	1	2	2	4	5	6	10	4
Near drowning (Total)		9	11	3	1	1	1	0	1	0	1	0	1	1	0	1	2	0	1	1	2
Pool		3	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Sport/rec activity (No diving equipment)		0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other drowning		6	3	1	0	1	0	0	1	0	0	0	0	0	0	1	1	0	0	0	1
Poisoning (Total)		105	244	13	27	97	83	74	61	57	53	39	33	29	23	28	39	46	67	57	62
Drugs, medicinal substances & biologicals (total)		58	191	8	18	80	71	63	53	45	30	27	21	15	21	30	39	60	50	50	50
Heroin/Opiates		1	2	0	0	8	8	6	4	3	2	2	1	1	1	3	2	2	2	5	4
Paracetamol		4	34	1	5	23	13	9	7	6	5	3	2	1	1	1	2	2	2	1	7
Tranquillisers		2	19	0	3	13	19	21	21	19	17	11	9	7	3	3	4	7	10	9	12
Other drugs/medications		52	136	6	11	36	31	25	20	22	19	15	15	11	9	15	23	28	47	35	27
Other solid & liquid substances, gases & vapours (total)		47	53	6	9	17	12	11	8	7	8	8	6	8	8	7	9	7	7	7	12
Other solids/liquids		43	50	5	7	15	10	9	8	7	7	7	5	7	7	7	7	6	6	6	11
Gas/vapour		4	3	0	2	2	1	2	1	0	1	1	1	1	1	1	1	1	1	1	1
Falls (Total)		222	358	499	270	119	117	118	115	118	133	156	226	361	510	774	1278	2357	4159	7291	526
Falls, different level (total)		185	239	335	108	31	30	27	29	30	34	37	59	77	96	124	189	329	545	920	118
Stairs/steps		12	17	8	5	8	11	11	10	12	13	16	23	33	37	49	71	110	143	161	25
Ladders/scaffolds		0	2	2	0	1	2	1	2	2	3	4	9	10	10	11	13	18	12	6	5
Building/structure		0	9	8	5	5	3	2	2	1	2	2	3	2	2	2	3	2	2	3	3
Playground equipment		1	66	212	50	3	1	1	1	1	0	0	1	0	0	0	0	2	4	6	22
Chair or bed		77	78	32	9	3	3	3	5	6	7	6	11	20	28	42	73	152	313	646	38
Different level, other		96	66	73	38	12	10	9	8	8	8	9	13	13	19	19	29	45	71	96	25

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total
Falls, same level (total)	37	119	164	162	88	87	91	86	88	99	119	168	284	414	651	1089	2028	3613	6371	408
Same level, not sport	10	49	69	66	29	34	37	38	41	50	65	97	162	225	352	559	984	1678	2706	192
Falls in sport	1	1	7	23	13	9	8	6	5	3	2	1	2	1	2	2	3	3	3	6
Fracture, unspecified	5	10	23	20	10	9	9	8	8	8	7	9	16	22	29	53	92	135	244	22
Other falls	21	60	65	54	35	36	37	35	34	38	45	61	103	165	268	474	949	1798	3418	188
Fires/ burns/ scalds (Total)	75	70	12	7	9	12	12	11	10	10	9	9	11	13	13	19	25	34	57	16
House fires	2	1	0	0	0	0	1	0	0	0	0	0	1	0	2	1	0	2	1	1
Clothing ignition	1	2	1	0	1	1	0	0	1	1	0	0	1	1	0	0	3	2	2	1
Hot liquids/vapors/steam	45	52	9	3	4	6	6	6	4	5	5	5	5	7	6	10	12	20	29	9
Caustic/corrosive substances & other hot objects	24	11	1	1	2	3	2	2	1	2	2	1	2	2	3	4	4	7	14	3
Other fires/burns	3	4	1	2	3	3	3	2	3	2	2	2	2	3	2	3	5	3	10	3
Natural/ environmental (Total)	19	68	31	26	22	20	18	18	17	18	22	22	21	27	22	33	47	69	106	27
Excessive heat/cold	1	1	1	1	2	1	0	1	1	1	1	0	1	3	4	9	24	37	74	4
Venomous animals/plants	2	11	8	8	7	6	7	7	6	6	8	7	7	7	4	6	5	5	3	7
Dog bite	2	32	13	5	2	2	3	2	2	2	4	3	3	4	4	7	6	7	7	6
Other bite/injury caused by animal	4	24	9	12	10	11	9	8	8	9	10	11	10	14	10	11	11	17	15	11
Other natural/ environmental	10	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4	6	1
Choking/ suffocation/ foreign body (Total)	89	91	35	11	9	7	10	12	12	14	18	19	23	26	27	31	44	51	58	24
Aspiration of food	36	9	1	1	1	1	1	1	1	2	2	2	5	3	3	4	6	9	13	3
Aspiration of other object	21	12	3	1	1	0	1	1	1	0	1	0	1	1	1	2	3	3	4	2
Mechanical suffocation	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Foreign body in eye	5	21	6	3	1	2	2	2	2	3	3	4	4	5	5	3	5	8	4	4
Foreign body in other orifice	24	47	25	6	6	5	7	8	8	9	12	14	14	18	18	23	29	32	38	14
Hit/ struck/ crush (Total)	54	133	60	63	47	39	34	29	24	20	16	18	21	20	23	35	57	90	128	42
Struck by falling object	4	11	4	2	1	2	2	3	2	3	2	2	2	2	3	4	5	6	10	3
Struck/knocked in sport	2	4	10	26	23	16	12	9	8	5	4	3	1	2	2	2	5	8	7	9
Caught/crushed in or between objects	25	75	21	7	3	3	3	4	4	4	3	6	5	4	3	5	5	9	16	10
Other hit/struck/crush	22	43	25	28	20	18	16	13	10	8	7	8	12	11	14	24	43	66	94	20
Machinery (Total)	0	5	2	2	5	7	6	4	6	7	5	5	4	2	1	1	1	0	1	4
Agricultural/farm	0	1	1	1	0	1	1	1	1	0	0	1	0	0	0	0	0	0	0	1
Lifting machines and appliances	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
Metalworking machines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Woodworking and forming machines	0	0	0	1	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0
Earth moving machines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other machinery	0	4	1	1	4	5	4	3	4	5	3	4	3	1	1	1	1	0	1	3
Cutting/ piercing (Total)	16	81	53	41	45	48	46	37	34	33	29	31	23	27	25	34	37	43	55	40
Powered lawn mower	0	1	1	1	1	1	2	2	2	1	2	2	3	2	2	3	2	1	1	2
Other powered hand tools	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0
Powered household appliances	0	2	1	1	1	0	1	0	1	1	0	1	1	1	1	1	1	0	0	1
Knives/daggers	1	4	2	3	8	10	9	8	7	8	6	5	3	3	3	1	1	1	0	5
Other hand tools/implements	2	9	6	8	4	3	4	4	4	3	3	5	3	5	3	4	2	3	2	4
Other cutting/piercing instruments/objects	14	65	42	29	31	32	30	23	21	20	17	17	13	15	15	24	32	38	52	28

Age Group (years)	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85	Total	
Other unintentional (Total)	43	41	23	37	57	56	56	55	45	42	41	43	46	58	75	95	139	206	272	59	
Firearms	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Explosion	0	0	0	0	0	0	1	1	1	0	0	1	0	0	0	0	0	0	1	0	0
Electric current	1	2	1	1	2	2	2	2	1	1	1	1	0	0	0	0	0	1	3	1	1
Overexertion/strenuous movements	2	2	3	14	23	24	23	27	22	19	18	15	17	19	24	27	41	54	66	20	20
Other unintentional	41	37	20	21	31	29	29	26	22	21	22	25	30	39	51	68	98	151	203	36	36
Intentional (Total)	49	14	4	58	293	282	265	236	223	187	138	92	67	47	37	36	41	43	48	142	
Self-Inflicted (Total)	2	1	0	47	252	229	212	193	189	162	121	78	58	39	32	29	33	31	35	117	
Poisoning (Tranquillisers/Psychotropic agents)	1	0	0	10	70	101	112	109	106	97	73	46	31	23	18	18	19	16	14	58	58
Poisoning (Other solids/liquids)	1	1	0	33	162	106	76	66	65	53	40	25	23	14	11	9	11	12	14	49	49
Poisoning (MV Exhaust gas)	0	0	0	0	0	1	2	1	2	1	1	1	0	0	0	0	0	0	0	1	1
Poisoning (Other gases/vapours)	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Firearms/explosives	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cutting/piercing	0	0	0	2	15	15	16	13	11	8	4	3	2	1	2	0	1	2	4	7	7
Other means	0	0	0	1	3	5	6	4	4	3	2	2	1	1	1	2	2	1	2	3	3
Inflicted by other (Total)	47	13	4	11	41	53	53	43	34	25	17	15	9	7	5	7	8	12	13	25	
Unarmed fight/brawl	2	1	1	5	27	36	36	27	24	15	10	9	5	4	2	4	5	7	5	15	15
Firearms/explosives	0	0	0	0	1	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0
Cutting/piercing	6	3	0	1	3	4	3	3	1	2	2	1	1	1	1	0	0	0	0	2	2
Child battering/maltreatment	36	8	3	2	2	2	2	4	2	1	1	1	0	0	1	0	0	1	0	2	2
Struck by blunt/thrown object	1	1	0	1	2	3	5	2	3	3	1	2	1	1	1	1	1	0	2	2	2
Other means	2	1	0	2	5	6	6	6	4	4	3	2	2	1	0	2	2	3	4	3	3
Undetermined/ other intent (Total)	3	1	1	3	7	8	7	6	6	5	4	3	3	3	1	1	2	7	4	4	
Undetermined, poisoning (solids/liquids)	1	0	0	2	6	7	5	5	4	4	3	2	3	2	1	1	1	3	2	3	3
Undetermined, firearm/explosive	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other undetermined/other intent	2	1	1	1	1	1	2	1	1	1	1	0	1	1	0	0	1	3	3	1	1
ALL INCIDENT TRUE INJURIES	701	1180	866	742	970	935	822	718	658	628	575	609	720	871	1145	1739	2987	4944	8239	1094	
Medical injuries (Total)	764	217	163	169	264	352	465	535	607	679	793	932	1141	1544	2080	2592	3119	3247	2854	853	
Medical misadventure	38	6	5	3	5	12	20	24	24	19	20	17	22	28	40	41	48	37	33	19	19
Post-Operative complications	542	143	126	128	195	263	349	404	485	550	632	723	871	1173	1585	1934	2241	2128	1679	633	633
Adverse drug effects	184	68	32	39	64	78	96	107	98	109	140	193	249	342	454	617	830	1081	1142	200	200
Late effects	2	13	16	22	30	31	31	28	30	30	29	25	33	26	31	40	43	48	47	28	28
ALL NON-INCIDENT NON-TRUE INJURIES	765	230	179	192	293	384	496	563	637	708	821	957	1174	1570	2111	2632	3162	3294	2901	881	
ALL INJURIES	1466	1410	1045	933	1264	1318	1318	1282	1296	1337	1396	1566	1894	2441	3256	4371	6149	8238	11140	1975	

* (Rates are per 100,000)

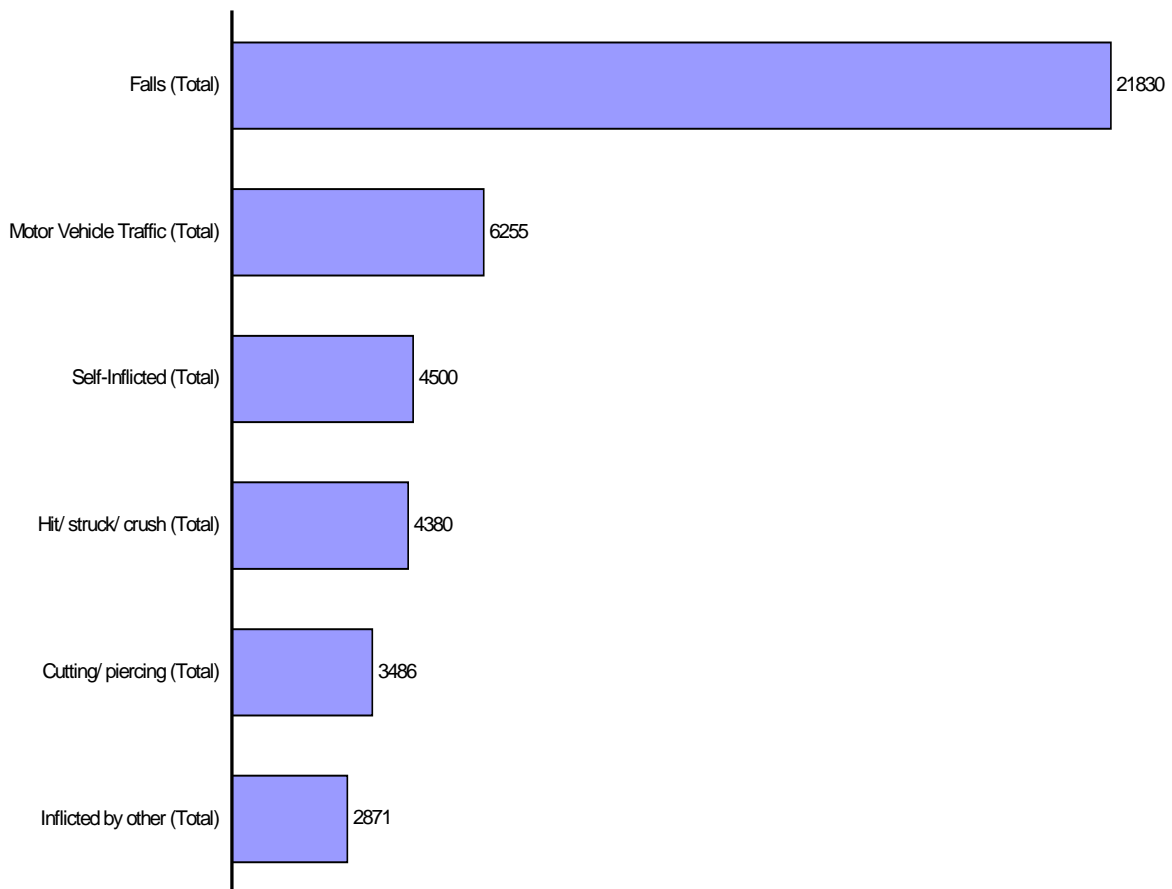
3.3 MAJOR CAUSES OF INJURY: ALL AGES

Classification of injuries by major causes is somewhat arbitrary given the limitations of E-code groupings and age group-specific peaks for many causes. Given that caveat, the following comments could be made.

Usually transport injury frequencies and rates are high, and within these categories sub-classifications are possible which may have higher values than some other “major” categories, such as poisoning. Reference should be made to the “Total” columns of Tables 1, 4 or 5, all-age, all-person values for frequency and rates, to determine the major causes of injury overall.

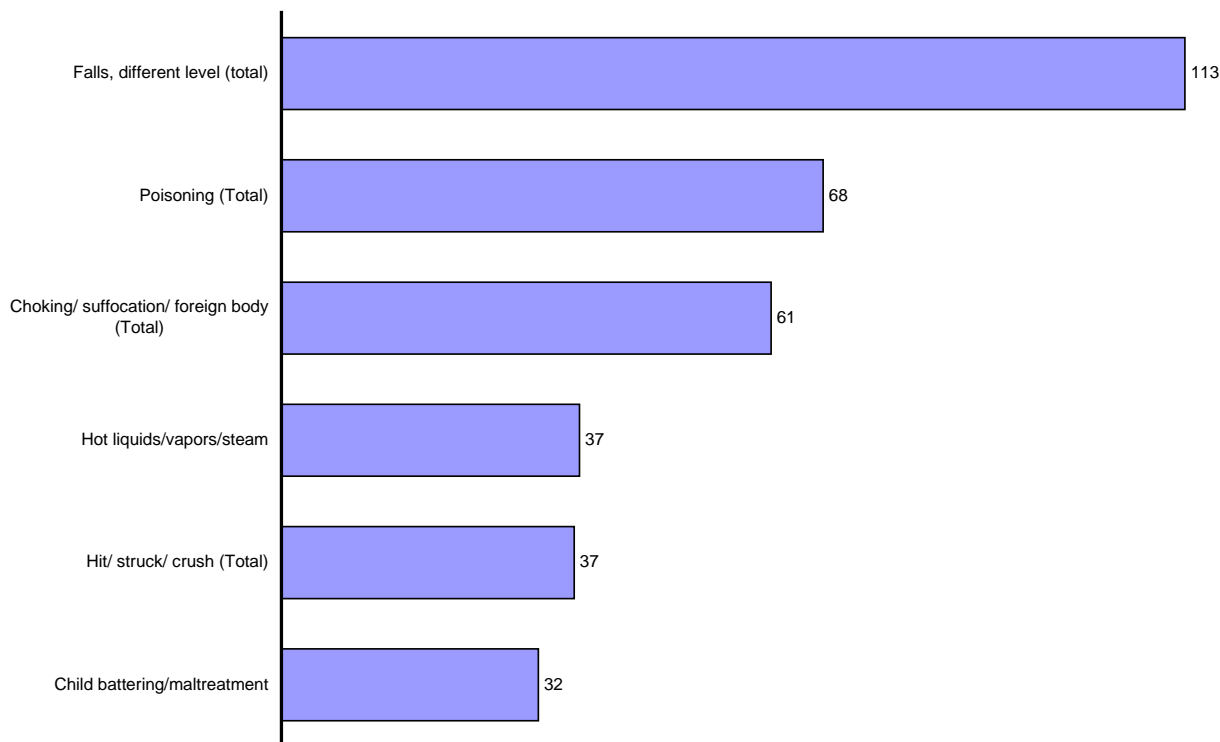
Medical injuries constituted the greatest major category of injuries overall with an average annual total of 38,851, representing an average annual rate of 856 per 100,000. As most injury researchers only consider true incident injuries, and medical injuries are classified as non-incident, non-true injuries, these will not be discussed in detail here. The most frequent incident true-injuries were falls, an average annual frequency of 21,830 (rate 481/100,000) and all transport injuries with a frequency of 9,217 (rate 203/100,000). Sixty-eight percent of transport injuries were classified as motor vehicle traffic injuries. In Figure 4, a selection of six major causes of injury by average annual frequency for persons of all ages are shown.

*Figure 4: Six major injury causes, all ages, average annual frequency
Public Hospital Admissions, Victoria, July 1992 to June 1998*



Figures 5 to 10 illustrate the relative importance of injury causes in specific age groups where six injury causes with high frequencies are shown. Falls ranked first for all age groups except for 15-24 year olds, where motor vehicle traffic accidents headed the list ahead of falls at fourth position.

*Figure 5: Six major injury causes, <1 year, average annual frequency
Public Hospital Admissions, Victoria, July 1992 to June 1998*



*Figure 6: Six major injury causes, 1-4 years, average annual frequency
Public Hospital Admissions, Victoria, July 1992 to June 1998*

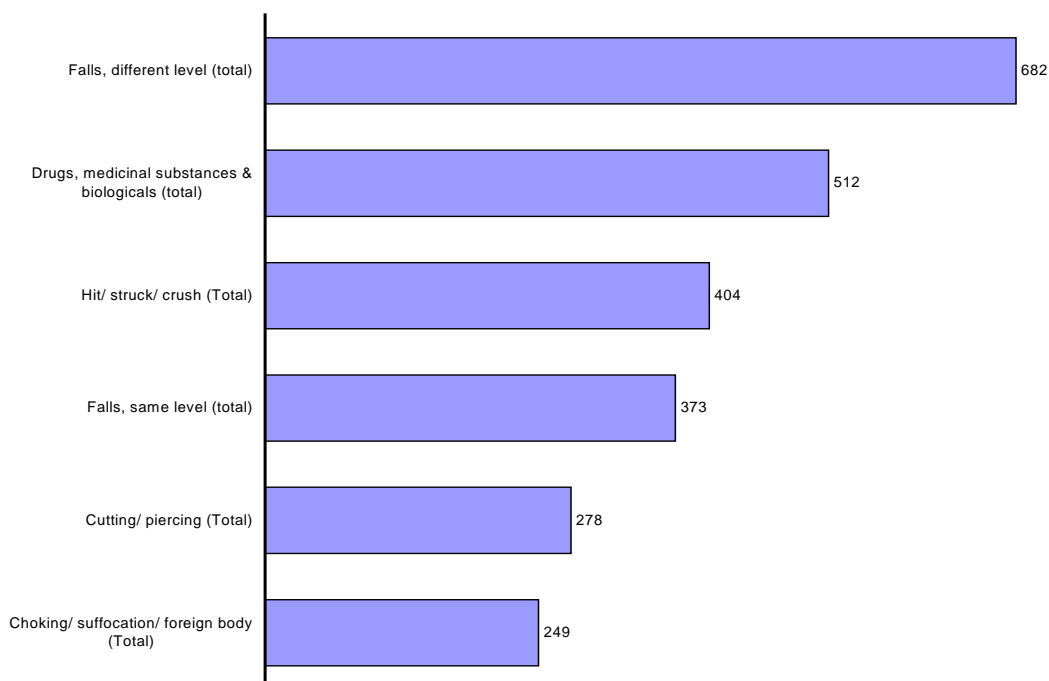


Figure 7: Six major injury causes, 5-14 years, average annual frequency
Public Hospital Admissions, Victoria, July 1992 to June 1998

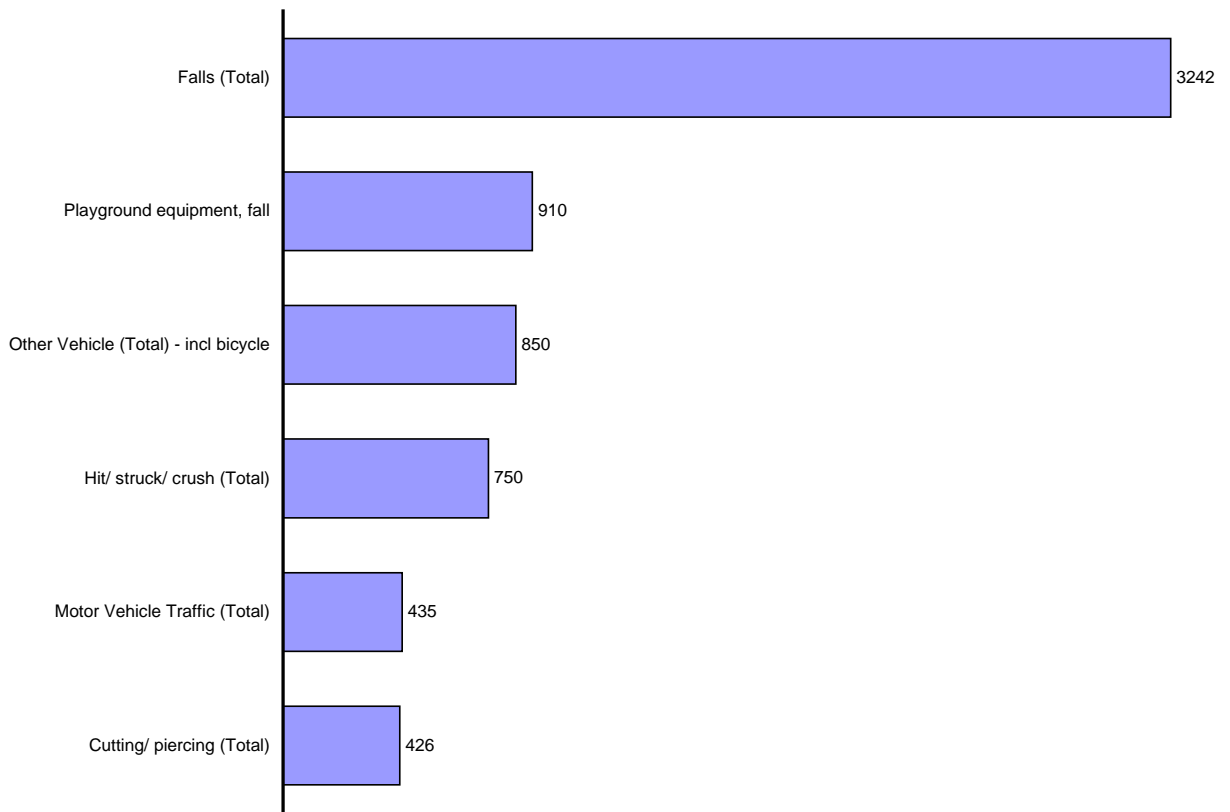


Figure 8: Six major injury causes, 15-24 years, average annual frequency
Public Hospital Admissions, Victoria, July 1992 to June 1998

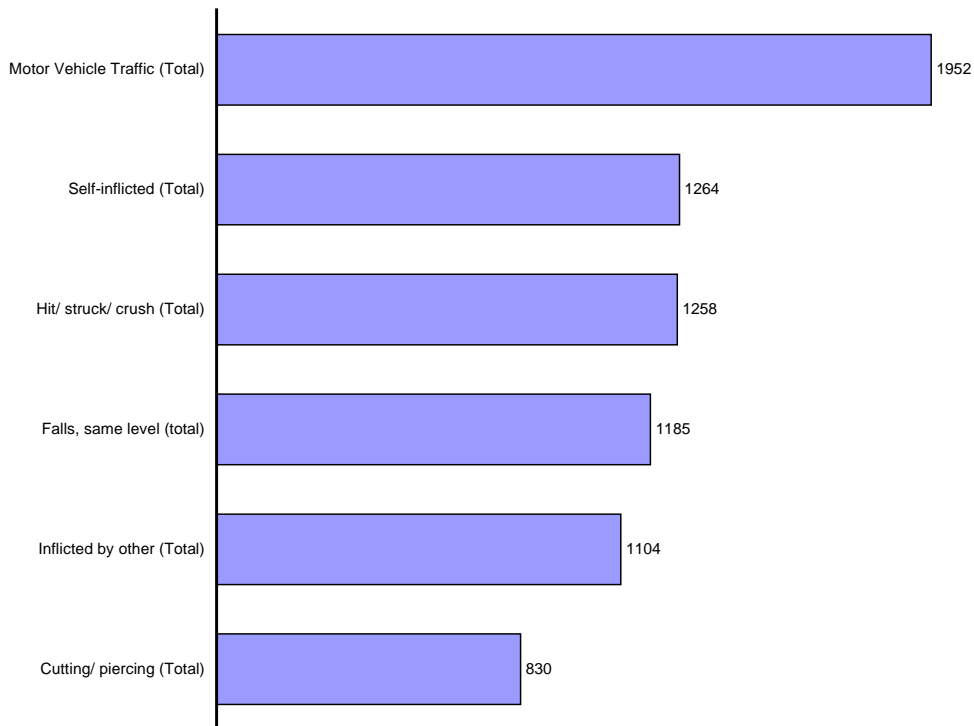


Figure 9: Six major injury causes, 25-64 years, average annual frequency
Public Hospital Admissions, Victoria, July 1992 to June 1998

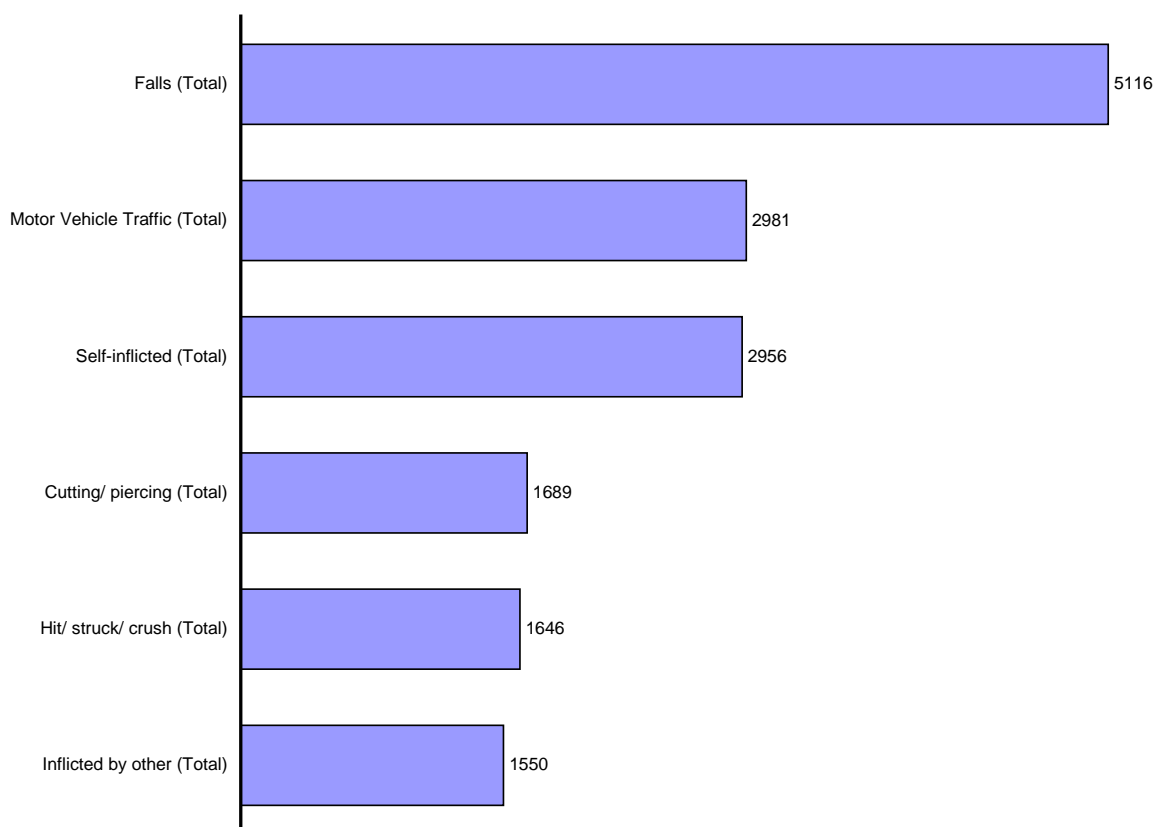
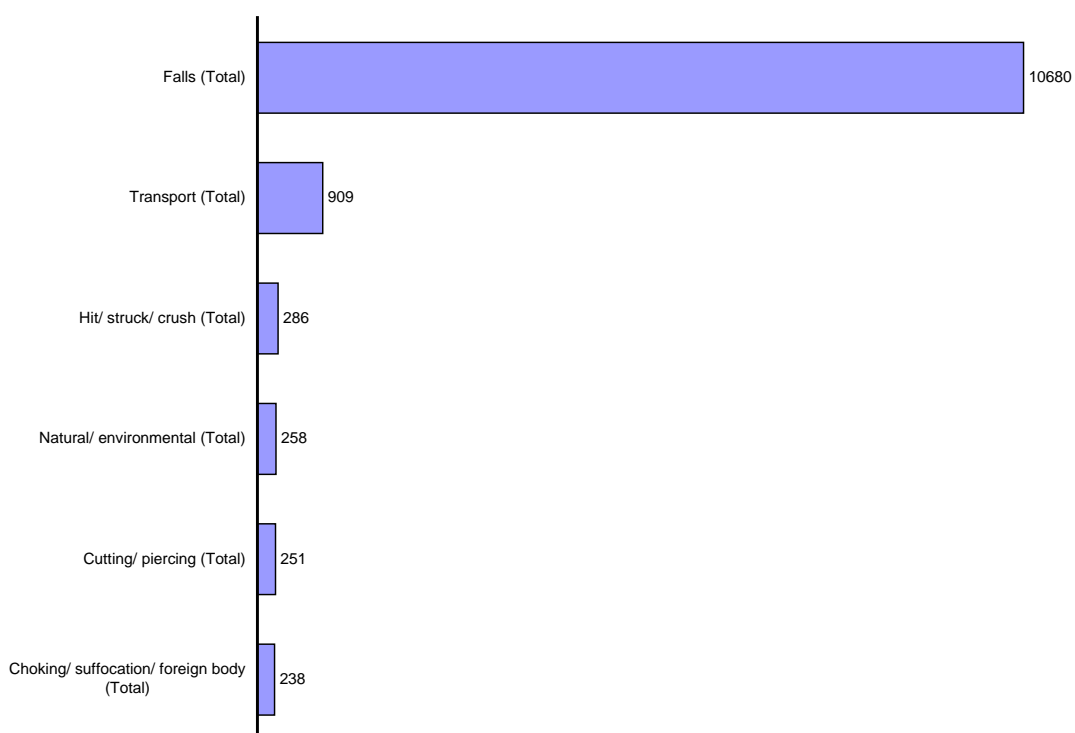


Figure 10: Six major injury causes, ≥65 years, average annual frequency
Public Hospital Admissions, Victoria, July 1992 to June 1998



3.4 MAJOR CAUSES OF INJURY BY 5-YEAR AGE GROUP AND SEX

Figures 11 to 22 show the average annual rate of injury by 5-year age groups and sex for a selection of injury causes. The 15-19 and 20-24 year old age groups have the highest transport injury rates across all 5-year age groups, mostly attributed by motor vehicle traffic injuries (Figures 11 and 12). The other vehicle category is dominated by 10-14 year olds which mostly comprise bicycle and horseriding related injuries (Figure 13).

Fall injury rates are high for all age groups, particularly the over 65 year age groups and the very young age groups represented by 5-9 year olds (Figure 14).

Sports related falls and collisions are dominated by males across the age range of 5-34 years (Figure 15).

Under 5 year olds appear to be the peak affected age group for poisoning injuries (Figure 16). Another peak occurs at the 15-19 and 20-24 year age range, particularly for females.

Fire/burns/scalds are mostly attributed to the under 5 year old age group (Figure 17). Just over 70% of these injuries were scalds from hot liquids and steam. Choking/suffocation/foreign body injuries mainly affected under 5 year olds also (Figure 18). The main causes for under 1 year olds were aspiration of food, and foreign bodies in other orifices, and for 1-4 year olds, foreign bodies in other orifices were the main cause.

Machinery related injury rates are dominated by males throughout the middle years age range, 15-64 years (Figure 19).

Self-inflicted injury rates were higher for females than males (Figure 20), both peaking at the 15-19 year age group. Intentional injuries inflicted by other or assault injuries were largely males aged within the 15-34 year age range (Figure 21).

Medical injuries, comprising medical misadventures, post-operative complications and adverse drug effects mainly affected those over 60 years of age and infants under 1 year. This result may be due to the exposure of elderly and infant patients to multiple procedures after the primary cause of hospitalisation, which initially, may not have been due to injury¹. It may also be a reflection of their physiological vulnerability.

Figure 11: Transport (total), average annual rates by age group and sex
Public Hospital Admissions, Victoria, July 1992 to June 1998

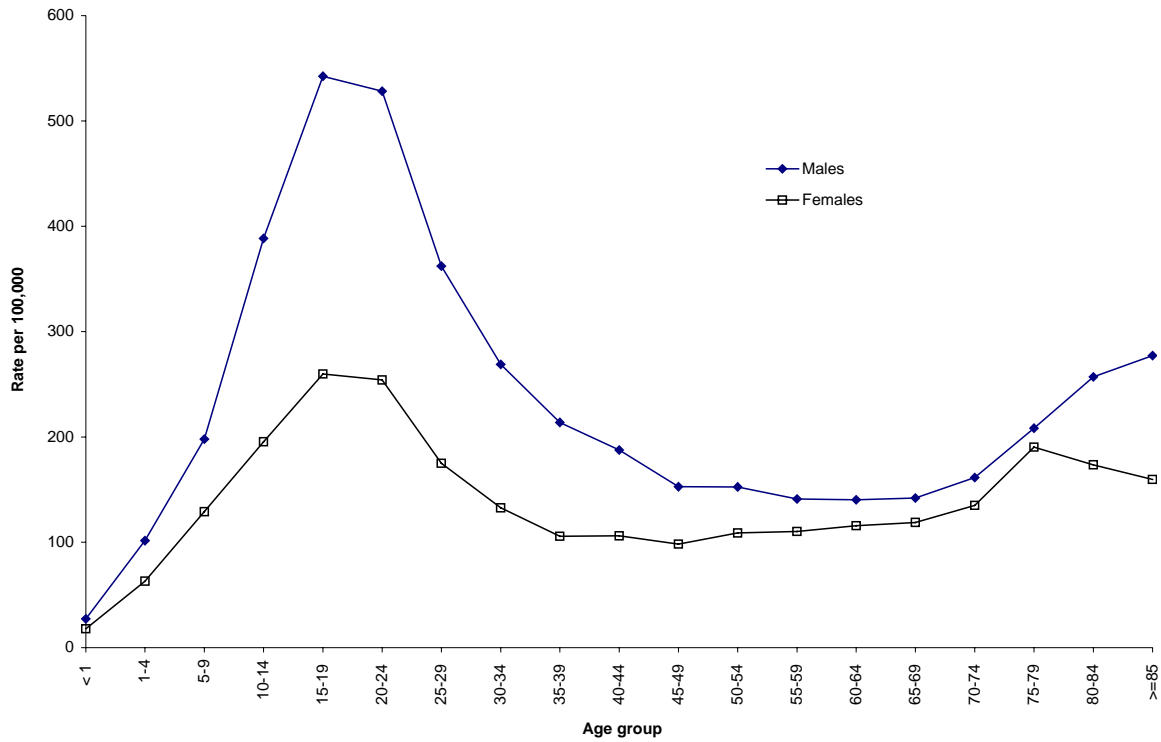


Figure 12: Motor vehicle traffic, average annual rates by age group and sex
Public Hospital Admissions, Victoria, July 1992 to June 1998

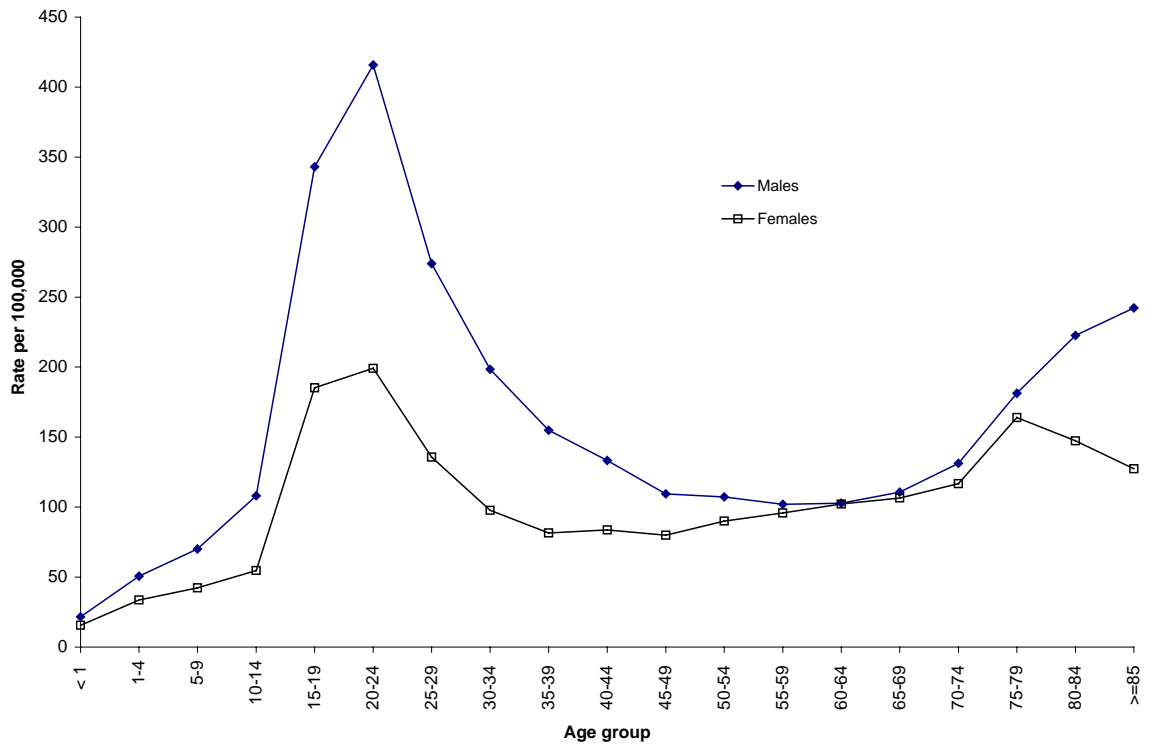


Figure 13: Other vehicle, average annual rates by age group and sex
Public Hospital Admissions, Victoria, July 1992 to June 1998

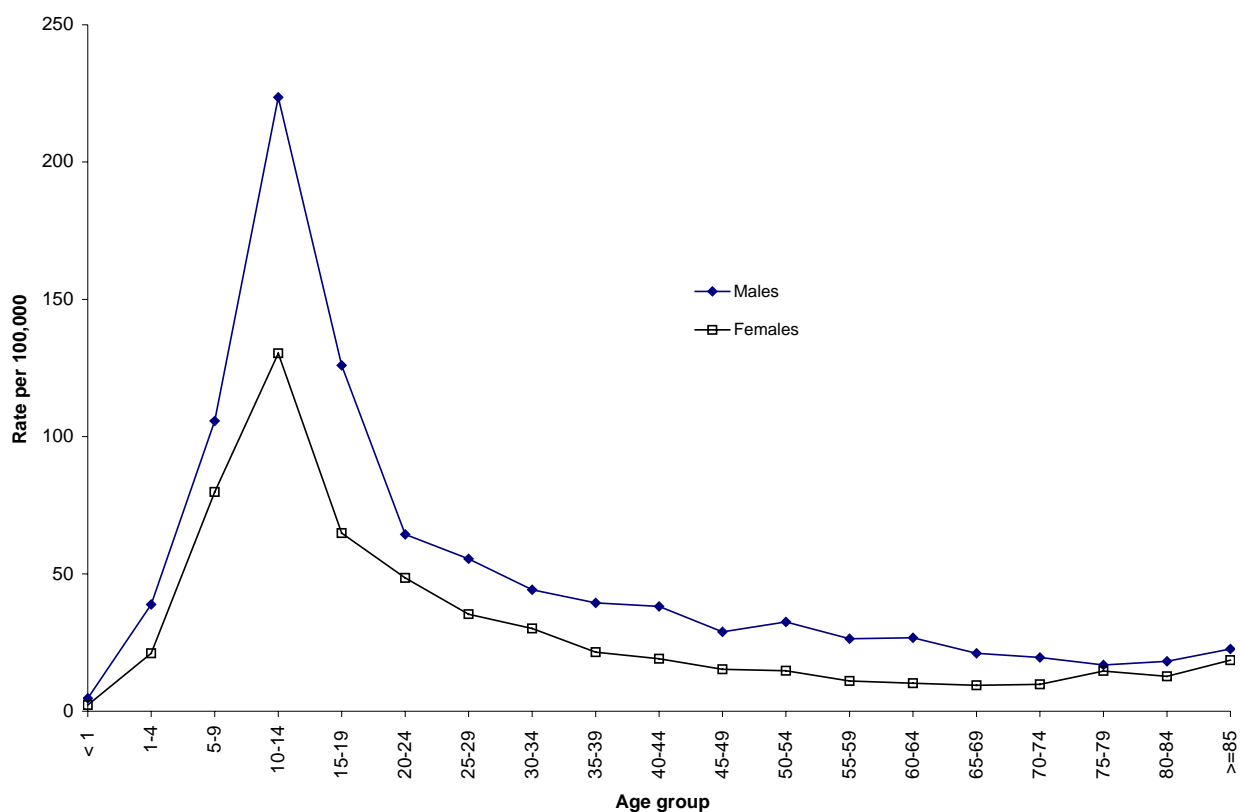


Figure 14: Falls (total), average annual rates by age group and sex
Public Hospital Admissions, Victoria, July 1992 to June 1998

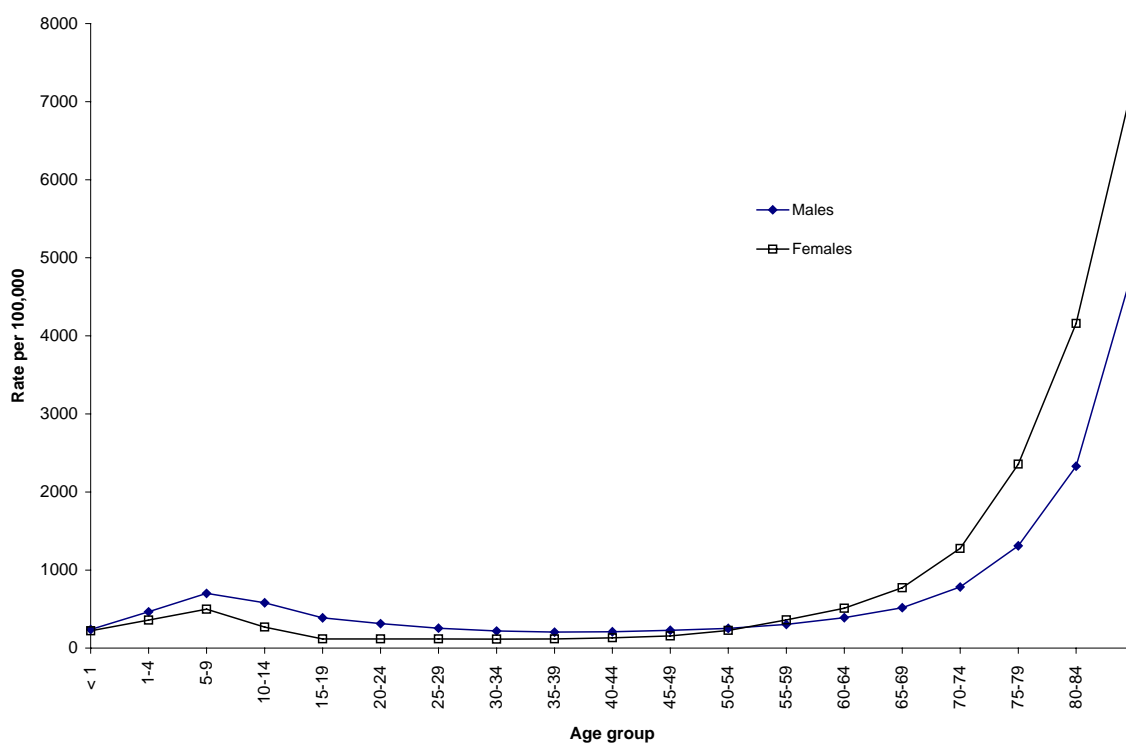


Figure 15: Sport falls and collisions, average annual rates by age group and sex
Public Hospital Admissions, Victoria, July 1992 to June 1998

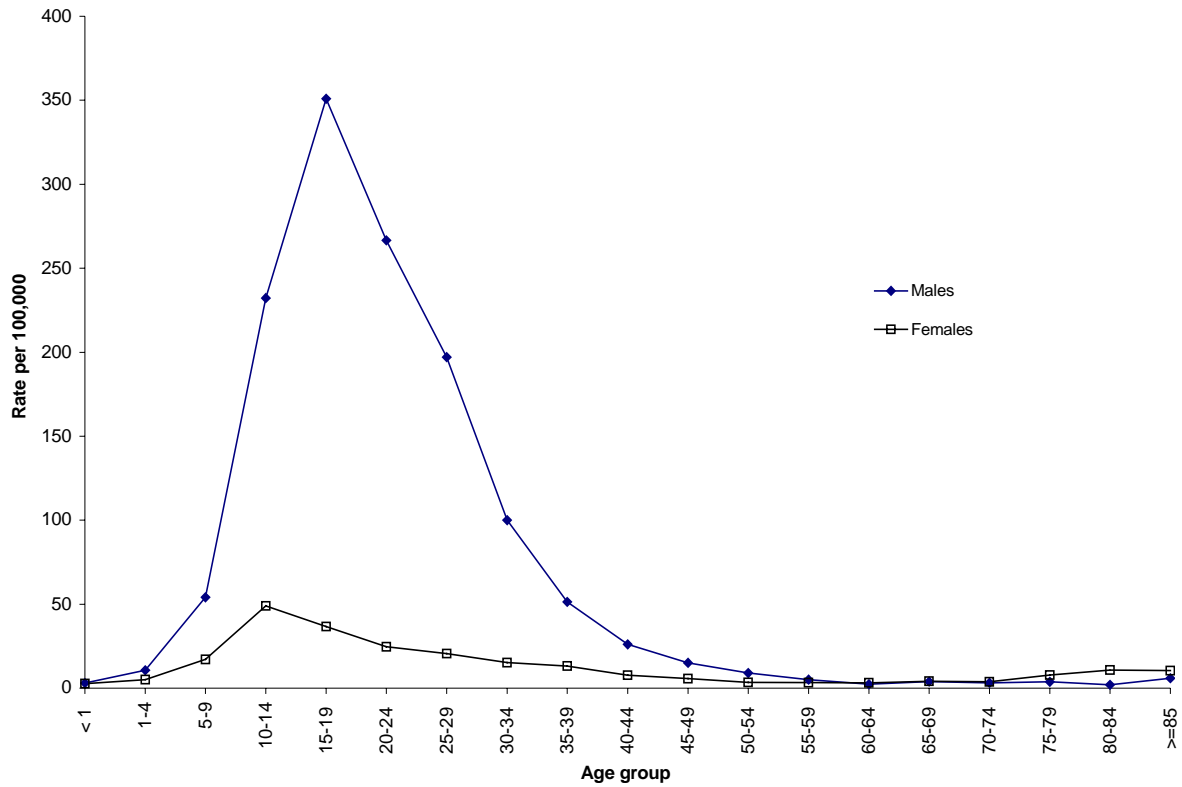


Figure 16: Poisoning (total), average annual rates by age group and sex
Public Hospital Admissions, Victoria, July 1992 to June 1998

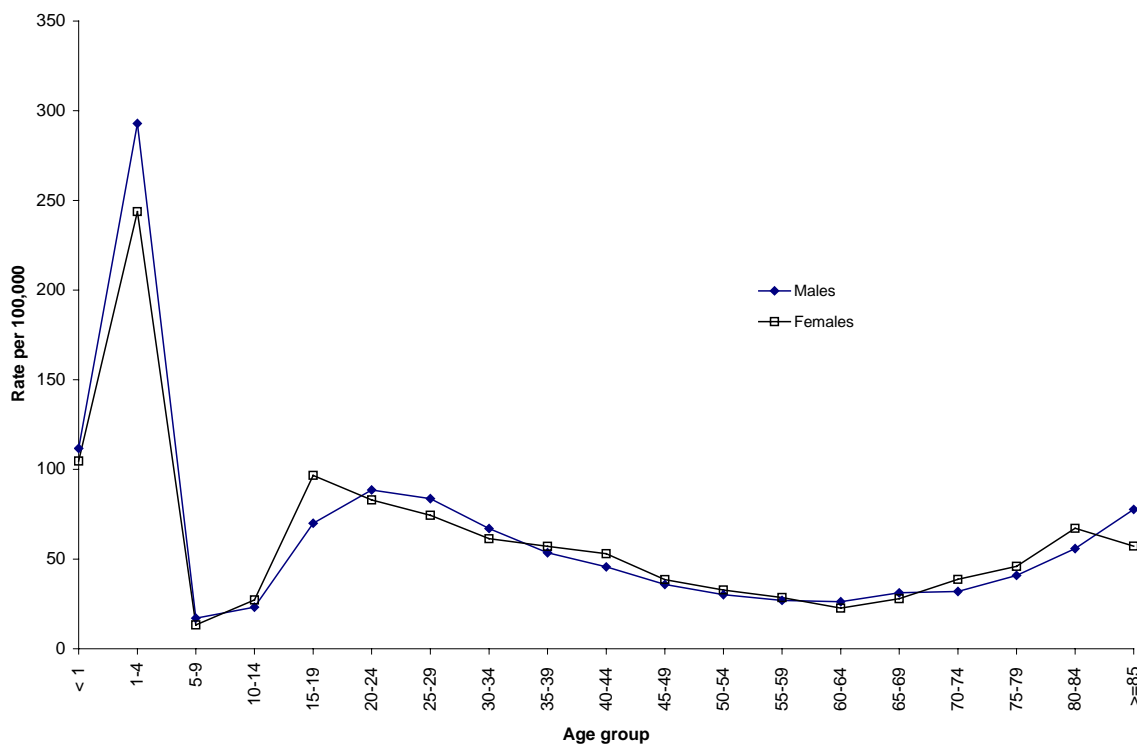


Figure 17: Fire/burns/scalds, average annual rates by age group and sex
Public Hospital Admissions, Victoria, July 1992 to June 1998

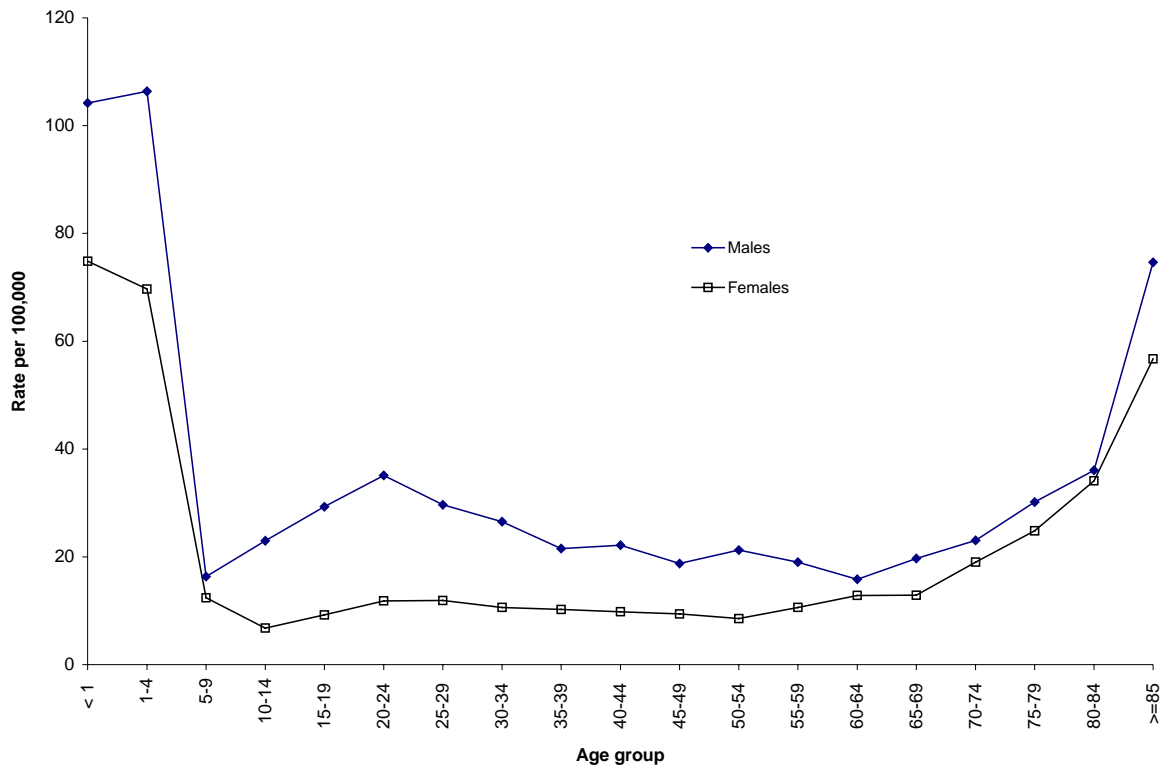


Figure 18: Choking/suffocation/foreign body, average annual rates by age group and sex
Public Hospital Admissions, Victoria, July 1992 to June 1998

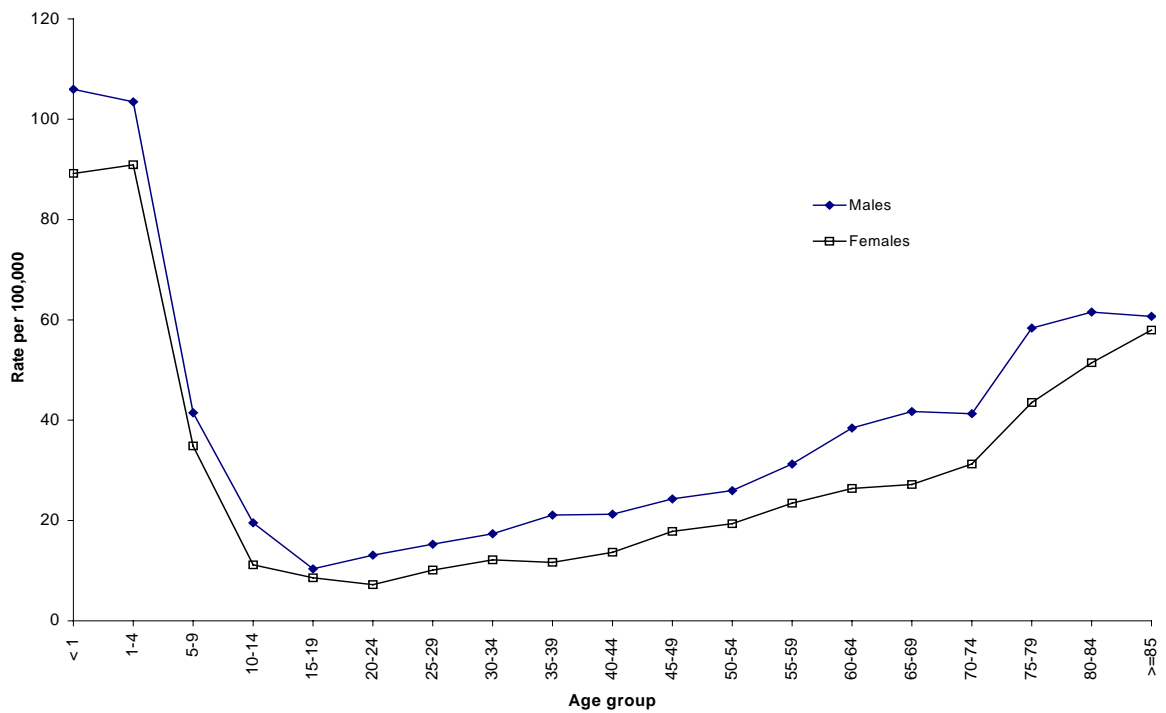


Figure 19: Machinery, average annual rates by age group and sex
Public Hospital Admissions, Victoria, July 1992 to June 1998

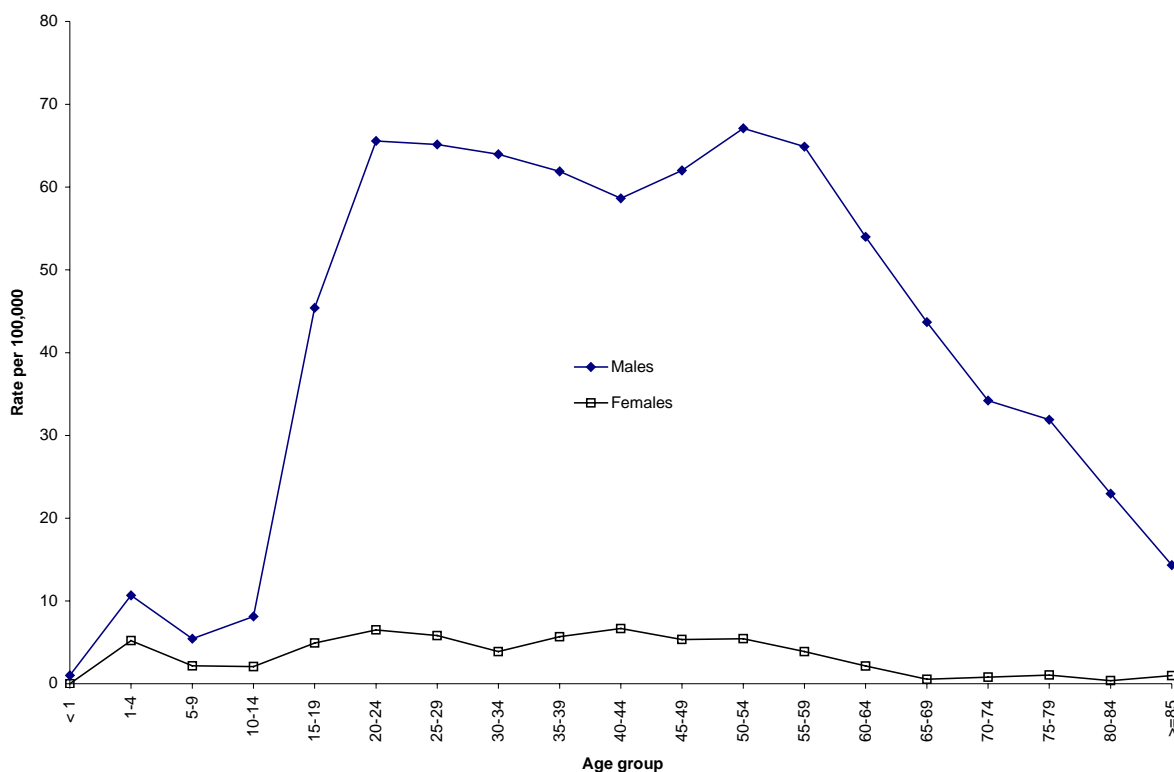


Figure 20: Intentional, Self-inflicted (total), average annual rates by age group and sex
Public Hospital Admissions, Victoria, July 1992 to June 1998

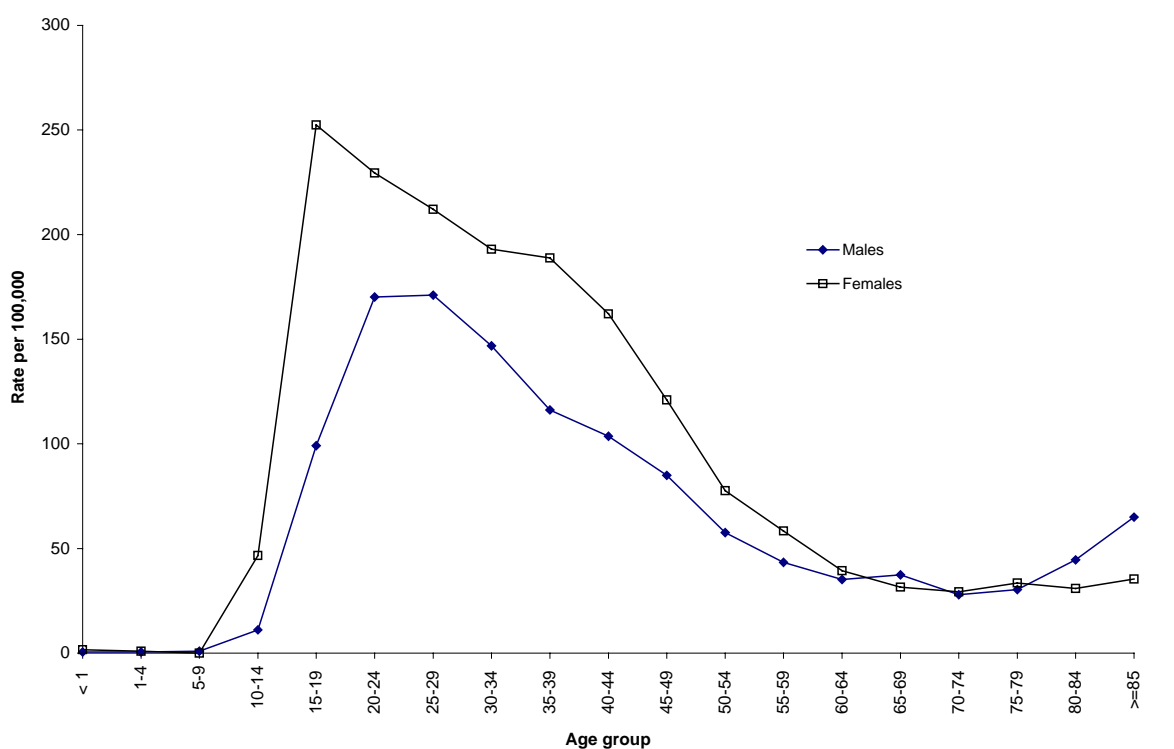


Figure 21: Intentional, inflicted by other (total), average annual rates by age group and sex
Public Hospital Admissions, Victoria, July 1992 to June 1998

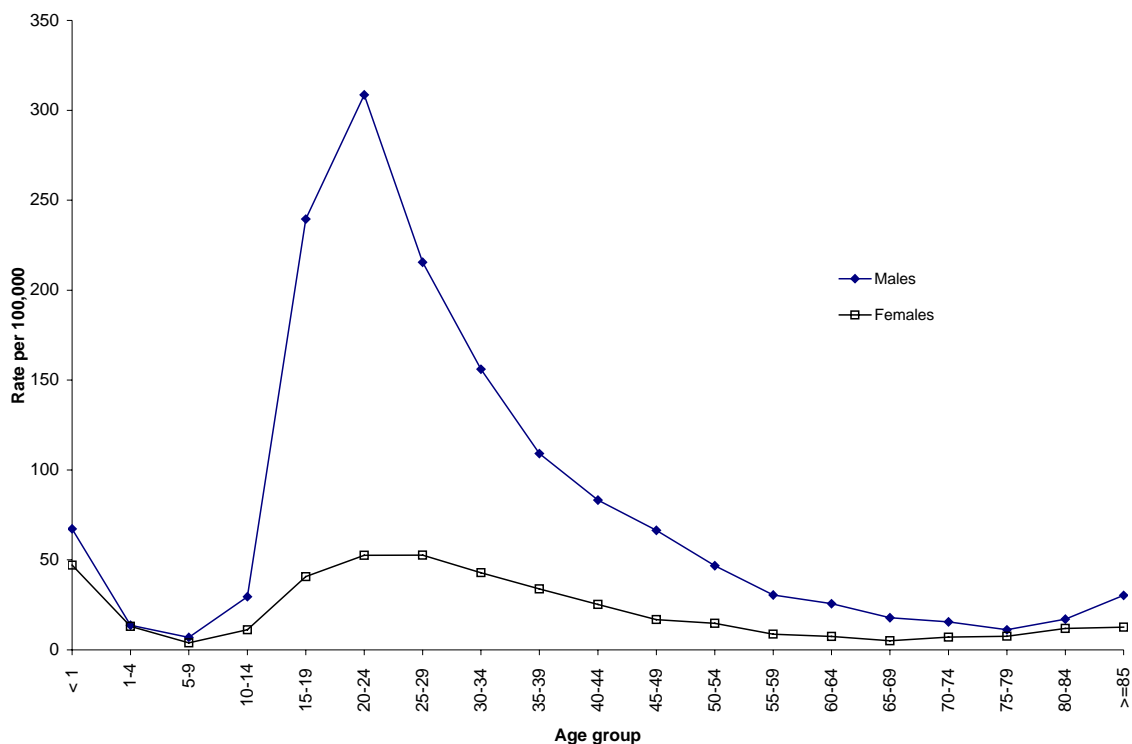
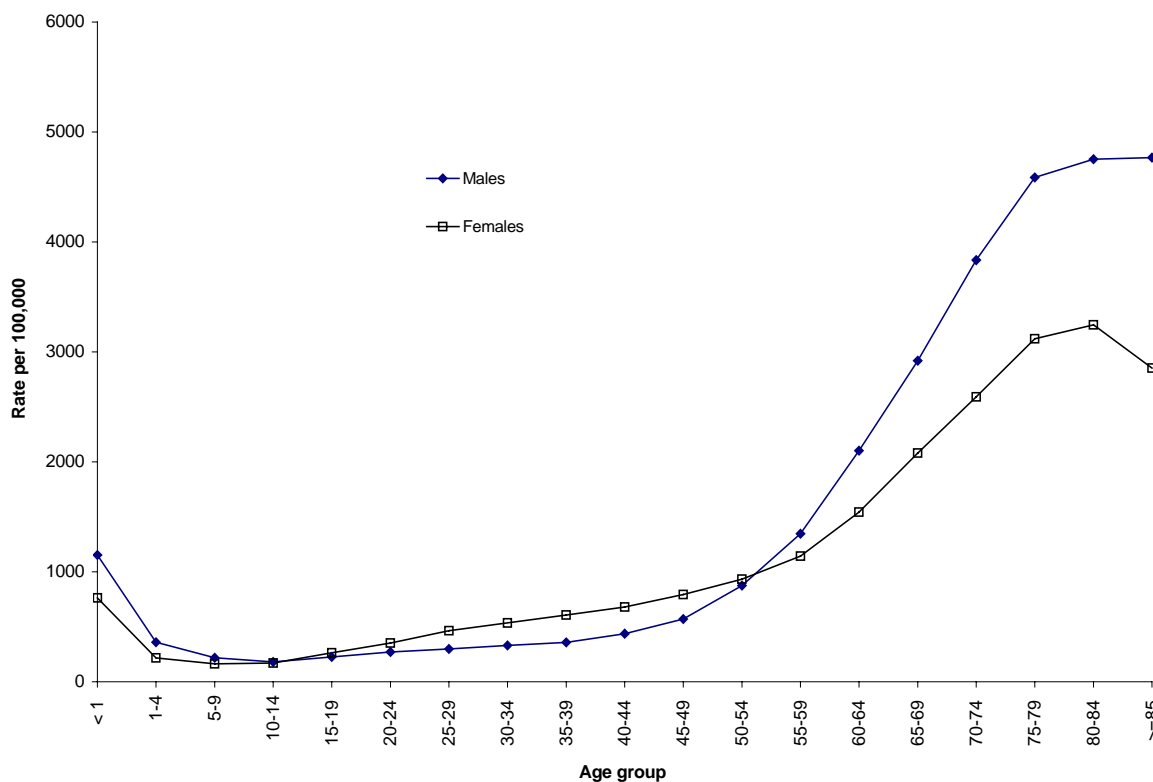


Figure 22: Medical injuries (total), average annual rates by age group and sex
Public Hospital Admissions, Victoria, July 1992 to June 1998



4. RESULTS: JULY 1987 TO JUNE 1998, 11-YEAR TRENDS FOR INJURY RATES

Trend analysis was performed for a selection of rates for various injury causes and age groups over the 11-year period. These are graphically represented by Figures 23 to 72 and include the estimated trend curve (exponential function), slope of the curve and its 95% confidence interval and the corresponding p-value.

Casemix funding was introduced in July 1993 and it is estimated that its effect extended over a 3-year period beginning in the year before its official introduction, as hospitals were already preparing for it, and then dissipated in subsequent years. Generally speaking, injury rate levels, however, remain higher than pre-Casemix levels. It is beyond the scope of this overview to adjust rates for Casemix as its effect varies greatly among different injuries and age groups. Instead, the period of most likely effect has been highlighted in each figure. Therefore, significant changes in trends for particular injury causes may be the result of a combination of real changes in the injury rate and the influence of Casemix. The relative magnitude of each of these effects is unknown. The following section should therefore be read and interpreted against this background of possible influences.

Trends were determined using a log-linear regression model of rate data assuming a Poisson distribution of injuries. The statistics relating to the trend curves, slope and intercept, 95% confidence intervals around the slope, estimated annual percentage change and the p-value, were calculated using the regression model in SAS⁸. A negative slope indicates a decreasing trend whereas an increasing trend has a positive slope. A trend was considered to be statistically significant if the p-value of the slope of the regression model was less than 0.05.

A summary of the results from plotting Figures 23 to 72, together with the slope curve, 95% confidence interval, estimated annual percentage change and p-value are given in Table 8.

4.1 ALL AGES

The all age injury rate was increasing at a significant level at around 6.1% p.a. (Figure 23). Transport injuries, however, were declining at -1.6% p.a., including the transport sub-groups such as pedestrians and bicycle injuries, -3.1% and -0.5% p.a. respectively, (Figures 24, 28 & 29). Excluding transport injuries from the all-age all-cause rate caused the slope of the trend curve to increase by 15% and raise the estimated annual percentage change to 7.0% (Figure 25). The change in the slope coefficient for unintentional injuries when excluding transport injuries was far greater at almost 48% (Figures 26 & 27). Other injury causes such as falls, intentional self-inflicted and assault injuries also displayed significant increasing trends (Figures 30, 32, 33 & 34). The highest estimated annual percentage change was observed for intentional self-inflicted injuries at 8.6%.

4.2 0-4 YEARS

The 0-4 year old all-cause injury rate was increasing at a statistically significant rate with an estimated annual percentage change of 2.9% (Figure 35). This is contrary to the trend reported by Watt¹ in the previous report for the first 6 years of available VIMD data. Falls and poisoning injuries both showed increasing trends at 1.7% and 3.2% p.a. respectively (Figures 36 & 37) and are listed as the first and second highest cause of hospital admission for this age group and therefore have great influence over the slope of the all cause rate. Other injuries such as near drownings (-4.1% p.a.), fire/burn injuries (-6.0% p.a.), scalds (-3.9% p.a.), dog bites (-1.8% p.a.) and motor vehicle traffic injuries (-4.3% p.a.) were decreasing significantly over the 11-year period (Figures 38-42).

4.3 5-14 YEARS

The trend curve for the 5-14 year old all-cause injury rate was increasing over the 11-year period (1.3% p.a.) (Figure 43). The first six years, however, clearly indicate a declining trend up to the year that Casemix funding was introduced. The rate then climbs dramatically over the highlighted “casemix effect” period. The 5-14 year old injury rate is dominated by fall injuries and it is unclear whether this increase represents a ‘real’ change in injury rate or an effect solely due to Casemix or a combination of both. The 5-14 year old fall rate (Figure 46) is significantly increasing while pedestrian and bicycle related injuries are declining (Figures 44 & 45). Falls from playground equipment are increasing overall but not significantly.

4.4 15-24 YEARS

Overall, the 15-24 year olds all-cause injury rate was increasing significantly at 2.3% p.a. (Figure 48). Decreasing trends were observed for motor vehicle traffic injuries and motorcycle related injuries (-4.3% p.a.) (Figures 49 & 50). Both intentional self-inflicted and inflicted by other (assault) injury rates displayed marked increases over the 11-year period with estimated annual percentage changes of 7.2% and 3.5% respectively (Figures 52 & 53).

4.5 25-64 YEARS

In the middle years age group, the all-cause injury rate was on the rise at a significant level, 6.4% p.a. (Figure 54). The trend for motor vehicle traffic injuries appears relatively flat (Figure 55) while cutting/piercing injuries rose significantly, 3.7% p.a. (Figure 56). Marked increases were observed for both intentional self-inflicted (10.3% p.a.) and inflicted by other (assault) injury rates (4.1% p.a.) (Figures 59 & 60).

4.6 OVER 65 YEARS

The injury rate for persons over 65 years was increasing significantly over the 11-year period, 8.7% p.a. (Figure 61). Pedestrian injuries for this age group were dropping by 2.9% per year (Figure 62), while falls and medical injuries were rising steeply, recording estimated annual percentage increases of 4.6% and 13.2% respectively (Figures 63 & 64). Intentional self-inflicted injury rates were climbing steadily at 4.0% each year.

4.7 FALLS AMONG OLDER PERSONS BY 5-YEAR AGE GROUPS (60-64, 65-69, 70-74, 75-79, 80-84 & ≥85 YEARS)

Statistically significant increasing trends for fall rates were observed for all 5-year age groups from age 60 years and above (Figures 67 to 72). The steepest of these being for the 70-74 and 85+ year age groups with estimated annual percentage increases of 9.2% and 5.2% respectively.

Table 8: Trends for rates, selected injury causes and age groups
Public Hospital Admissions, Victoria, July 1987 to June 1998

Age Group	Injury Group	Trend (slope)*	Std. Error (slope)	95% CI (slope)	Annual % change**	P-value***/ Significance	Figure No.
All ages	All injuries	+0.059	0.007	(0.043, 0.076)	6.1	<0.001 (S)	23
All ages	Transport (total)	-0.016	0.010	(-0.038, 0.006)	-1.6	0.097 (NS)	24
All ages	All injuries less transport	+0.068	0.007	(0.053, 0.082)	7.0	<0.001 (S)	25
All ages	All unintentional injuries	+0.021	0.004	(0.012, 0.030)	2.1	<0.001 (S)	26
All ages	All unintentional injuries less transport	+0.031	0.003	(0.024, 0.037)	3.1	<0.001 (S)	27
All ages	Pedestrians (total)	-0.031	0.009	(-0.052, -0.010)	-3.1	0.001 (S)	28
All ages	Bicycle (total)	-0.005	0.015	(-0.040, 0.030)	-0.5	0.749 (NS)	29
All ages	Falls (total)	+0.039	0.003	(0.032, 0.047)	4.0	<0.001 (S)	30
All ages	Animal being ridden	-0.038	0.008	(-0.056, -0.019)	-3.7	<0.001 (S)	31
All ages	Intentional (total)	+0.061	0.006	(0.048, 0.073)	6.3	<0.001 (S)	32
All ages	Intentional – Self inflicted	+0.082	0.007	(0.067, 0.098)	8.6	<0.001 (S)	33
All ages	Intentional – Inflicted by other	+0.030	0.005	(0.020, 0.040)	3.1	<0.001 (S)	34
0-4 years	All injuries	+0.028	0.005	(0.018, 0.039)	2.9	<0.001 (S)	35
0-4 years	Falls (total)	+0.017	0.011	(-0.007, 0.041)	1.7	0.109 (NS)	36
0-4 years	Poisoning (total)	+0.032	0.006	(0.019, 0.045)	3.2	<0.001 (S)	37
0-4 years	Near drowning (total)	-0.042	0.019	(-0.084, 0.001)	-4.1	0.026 (S)	38
0-4 years	Fire/burns	-0.062	0.010	(-0.084, -0.039)	-6.0	<0.001 (S)	39
0-4 years	Scalds	-0.040	0.008	(-0.057, -0.022)	-3.9	<0.001 (S)	40
0-4 years	Dog bite	-0.018	0.008	(-0.035, -0.001)	-1.8	0.019 (S)	41
0-4 years	Motor vehicle traffic (total)	-0.044	0.016	(-0.081, -0.007)	-4.3	0.007 (S)	42
5-14 years	All injuries	+0.013	0.004	(0.003, 0.023)	1.3	0.003 (S)	43
5-14 years	Pedestrian (total)	-0.058	0.010	(-0.081, -0.035)	-5.7	<0.001 (S)	44
5-14 years	Bicycle (total)	-0.013	0.015	(-0.046, 0.021)	-1.2	0.403 (NS)	45
5-14 years	Falls (total)	+0.010	0.003	(0.004, 0.016)	1.0	<0.001 (S)	46
5-14 years	Playground equipment (falls)	+0.012	0.007	(-0.004, 0.028)	1.2	0.080 (NS)	47
15-24 years	All injuries	+0.023	0.005	(0.011, 0.035)	2.3	<0.001 (S)	48
15-24 years	Motor vehicle traffic (total)	-0.029	0.009	(-0.049, -0.009)	-2.8	0.001 (S)	49
15-24 years	Motorcycle (total)	-0.044	0.007	(-0.059, -0.028)	-4.3	<0.001 (S)	50
15-24 years	Sports falls & collisions	+0.011	0.008	(-0.007, 0.028)	1.1	0.171 (NS)	51
15-24 years	Intentional – Self inflicted	+0.070	0.009	(0.050, 0.089)	7.2	<0.001 (S)	52
15-24 years	Intentional – Inflicted by other	+0.035	0.006	(0.021, 0.048)	3.5	<0.001 (S)	53

Age Group	Injury Group	Trend (slope)*	Std. Error (slope)	95% CI (slope)	Annual % change**	P-value***/ Significance	Figure No.
25-64 years	All injuries	+0.062	0.007	(0.047, 0.077)	6.4	<0.001 (S)	54
25-64 years	Motor vehicle traffic (total)	-0.006	0.012	(-0.033, 0.021)	-0.6	0.612 (NS)	55
25-64 years	Cutting & piercing (total)	+0.036	0.004	(0.027, 0.045)	3.7	<0.001 (S)	56
25-64 years	Sports falls & collisions	+0.005	0.007	(-0.010, 0.019)	0.5	0.465 (NS)	57
25-64 years	Machinery (total)	-0.003	0.007	(-0.018, 0.012)	-0.3	0.622 (NS)	58
25-64 years	Intentional – Self inflicted	+0.098	0.007	(0.082, 0.114)	10.3	<0.001 (S)	59
25-64 years	Intentional – Inflicted by other	+0.040	0.004	(0.030, 0.050)	4.1	<0.001 (S)	60
65+ years	All injuries	+0.084	0.009	(0.064, 0.104)	8.7	<0.001 (S)	61
65+ years	Pedestrian (total)	-0.030	0.013	(-0.058, -0.001)	-2.9	0.018 (S)	62
65+ years	Falls (total)	+0.045	0.004	(0.035, 0.055)	4.6	<0.001 (S)	63
65+ years	Medical injuries (total)	+0.124	0.014	(0.092, 0.156)	13.2	<0.001 (S)	64
65+ years	Fire/burns/scalds (total)	+0.010	0.009	(-0.009, 0.030)	1.0	0.225 (NS)	65
65+ years	Intentional – Self inflicted	+0.039	0.010	(0.018, 0.061)	4.0	<0.001 (S)	66
60-64 years	Falls (total)	+0.033	0.005	(0.023, 0.044)	3.4	<0.001 (S)	67
65-69 years	Falls (total)	+0.034	0.005	(0.022, 0.046)	3.5	<0.001 (S)	68
70-74 years	Falls (total)	+0.088	0.010	(0.065, 0.112)	9.2	<0.001 (S)	69
75-79 years	Falls (total)	+0.033	0.005	(0.023, 0.044)	3.4	<0.001 (S)	70
80-84 years	Falls (total)	+0.029	0.004	(0.019, 0.039)	2.9	<0.001 (S)	71
85+ years	Falls (total)	+0.050	0.010	(0.028, 0.073)	5.2	<0.001 (S)	72

* *The Log-linear Poisson Regression model is represented by the formula:*

$$\text{Log}(\text{rate}) = mx + c, \text{ where } m=\text{slope}, c=\text{intercept and } x=\text{independent variable (year)}.$$

An increase is represented by a (+) sign & a decrease by a (-) sign.

** *Estimated annual percentage change calculated using: % change = 100 × [exp(slope)-1].*

*** *Significant (S) / not significant (NS), at the $\alpha = 0.05$ level.*

NOTE : Caution is required when interpreting the above trends as they are all subject to the influence of Casemix by varying, albeit unknown magnitudes.

Figure 23: All injuries, all ages, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

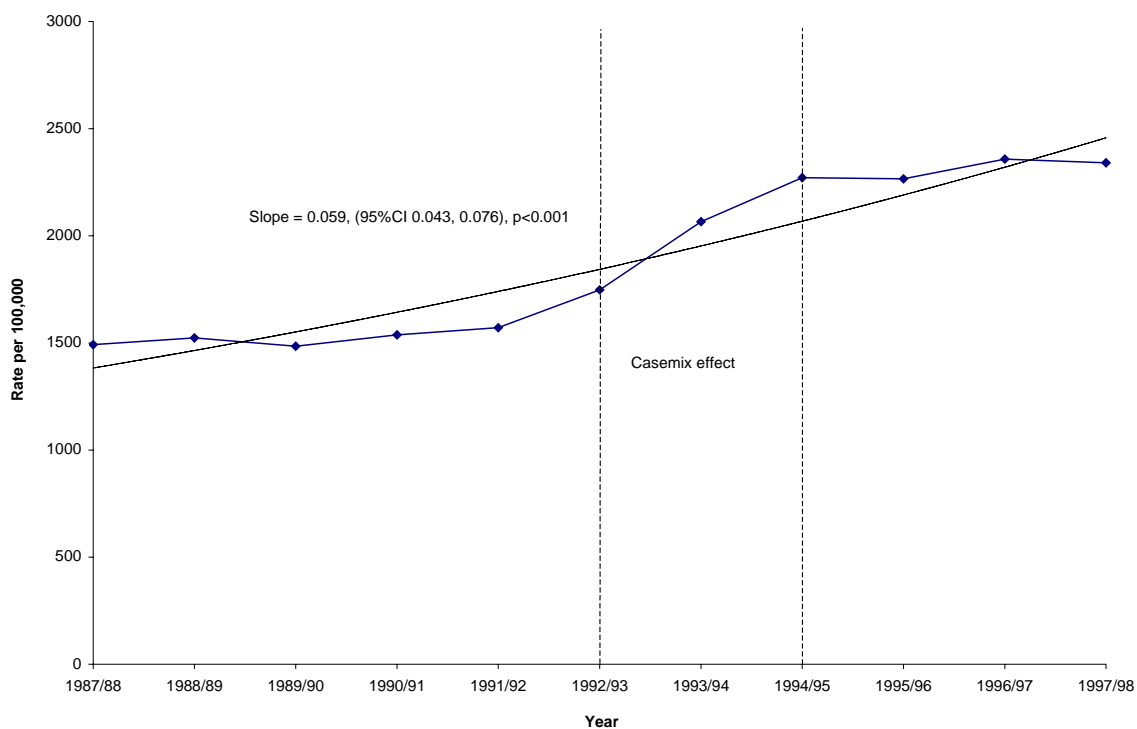


Figure 24: Transport (total), all ages, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

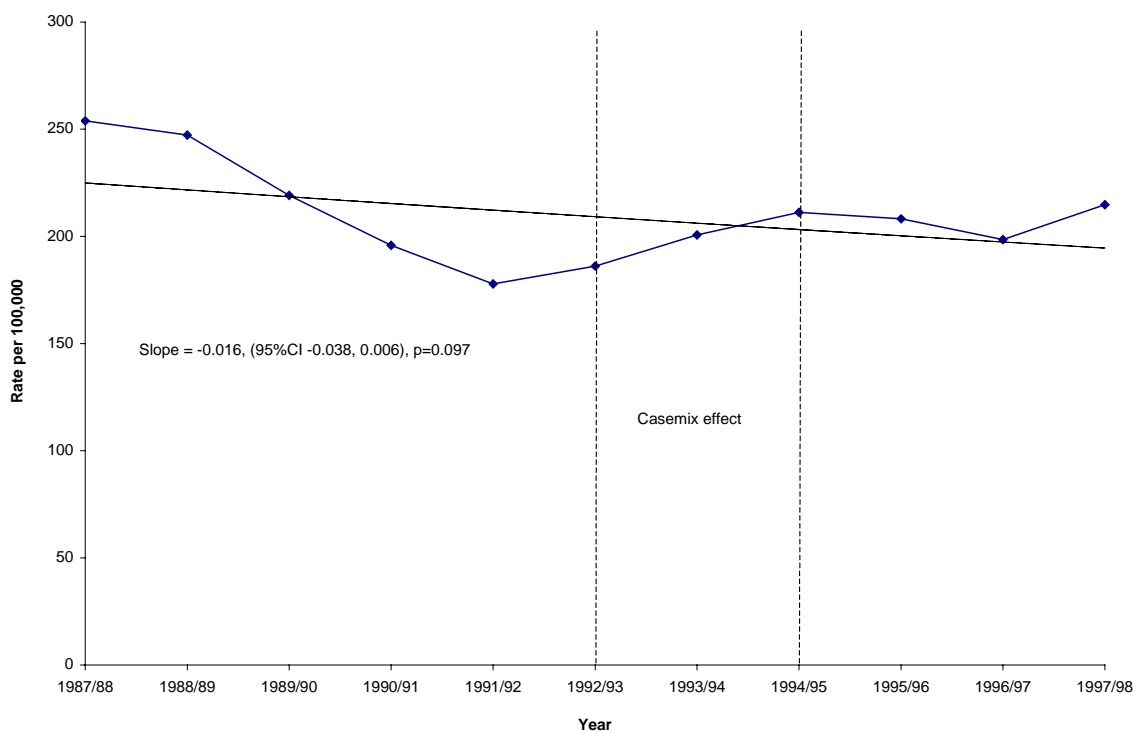


Figure 25: All injuries less transport, all ages, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

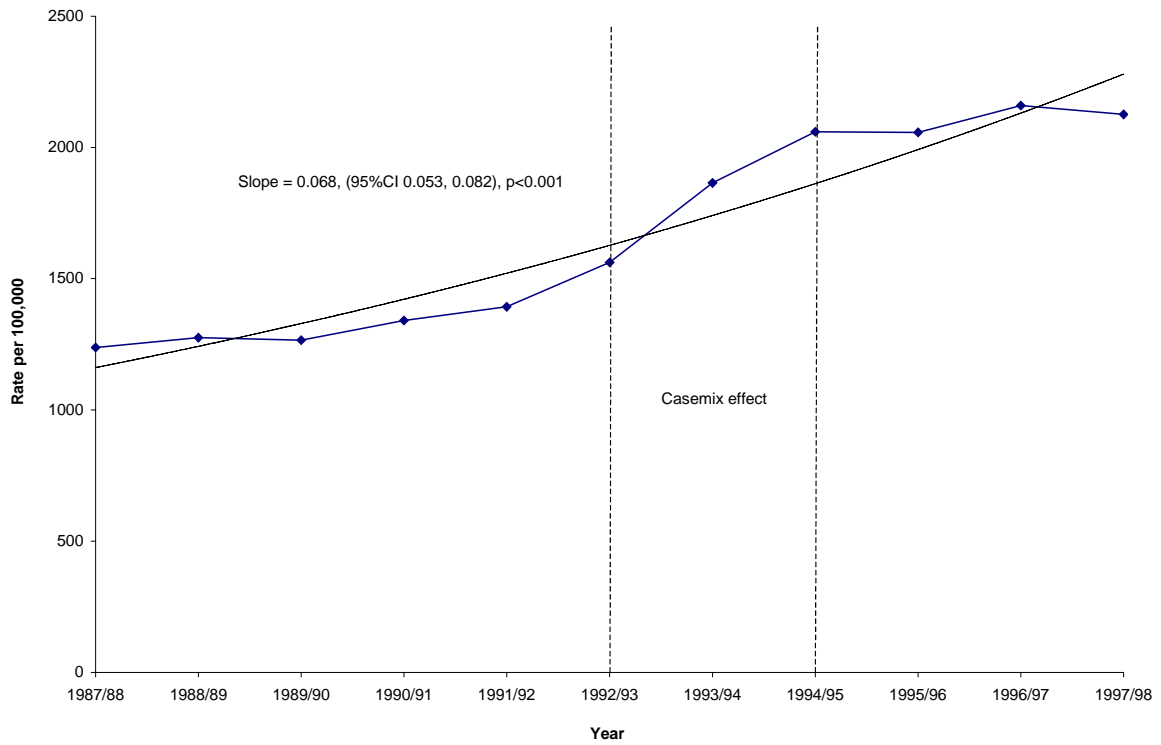


Figure 26: All unintentional injuries, all ages, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

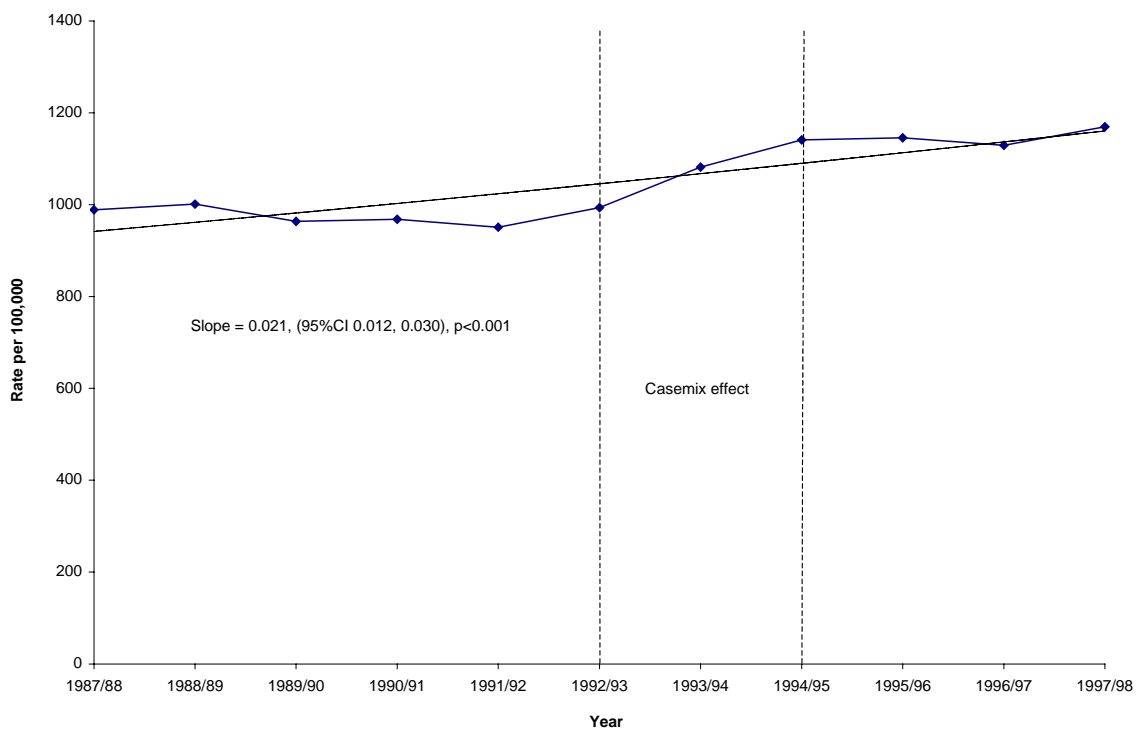


Figure 27: All unintentional injuries less transport, all ages, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

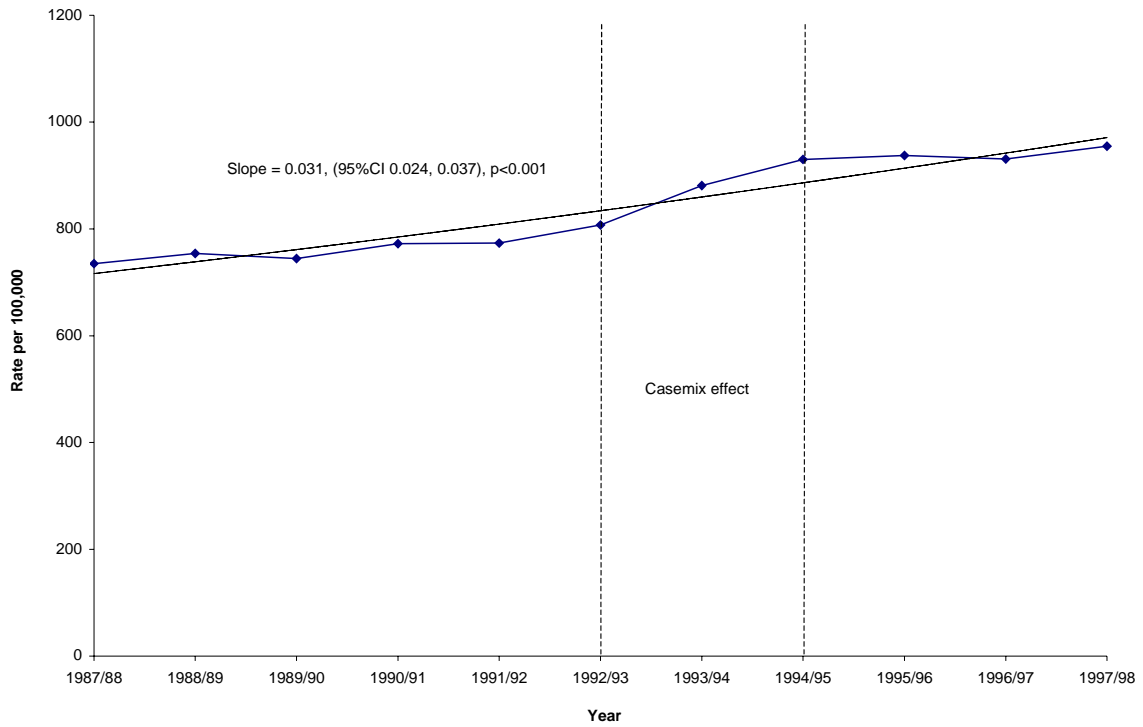


Figure 28: Pedestrian injuries (total), all ages, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

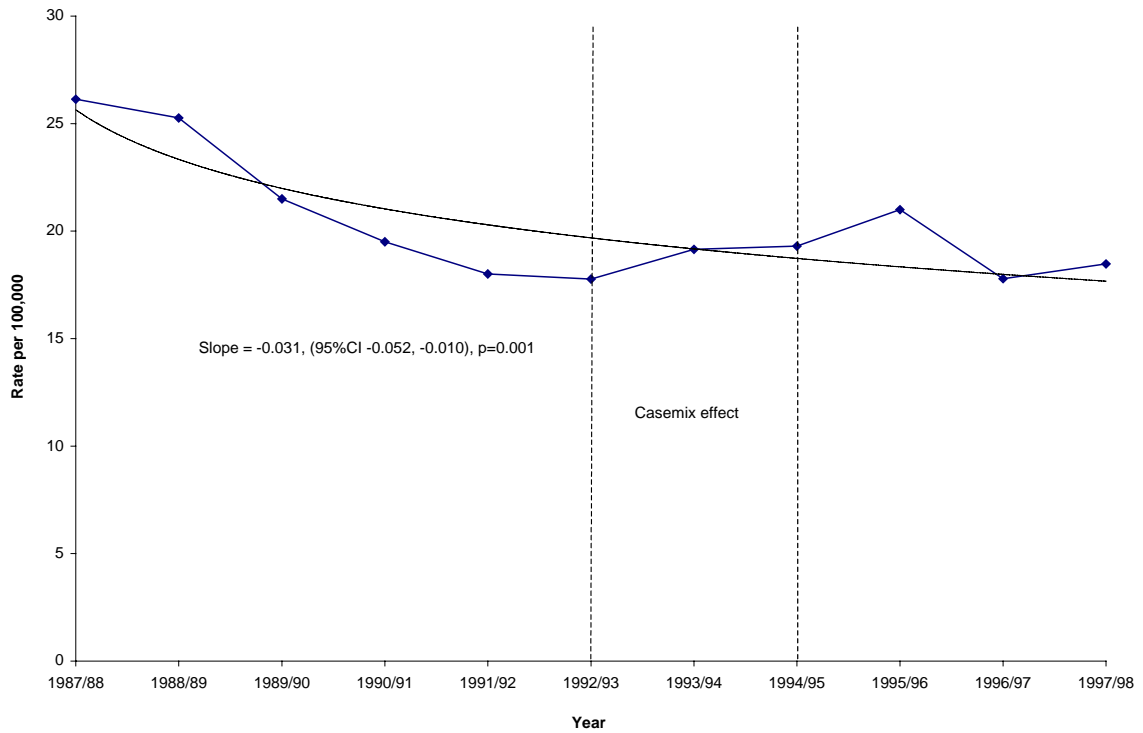


Figure 29: Bicycle injuries (total), all ages, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

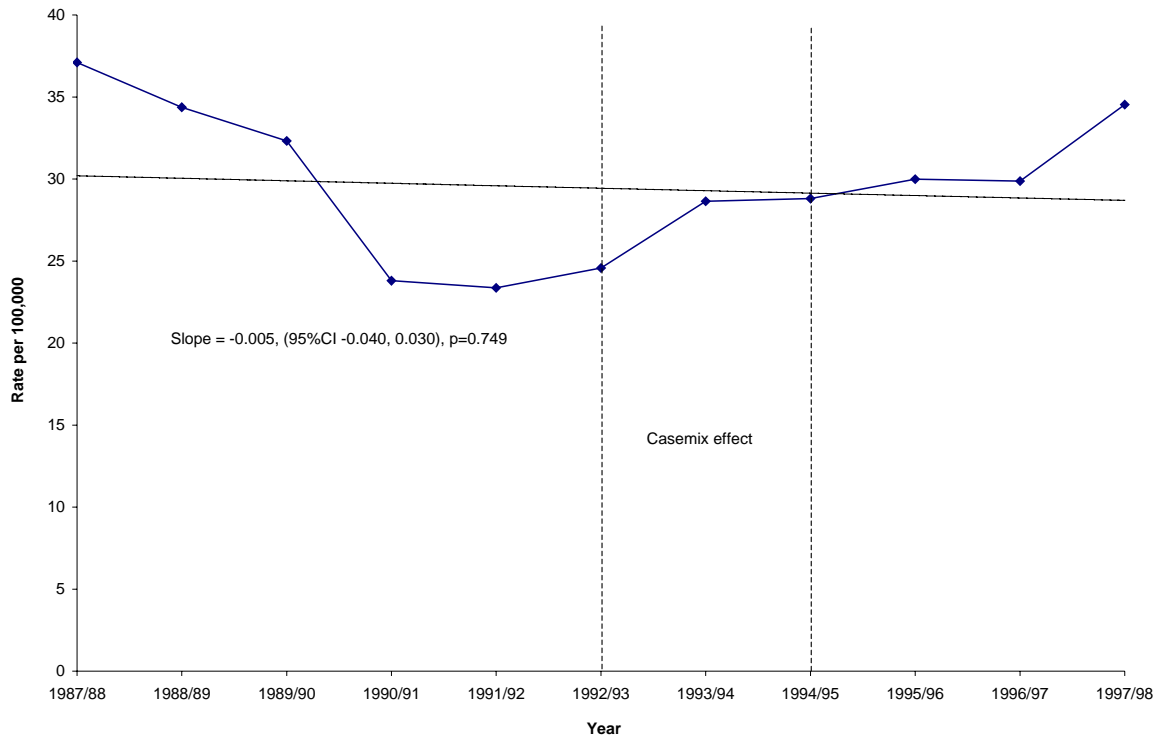


Figure 30: Falls (total), all ages, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

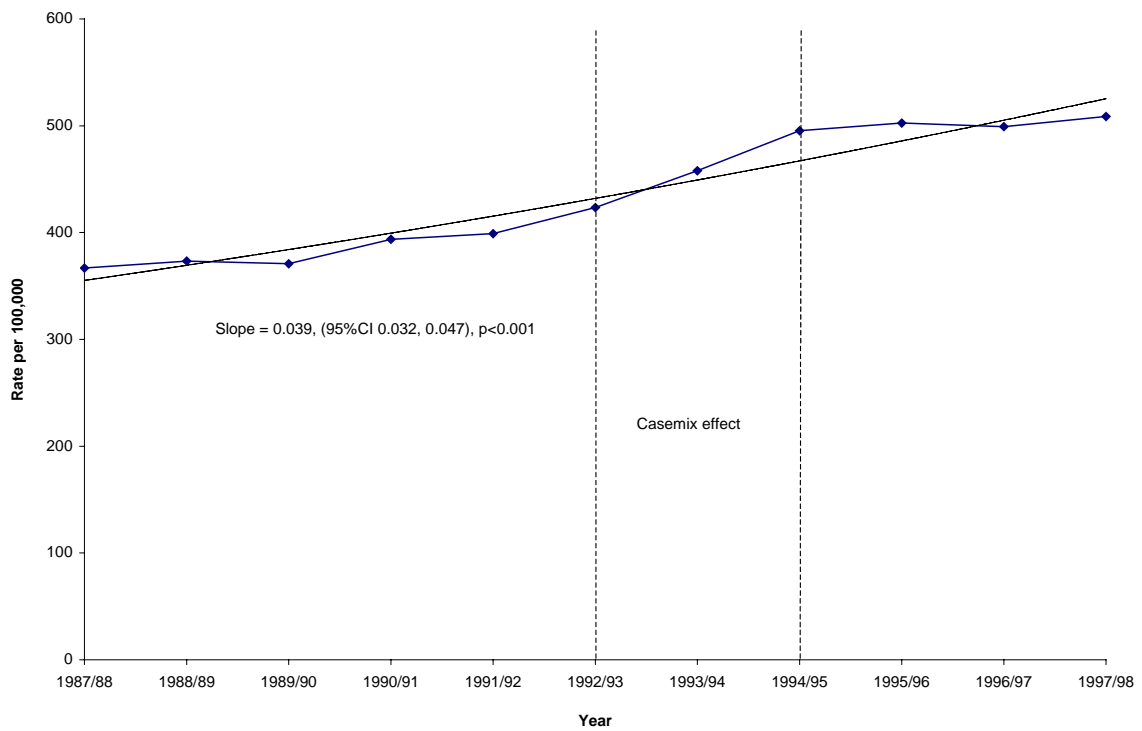


Figure 31: Animal being ridden, all ages, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

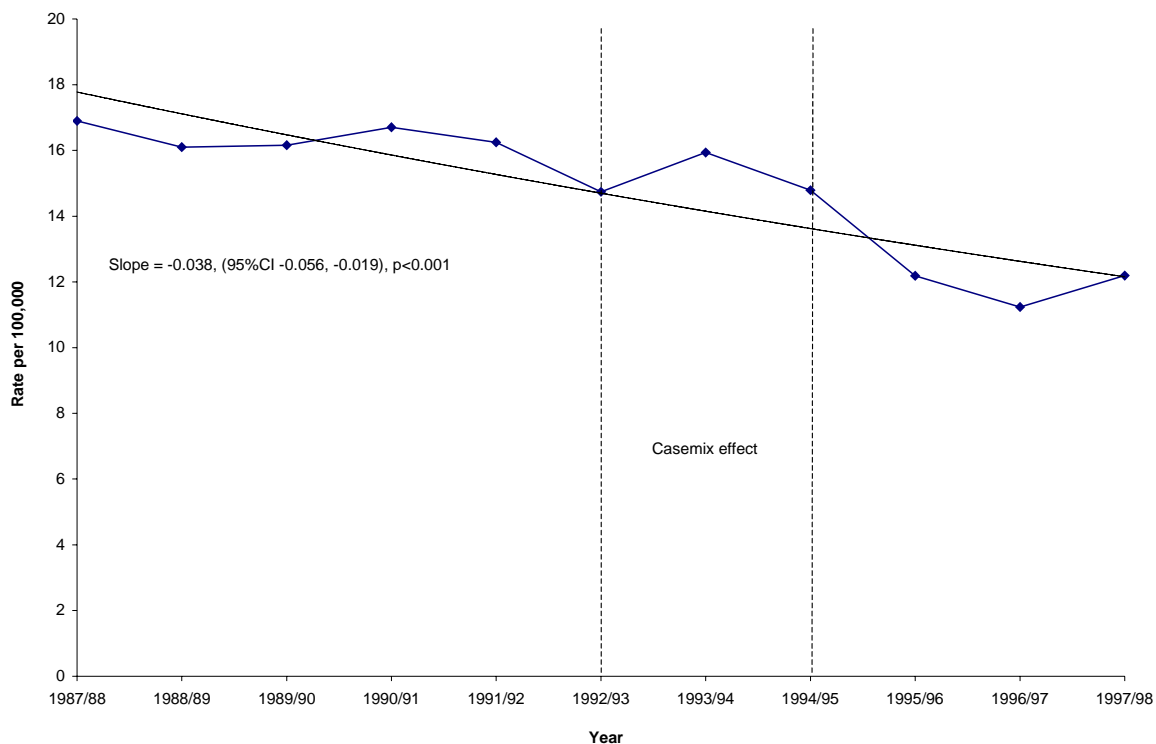


Figure 32: Intentional injuries (total), all ages, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

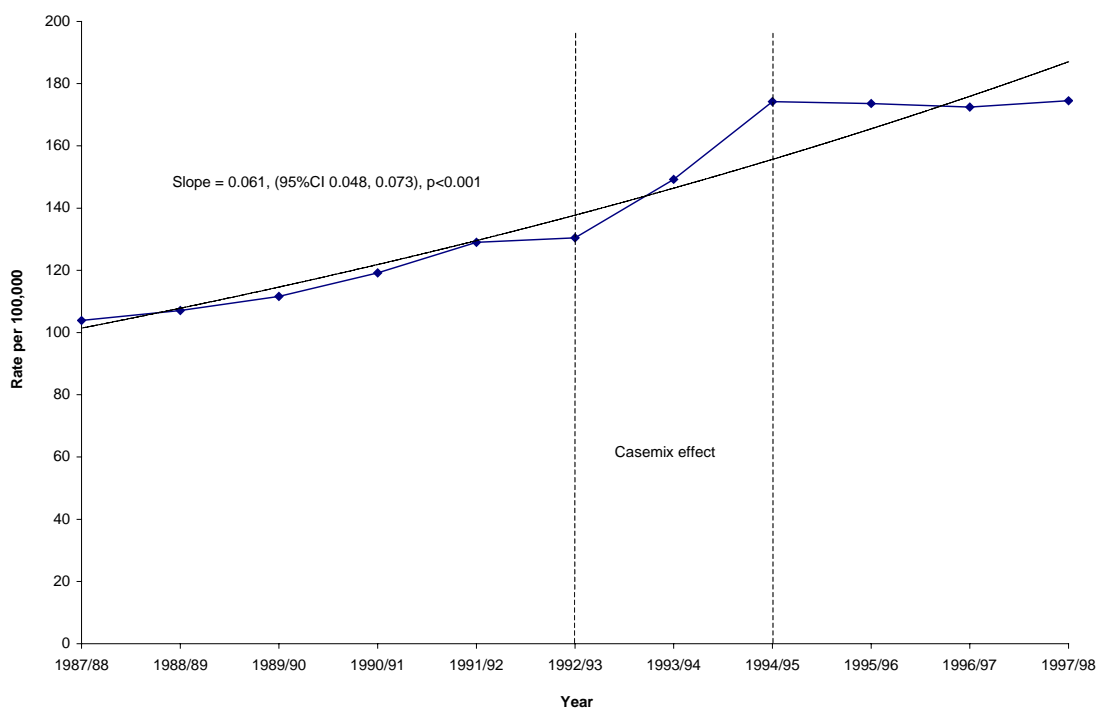


Figure 33: Intentional, Self-inflicted injuries, all ages, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

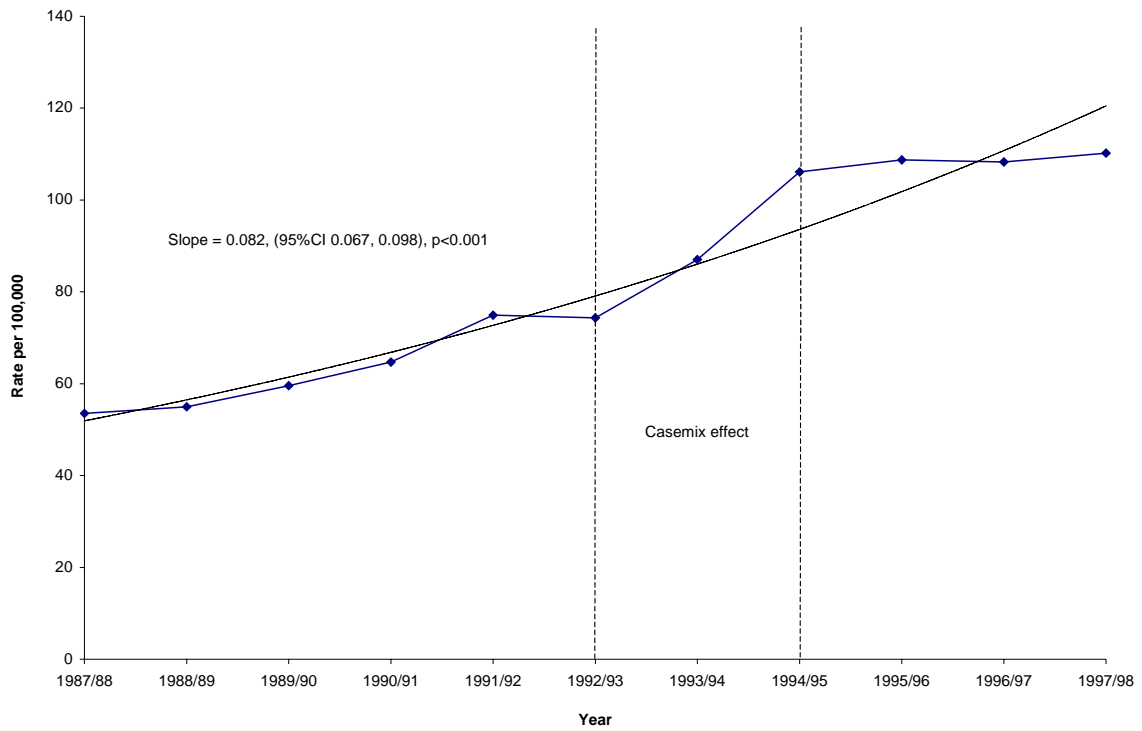


Figure 34: Intentional, inflicted by other (assault injuries), all ages, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

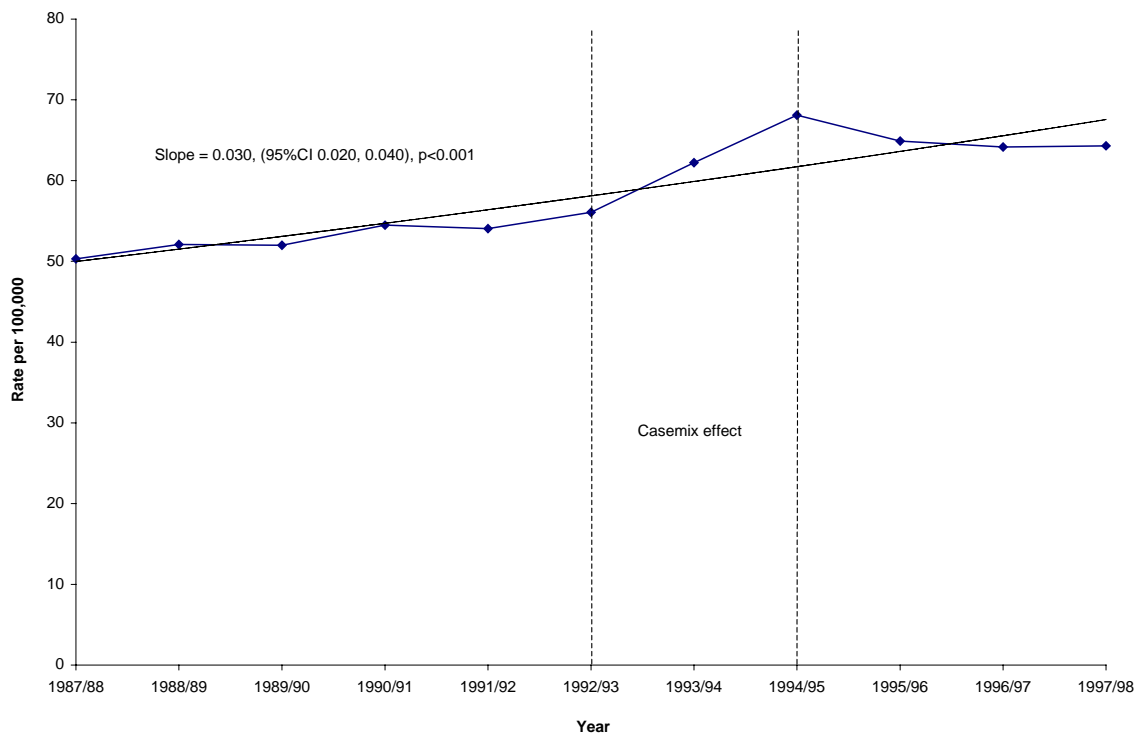


Figure 35: All injuries, 0-4 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

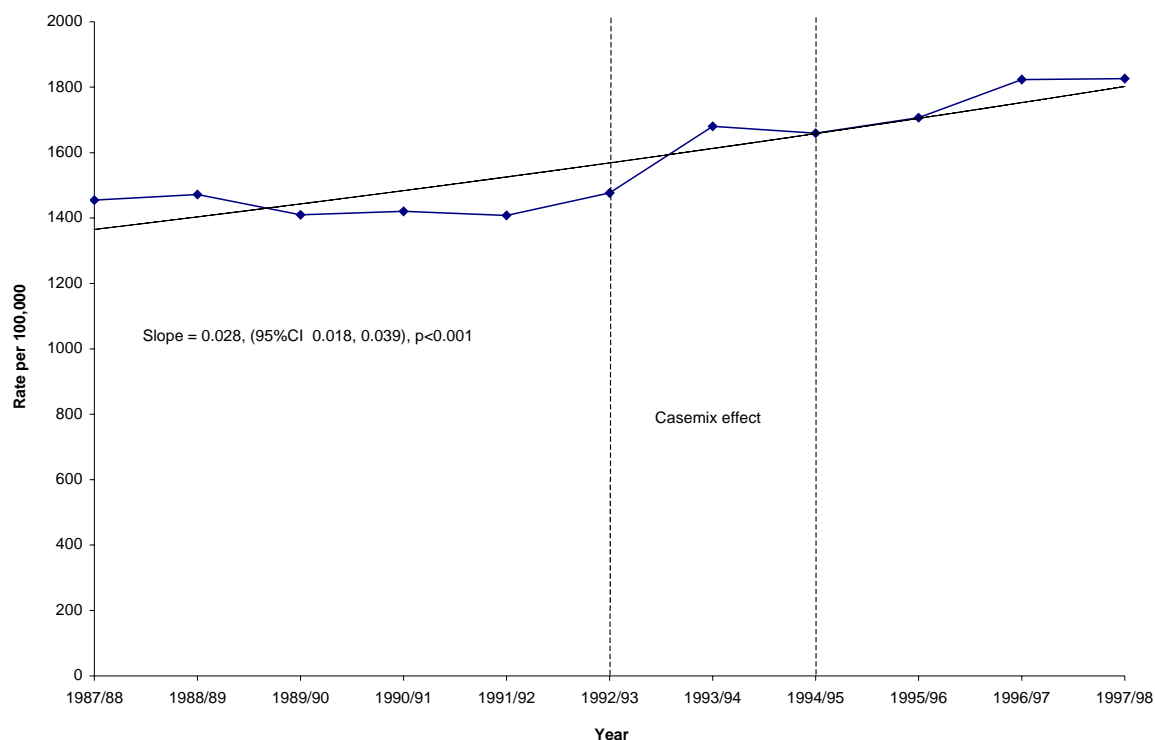


Figure 36: Falls (total), 0-4 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

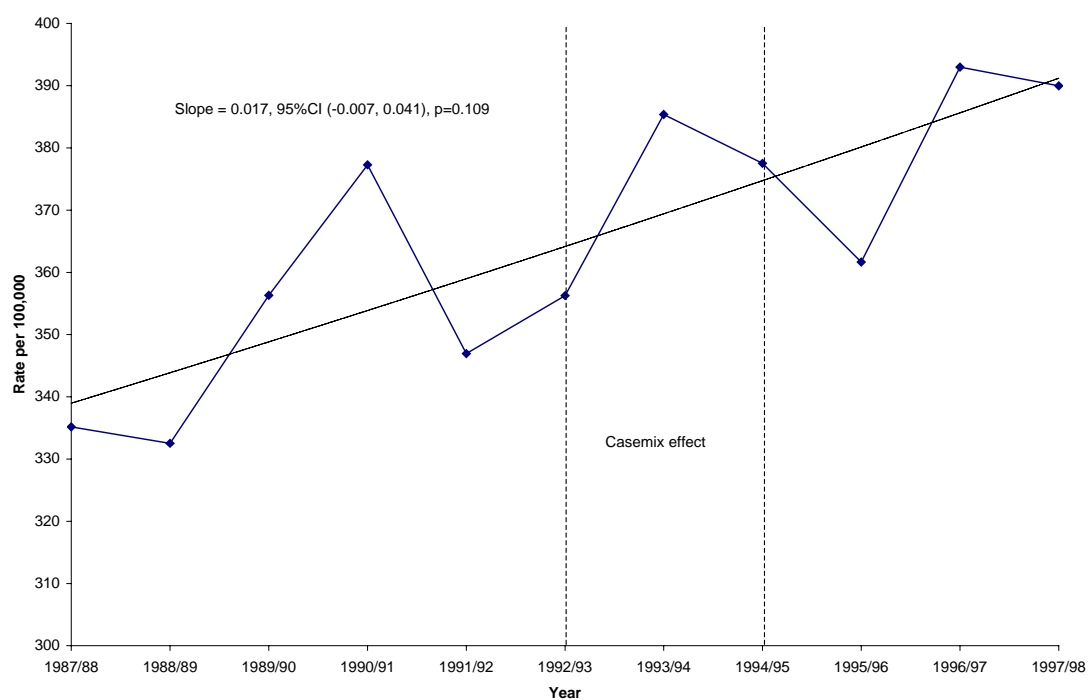


Figure 37: Poisonings (total), 0-4 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

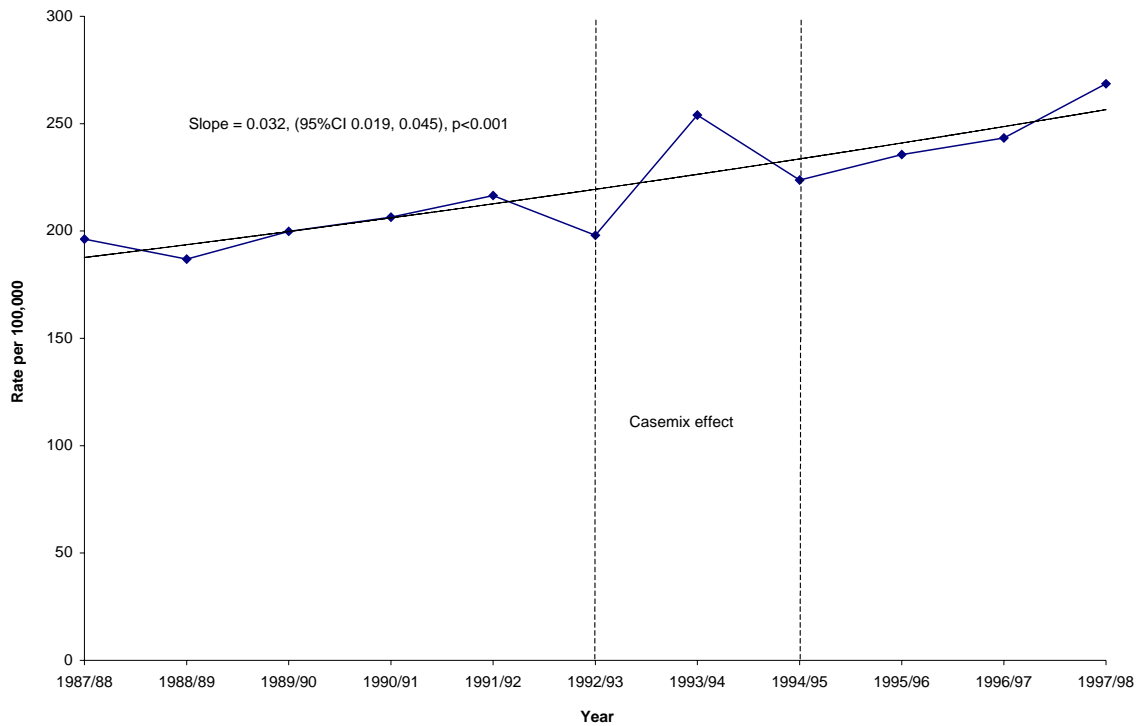


Figure 38: Near drowning injuries, 0-4 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

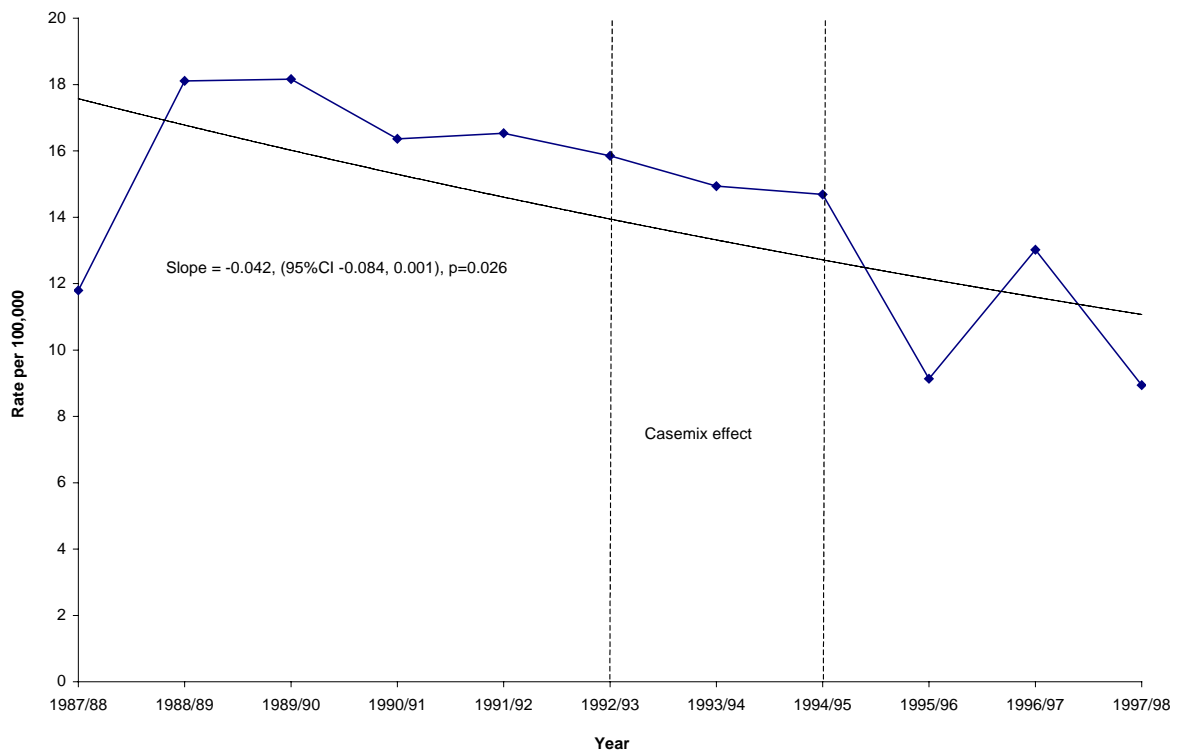


Figure 39: Fire/burn injuries, 0-4 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

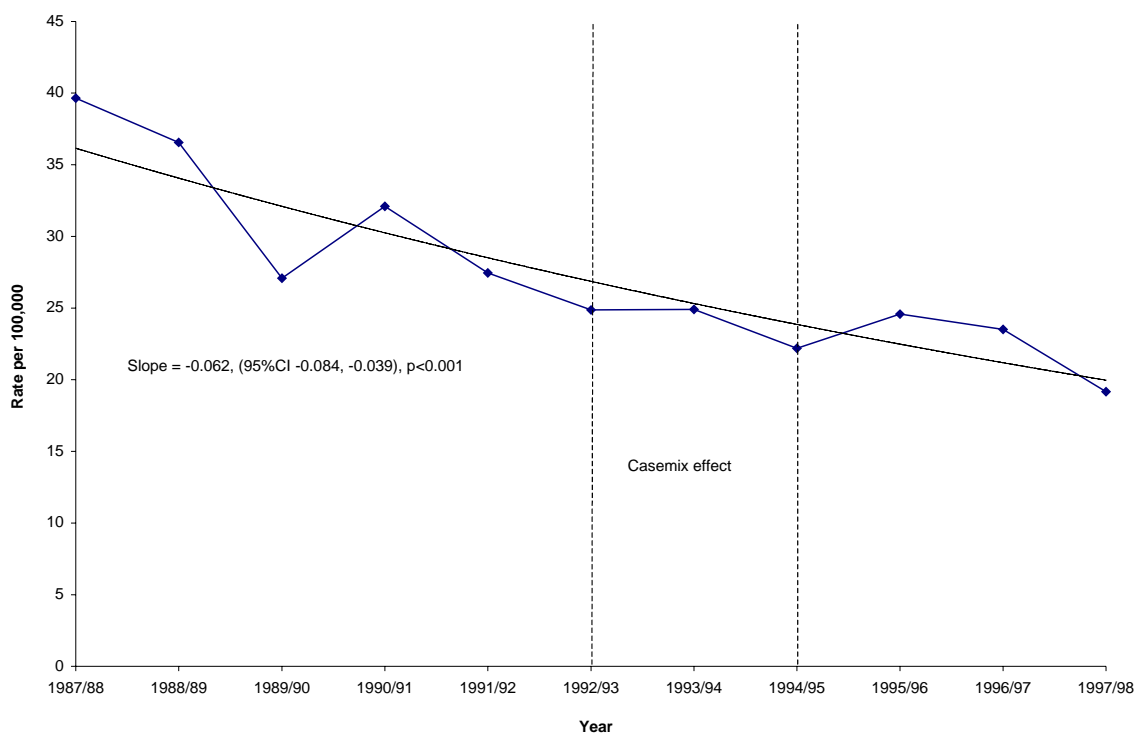


Figure 40: Scalds, 0-4 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

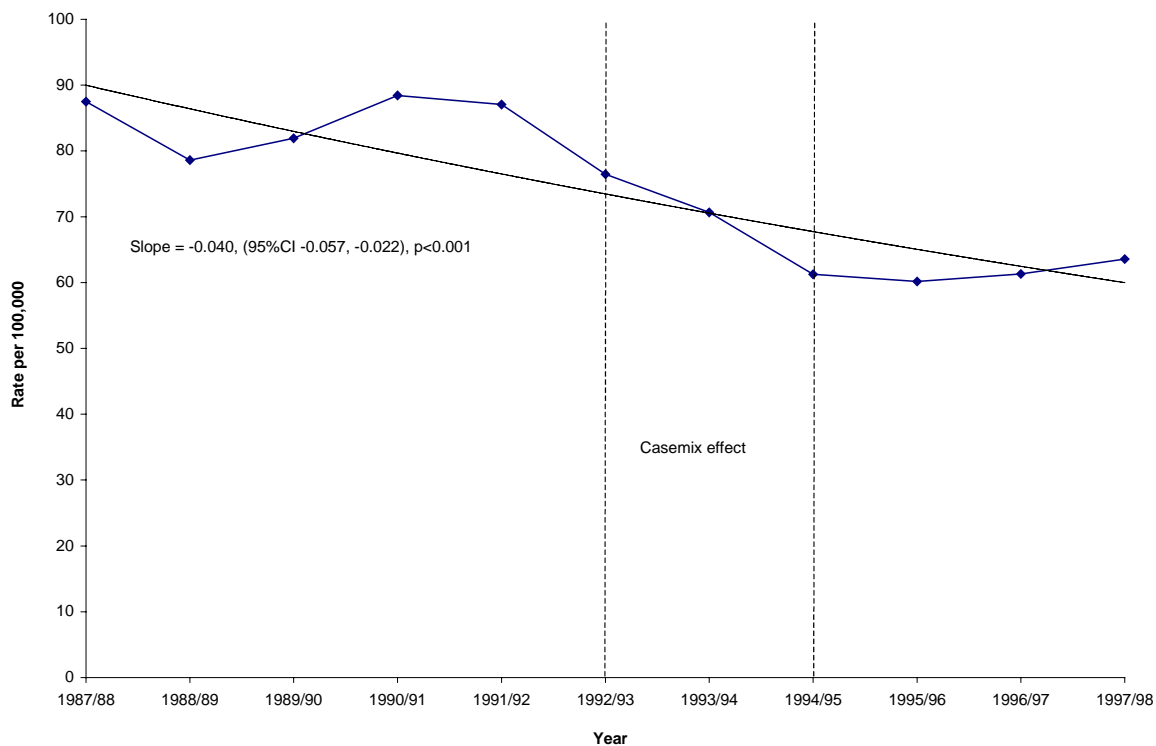


Figure 41: Dog bite injuries, 0-4 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

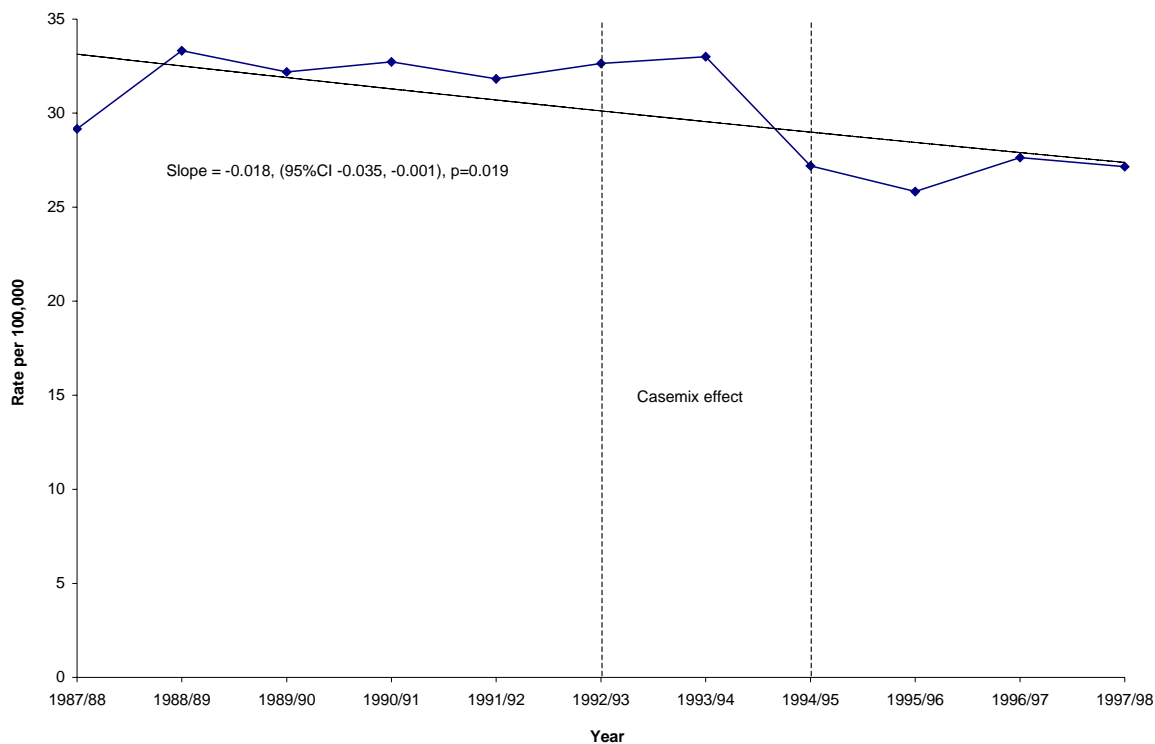


Figure 42: Motor vehicle traffic injuries, 0-4 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

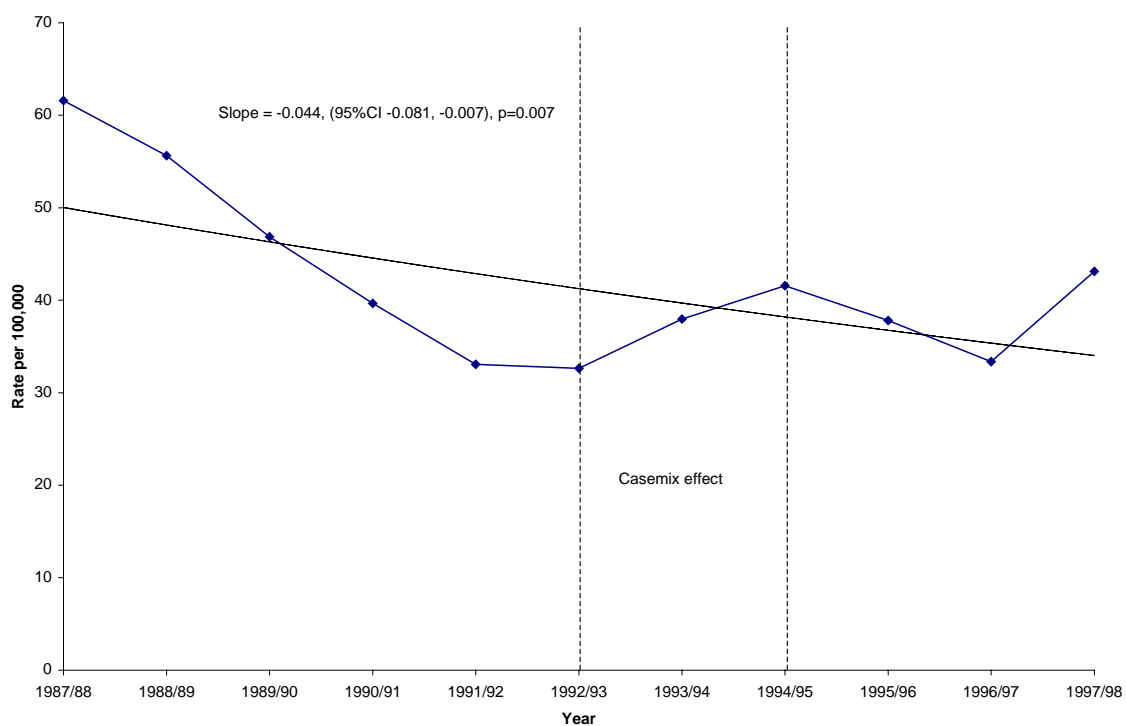


Figure 43: All injuries, 5-14 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

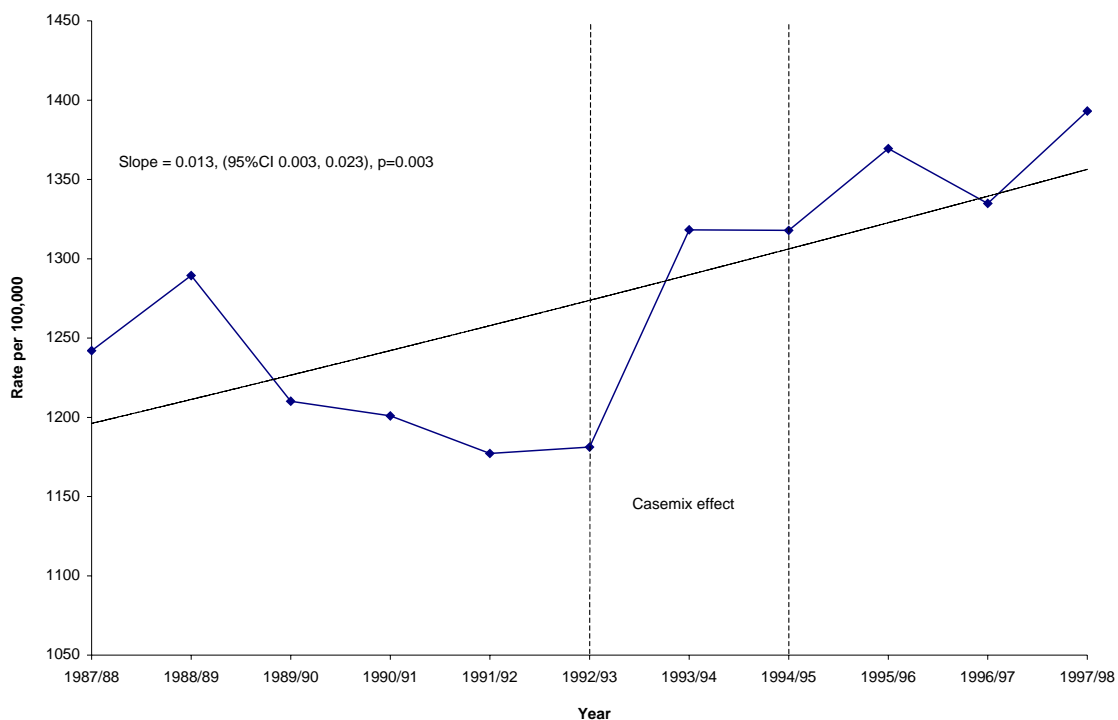


Figure 44: Pedestrian injuries, 5-14 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

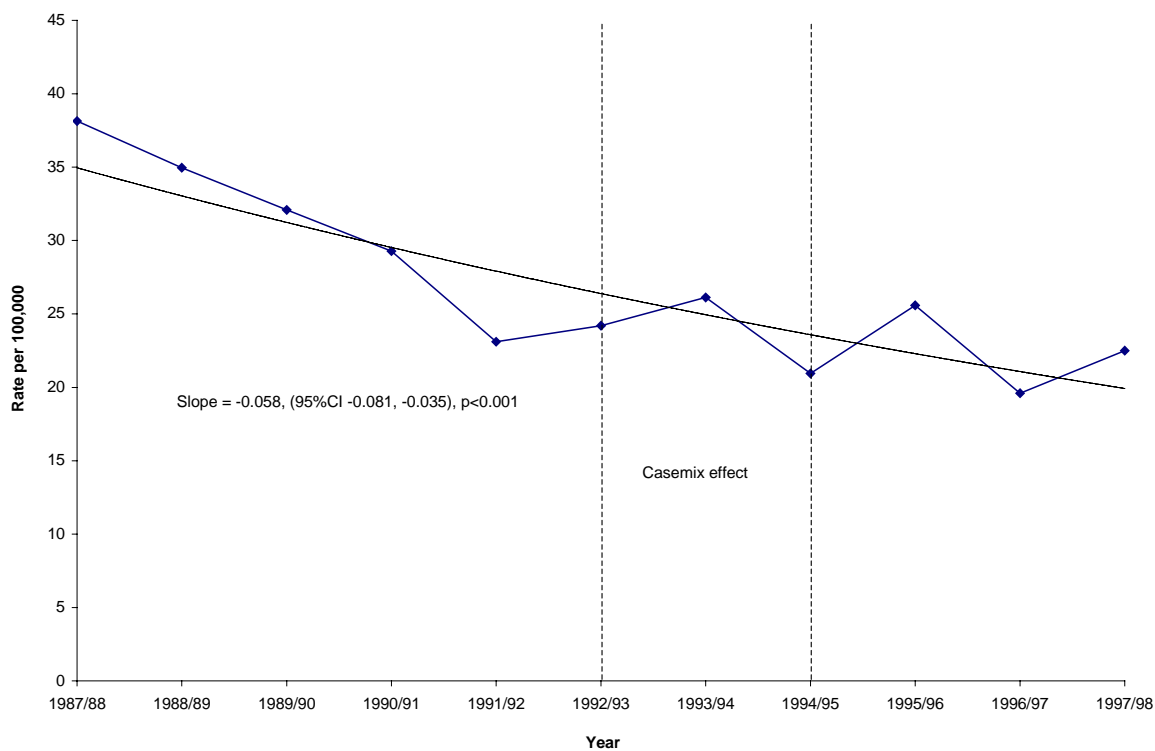


Figure 45: Bicycle injuries, 5-14 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

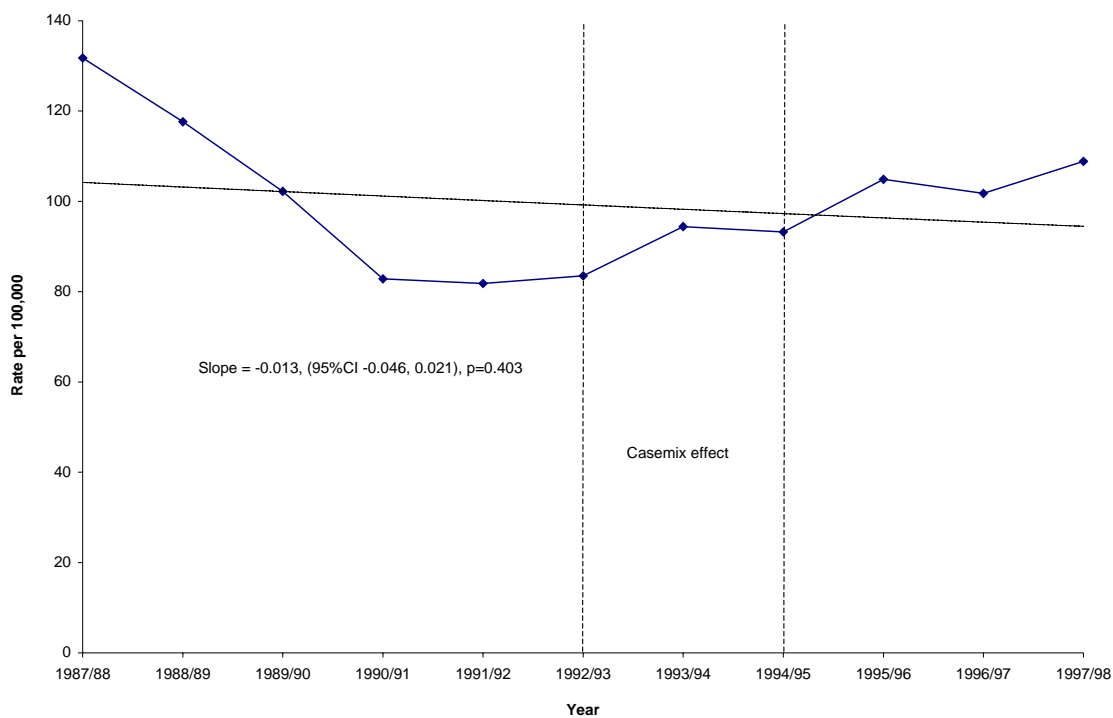


Figure 46: Falls (total), 5-14 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

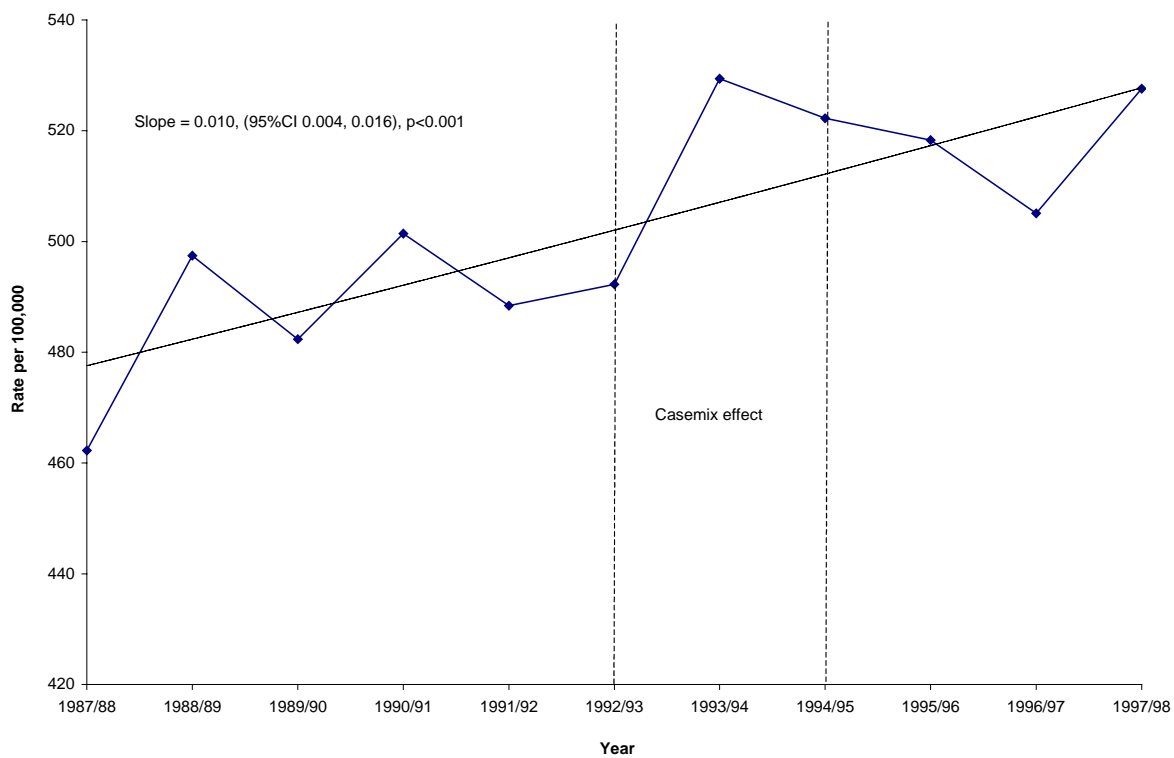


Figure 47: Playground falls, 5-14 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

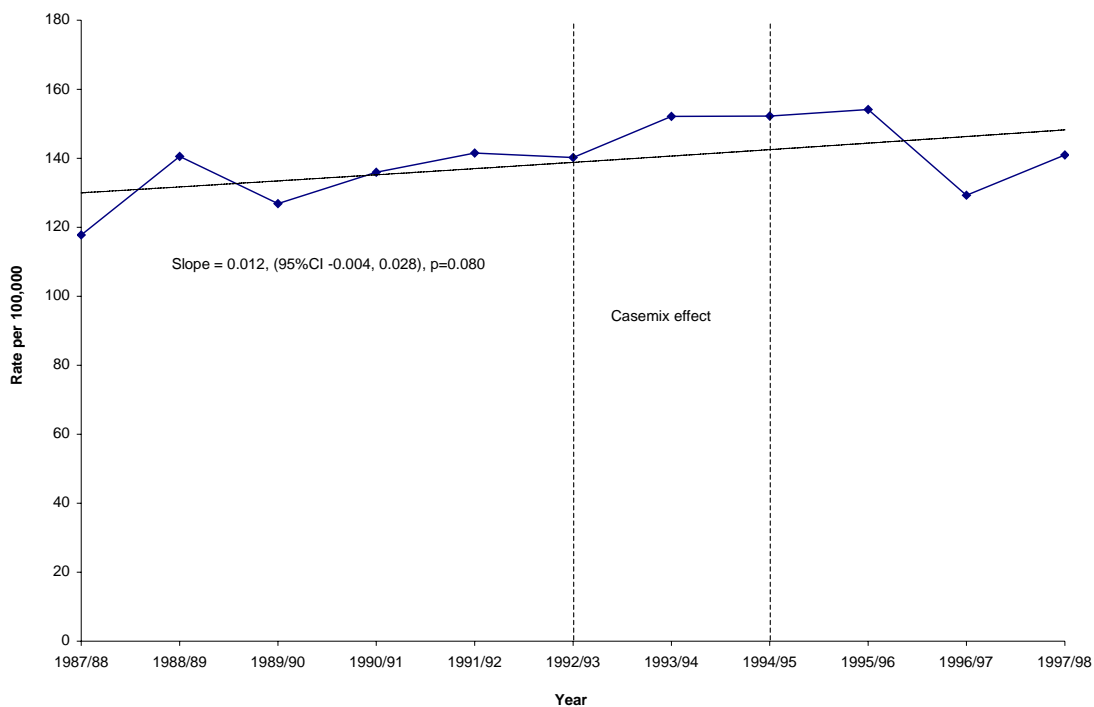


Figure 48: All injuries, 15-24 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

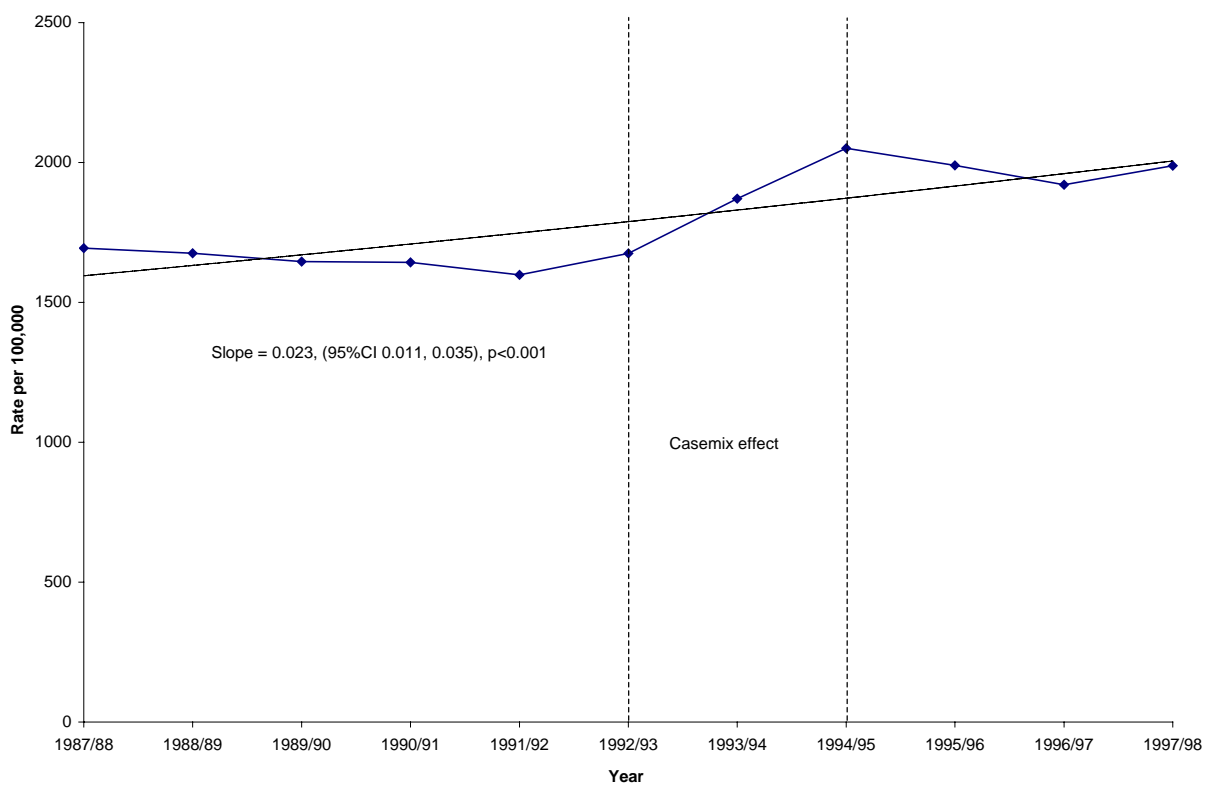


Figure 49: Motor vehicle traffic injuries, 15-24 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

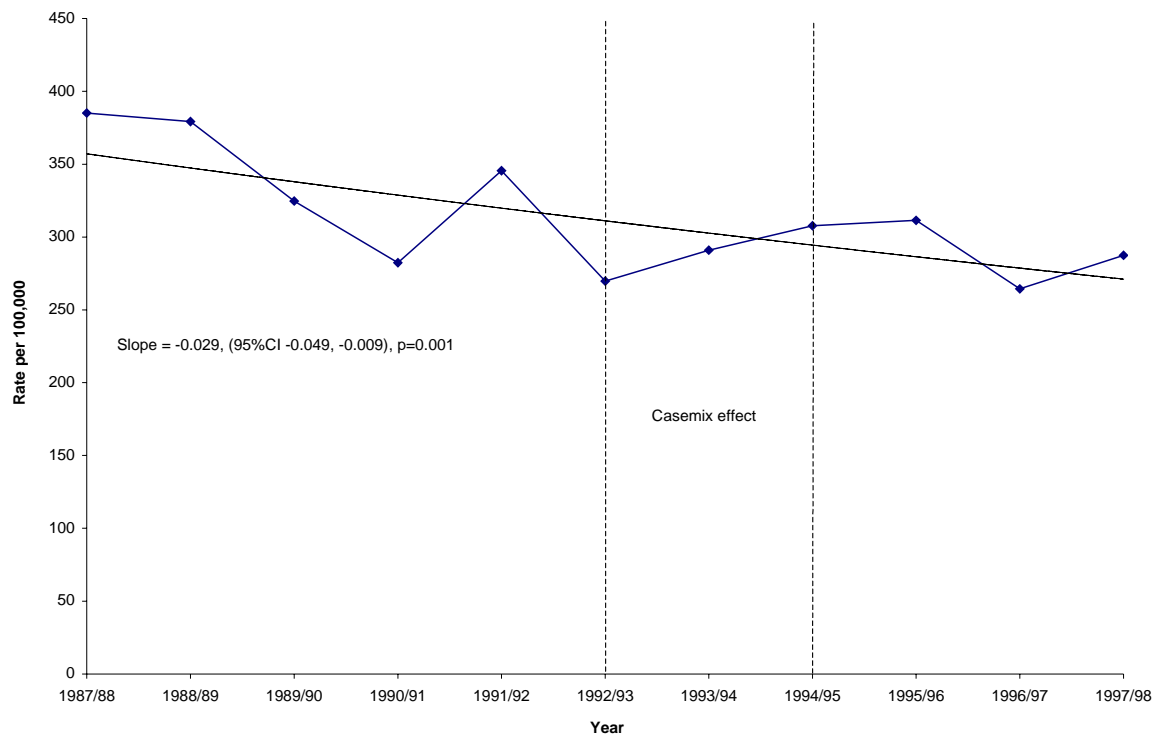


Figure 50: Motorcycle injuries (total), 15-24 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

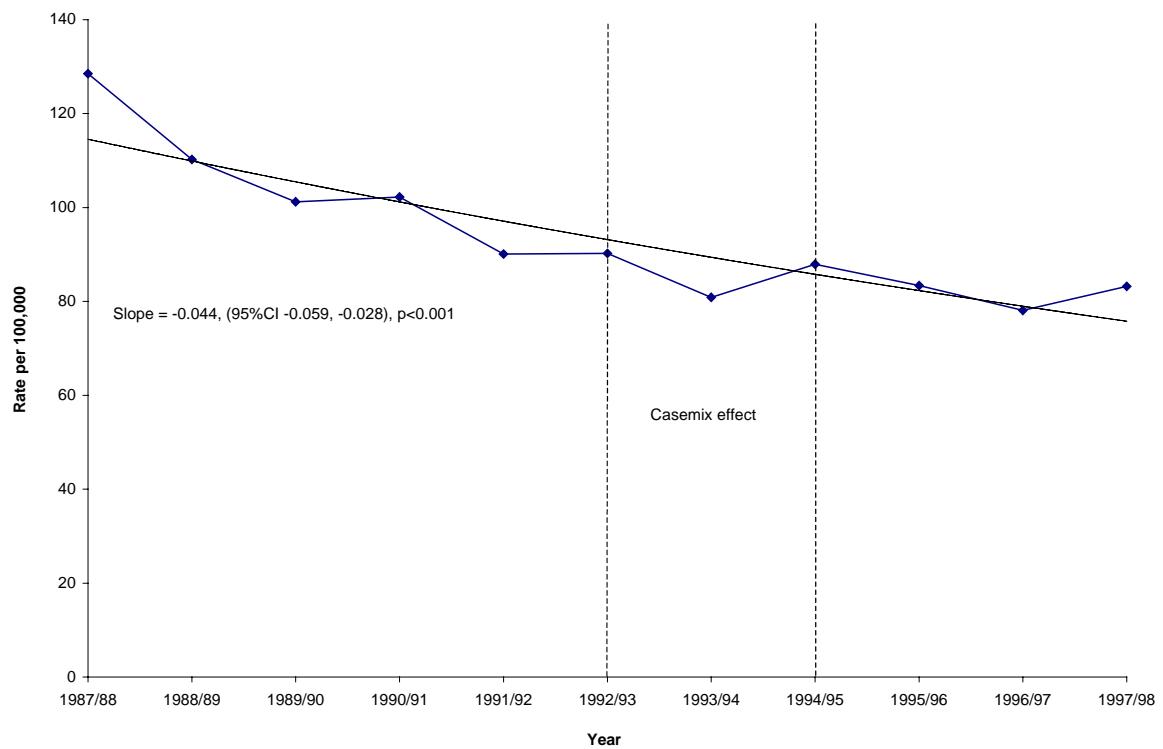


Figure 51: Sports fall and collision injuries, 15-24 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

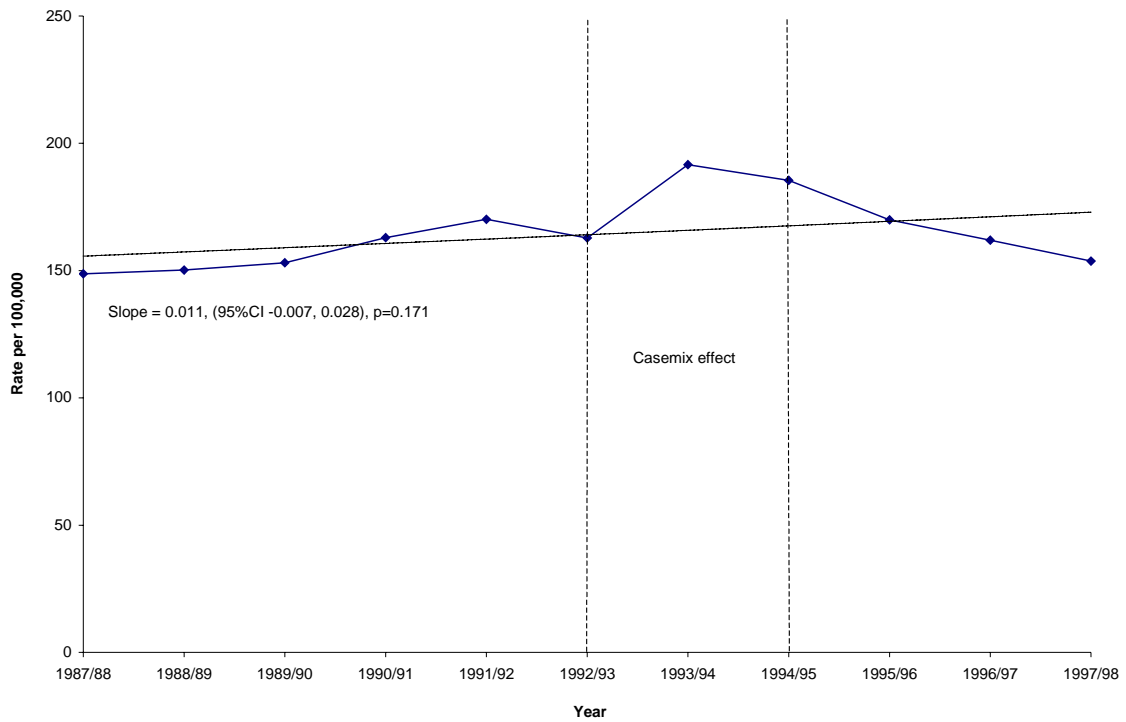


Figure 52: Intentional, Self-inflicted injuries, 15-24 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

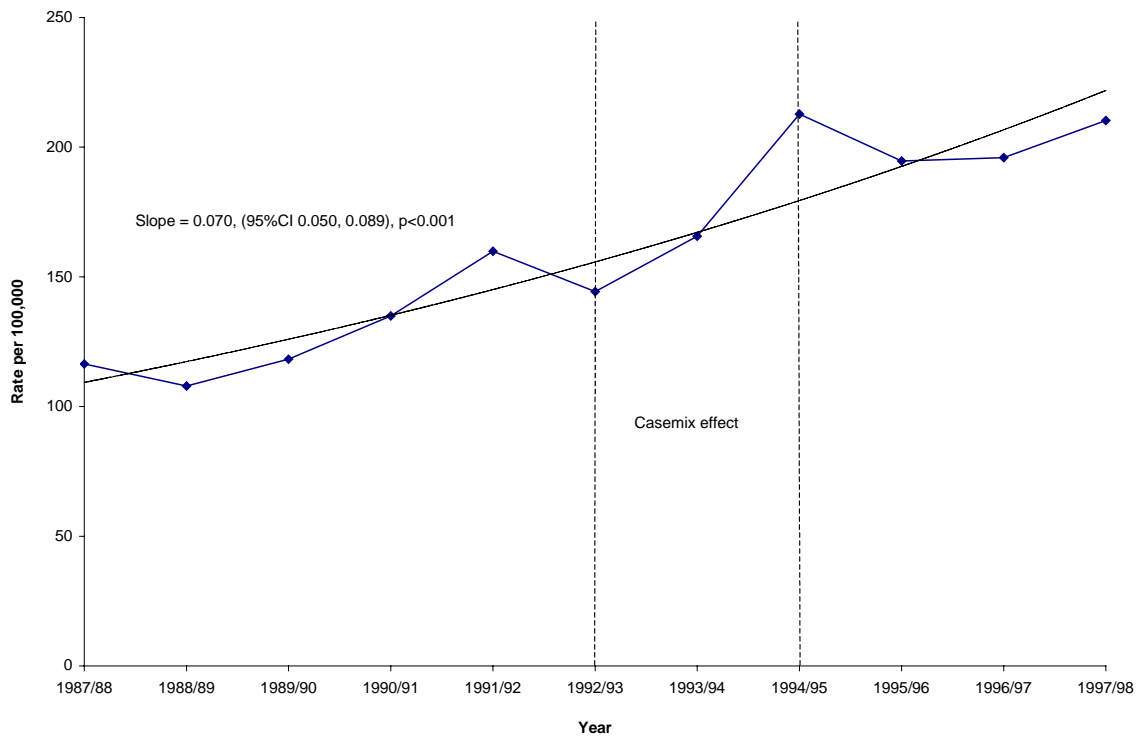


Figure 53: Intentional, Inflicted by other (assault) injuries, 15-24 years, rates & trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

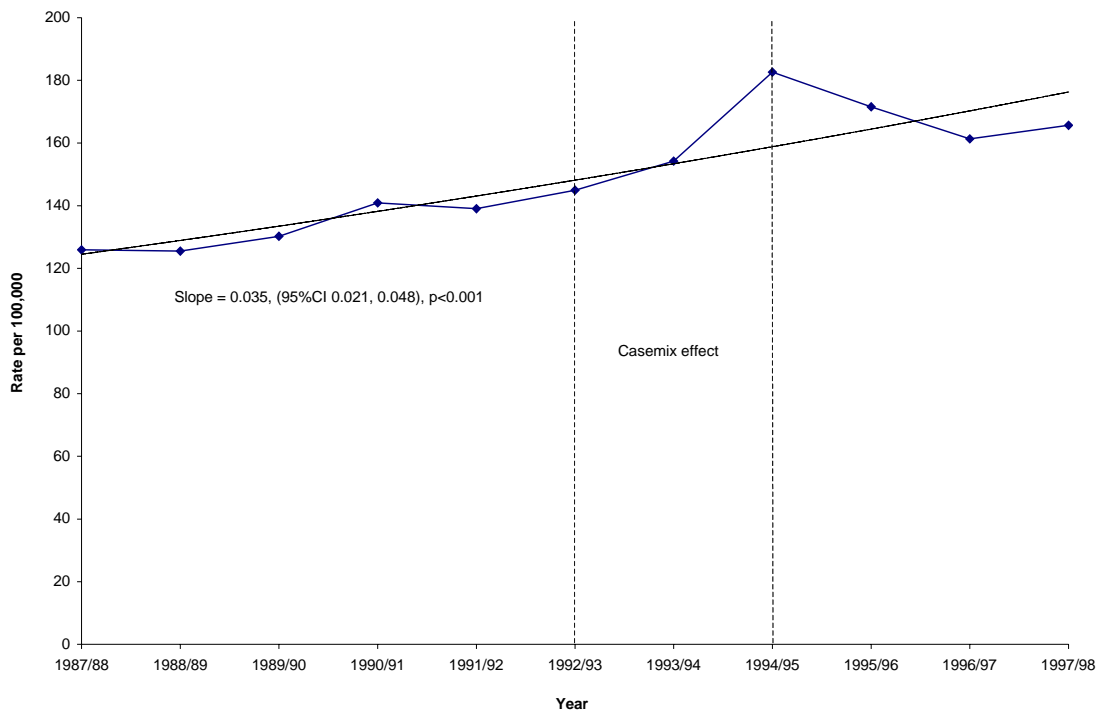


Figure 54: All injuries, 25-64 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

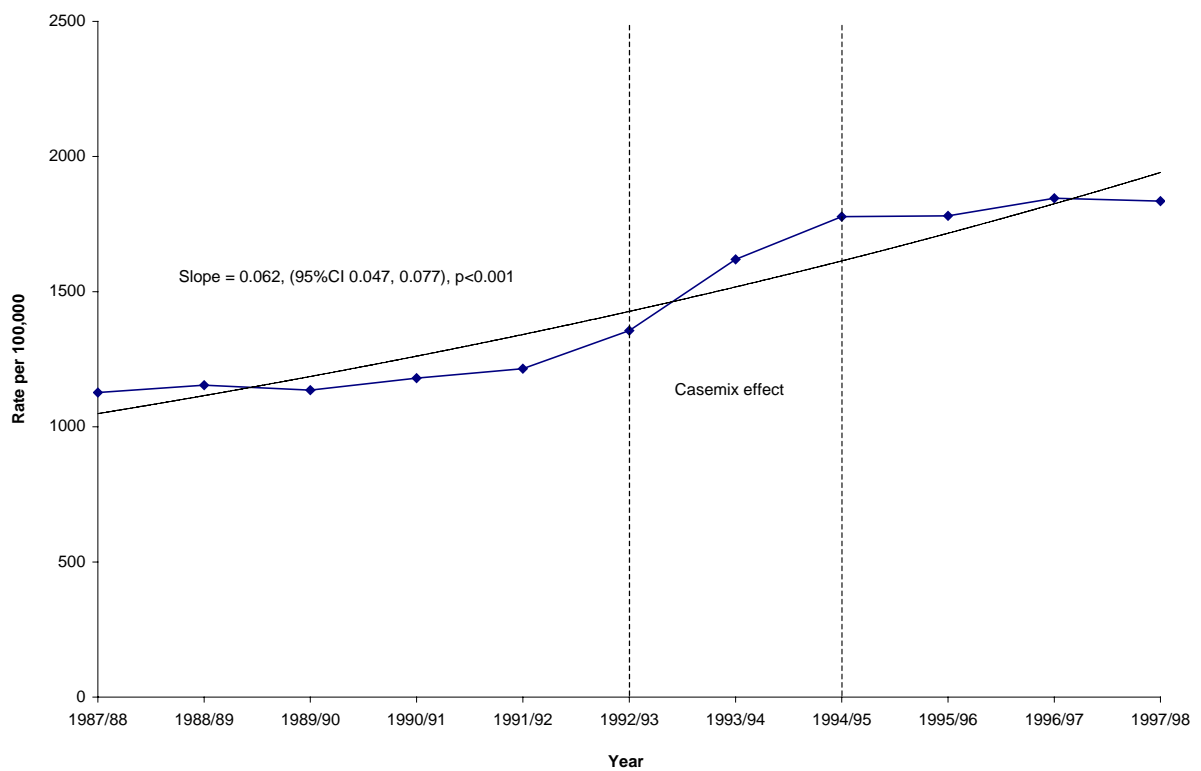


Figure 55: Motor vehicle traffic injuries, 25-64 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

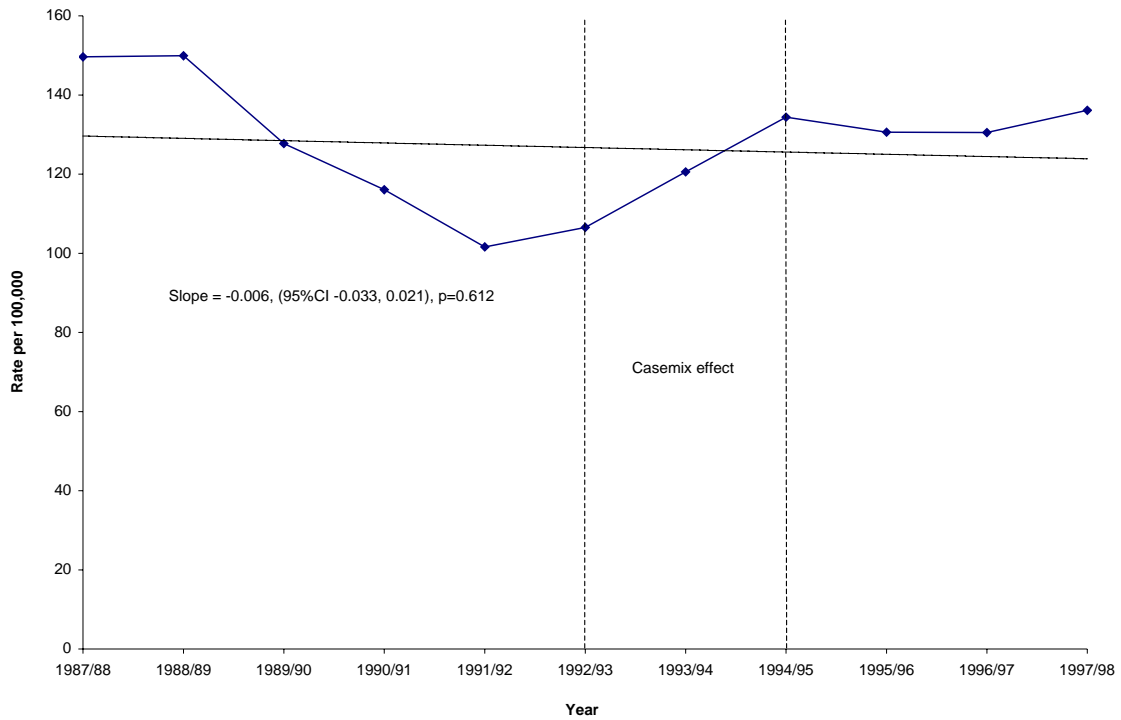


Figure 56: Cutting and piercing injuries, 25-64 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

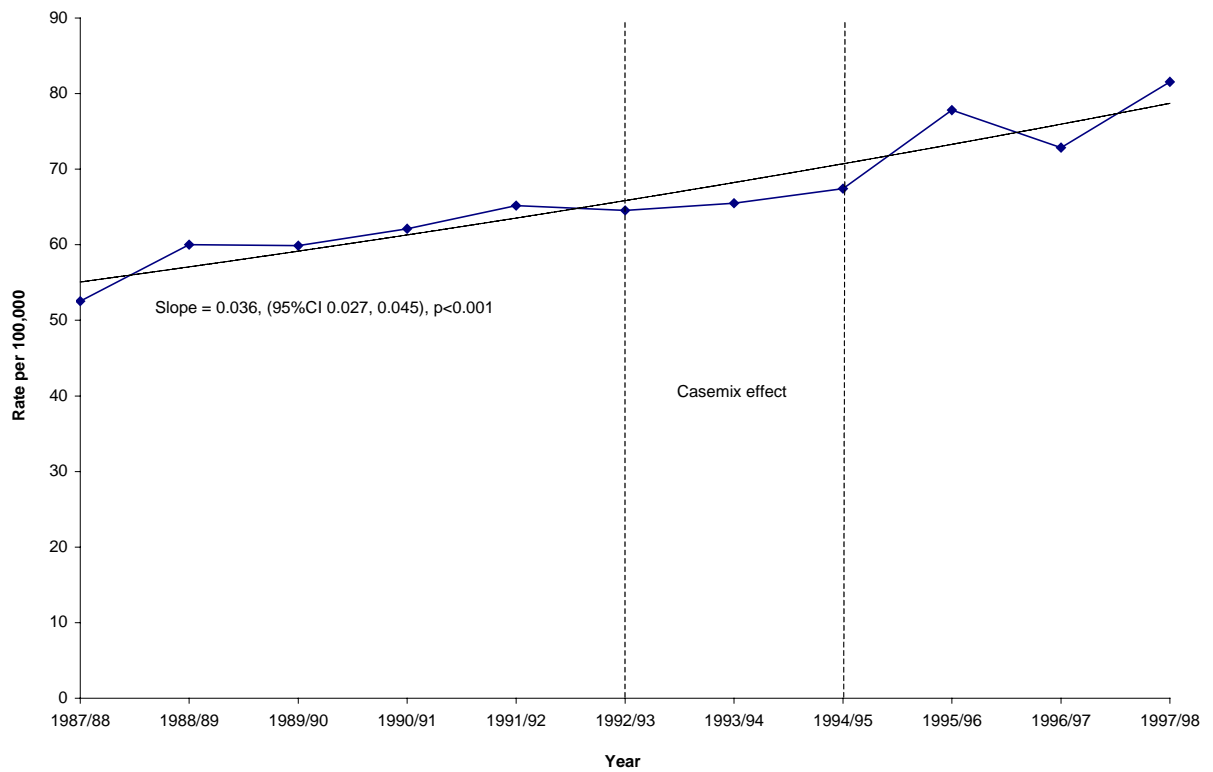


Figure 57: Sports fall and collision injuries, 25-64 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

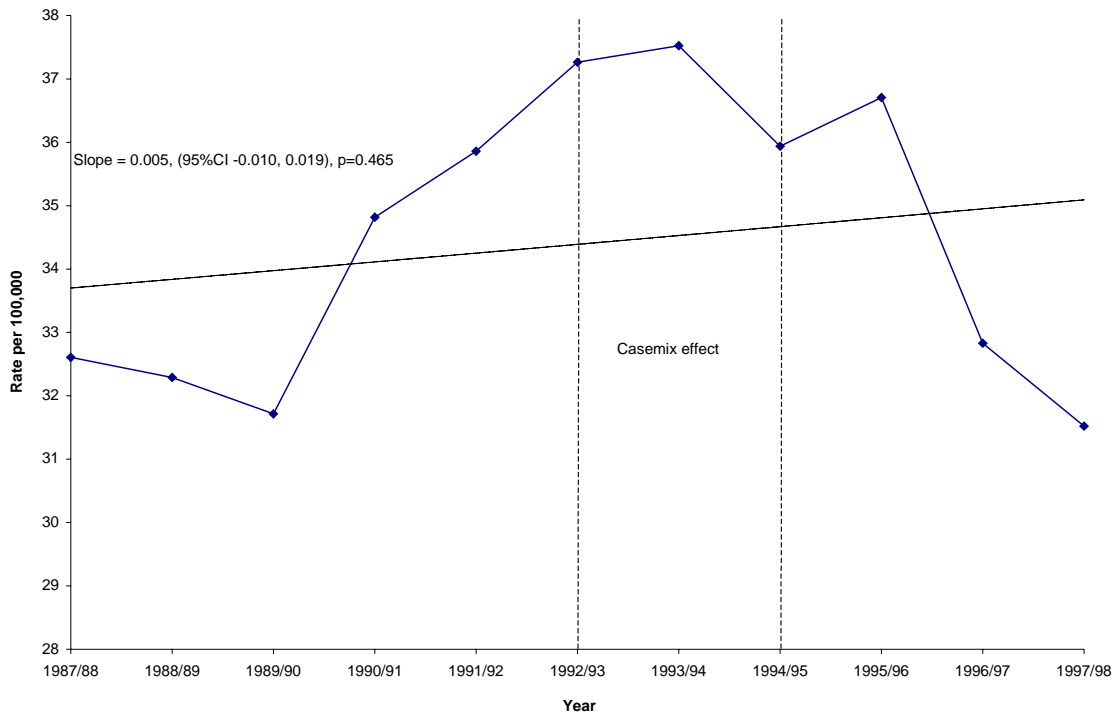


Figure 58: Machinery injuries, 25-64 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

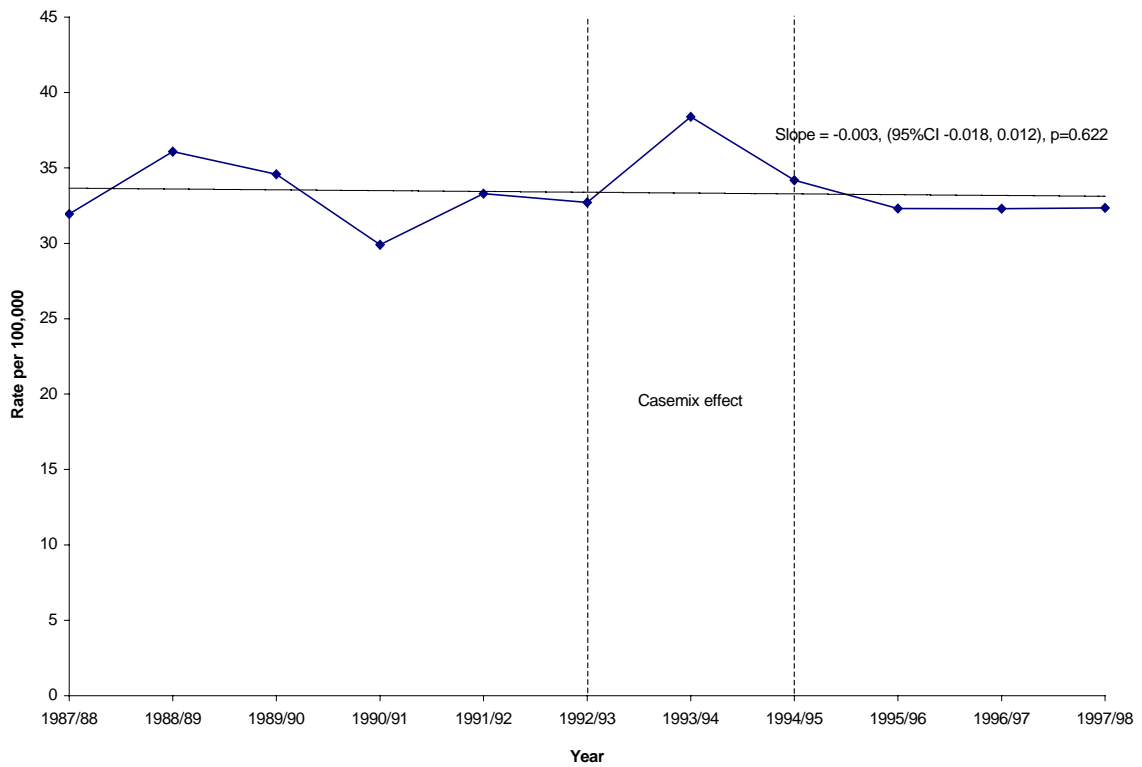


Figure 59: Intentional, Self-inflicted injuries, 25-64 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

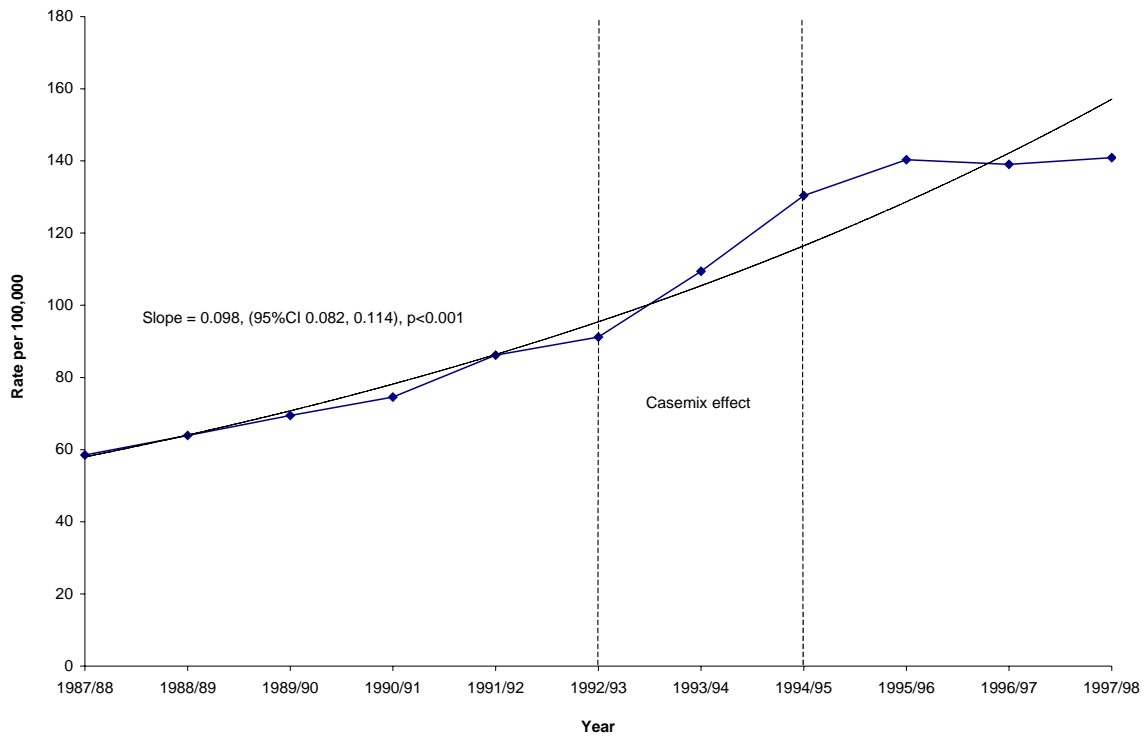


Figure 60: Intentional, inflicted by other (assault) injuries, 25-64 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

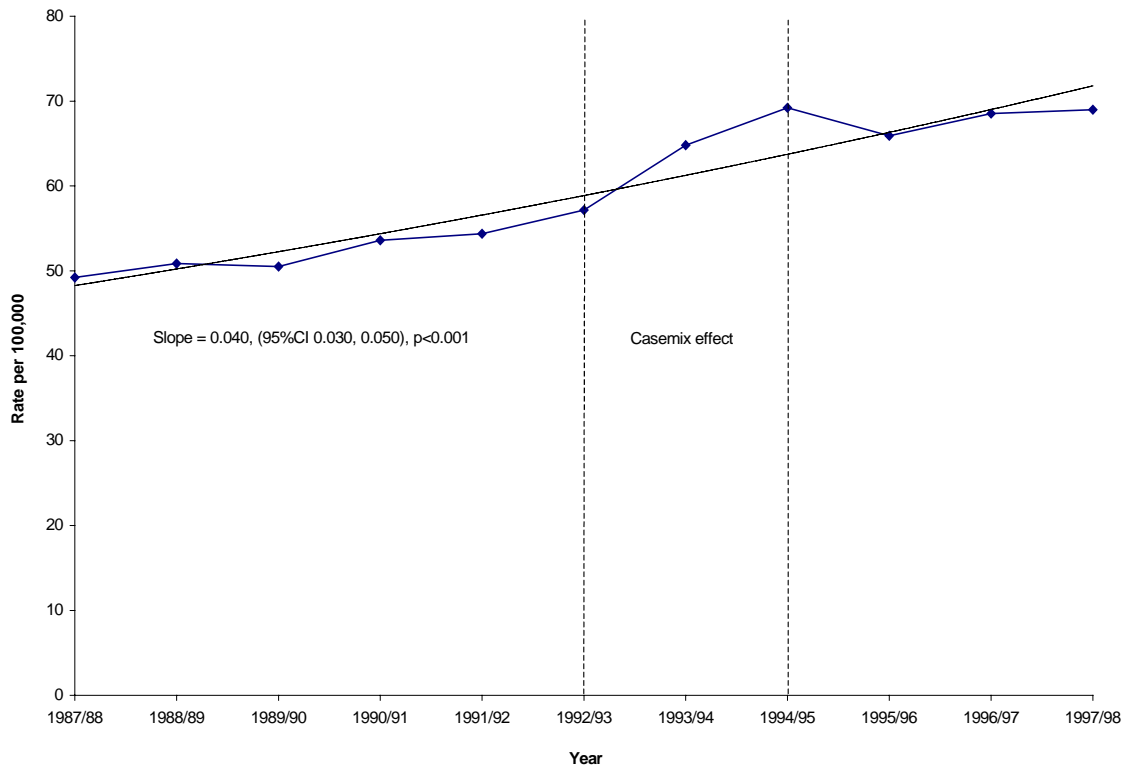


Figure 61: All injuries, ≥ 65 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

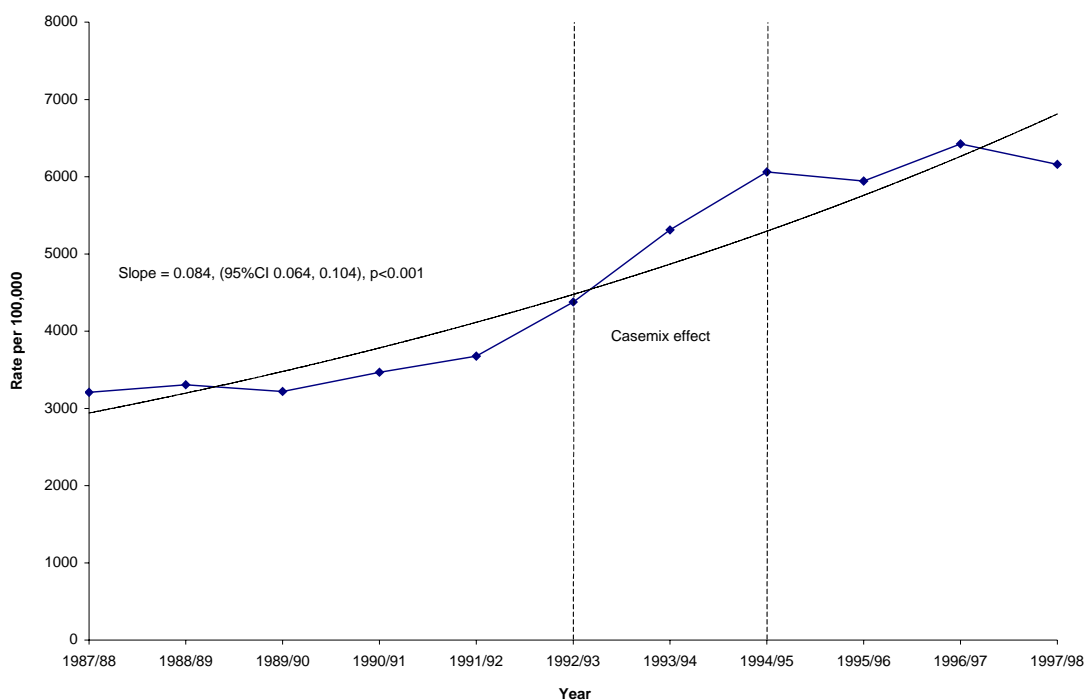


Figure 62: Pedestrian injuries (total), ≥ 65 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

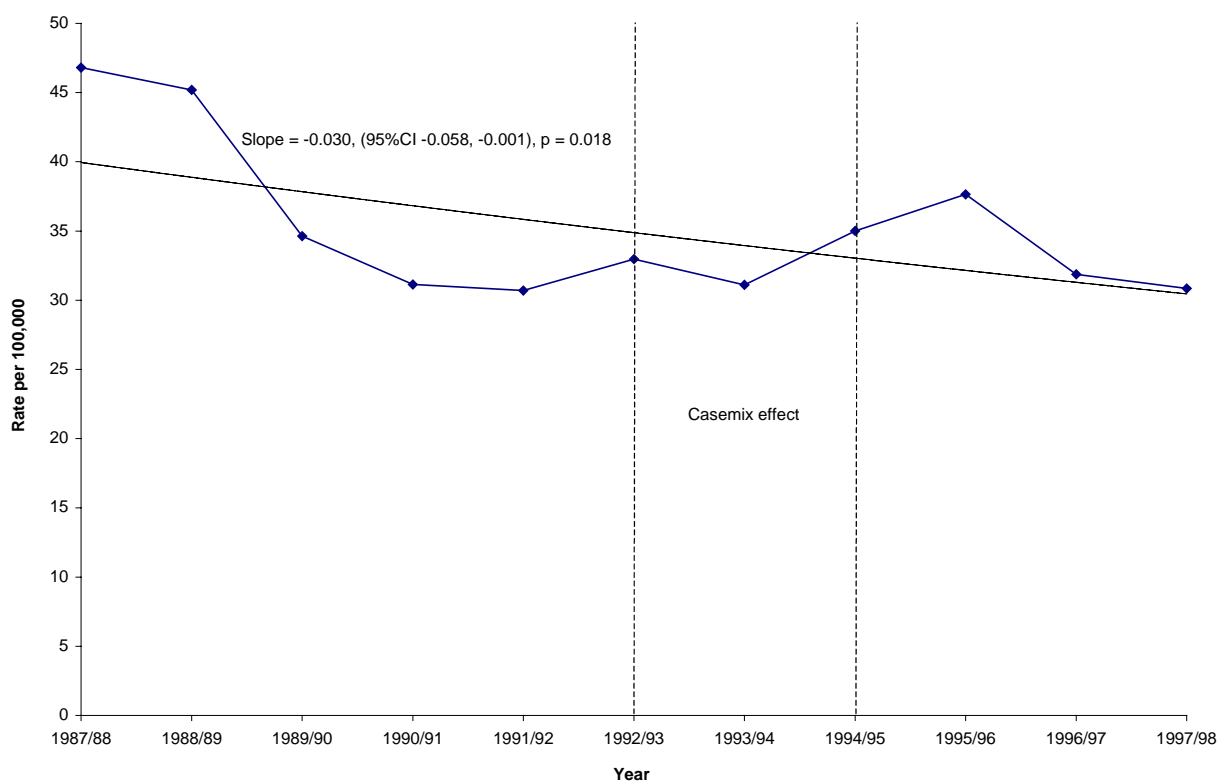


Figure 63: Falls (total), ≥65 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

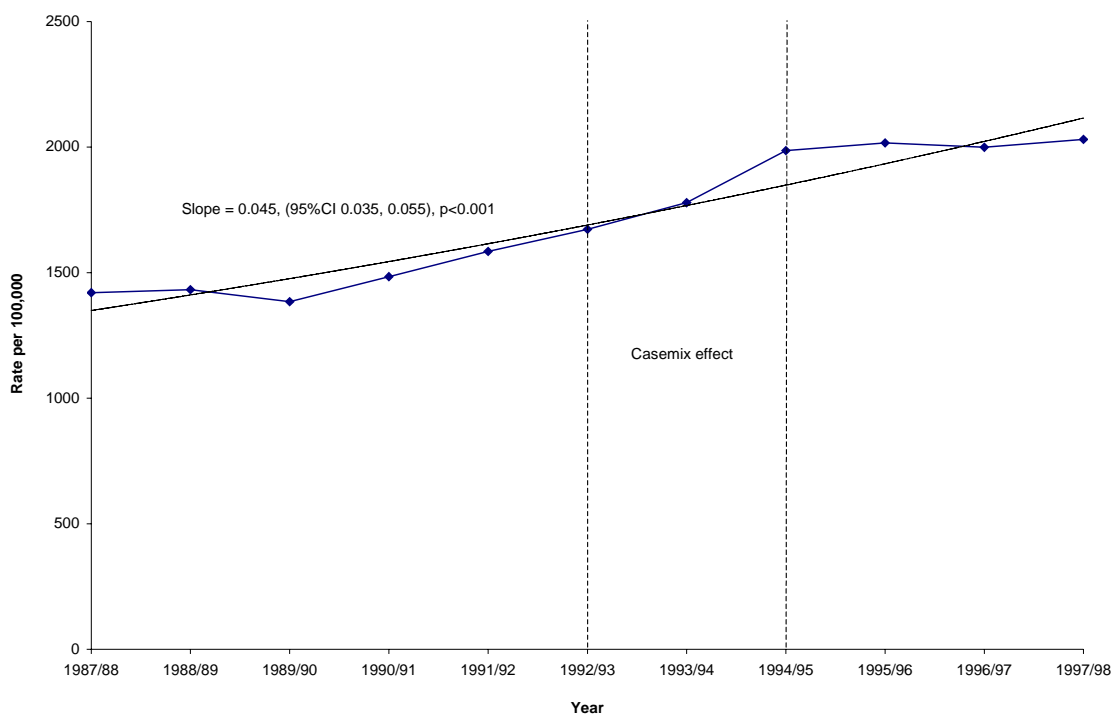


Figure 64: Medical injuries (total), ≥65 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

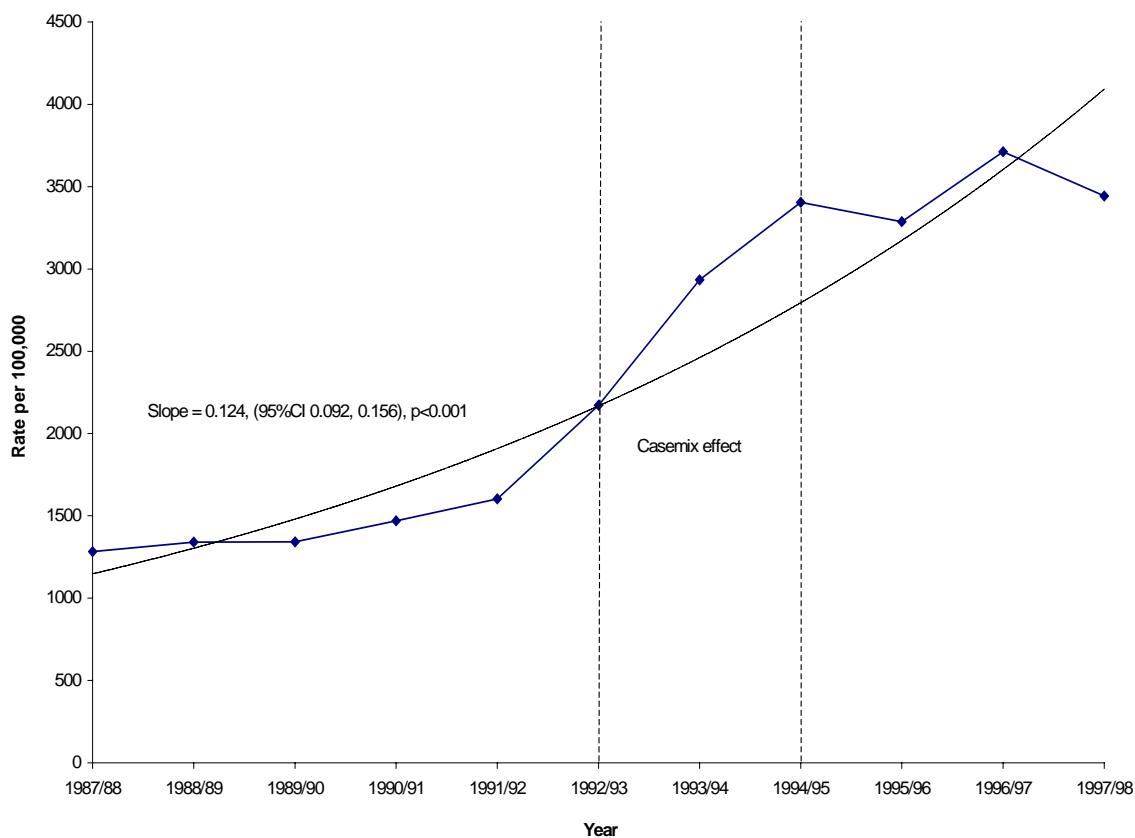


Figure 65: Fire/burn/scald injuries, ≥65 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

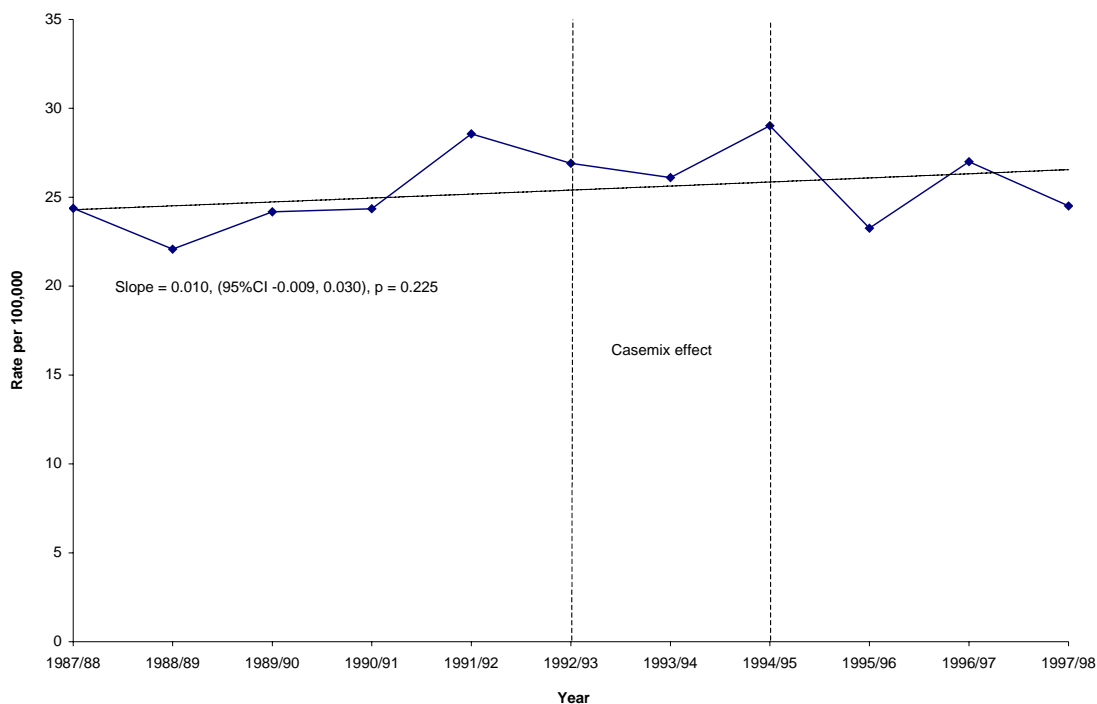


Figure 66: Intentional, Self-inflicted injuries, ≥65 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

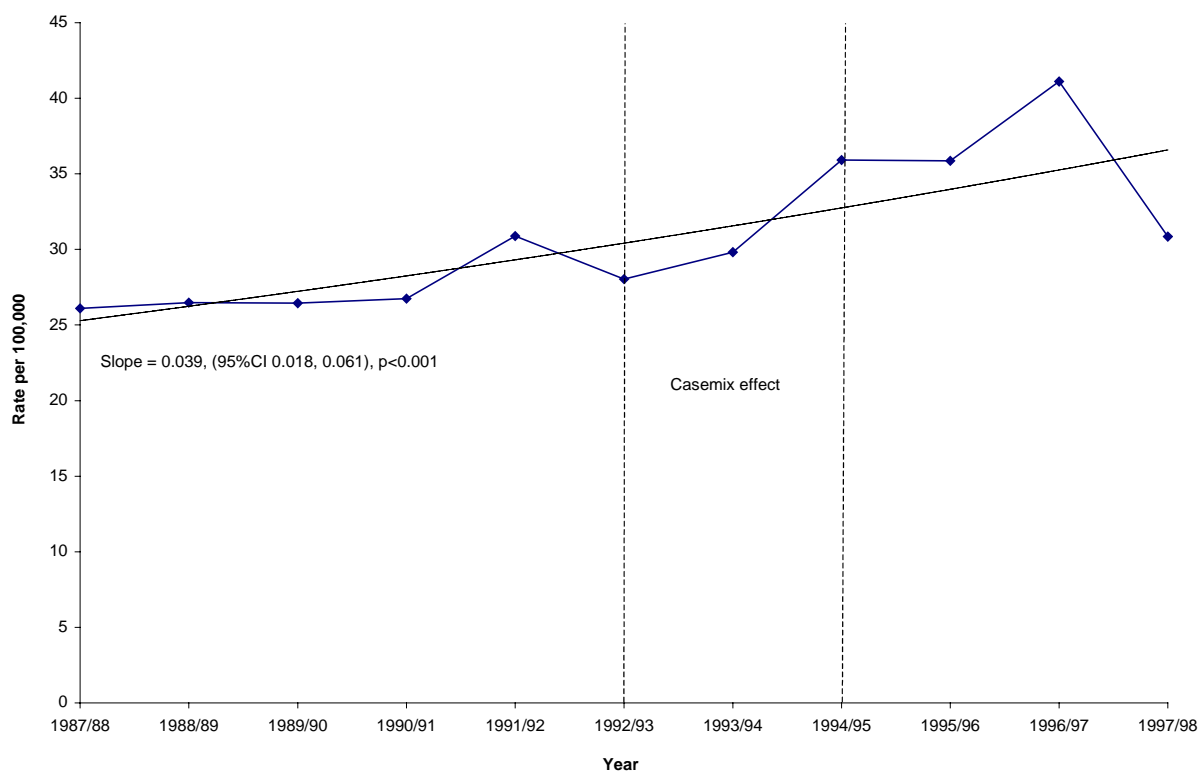


Figure 67: Falls (total), 60-64 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

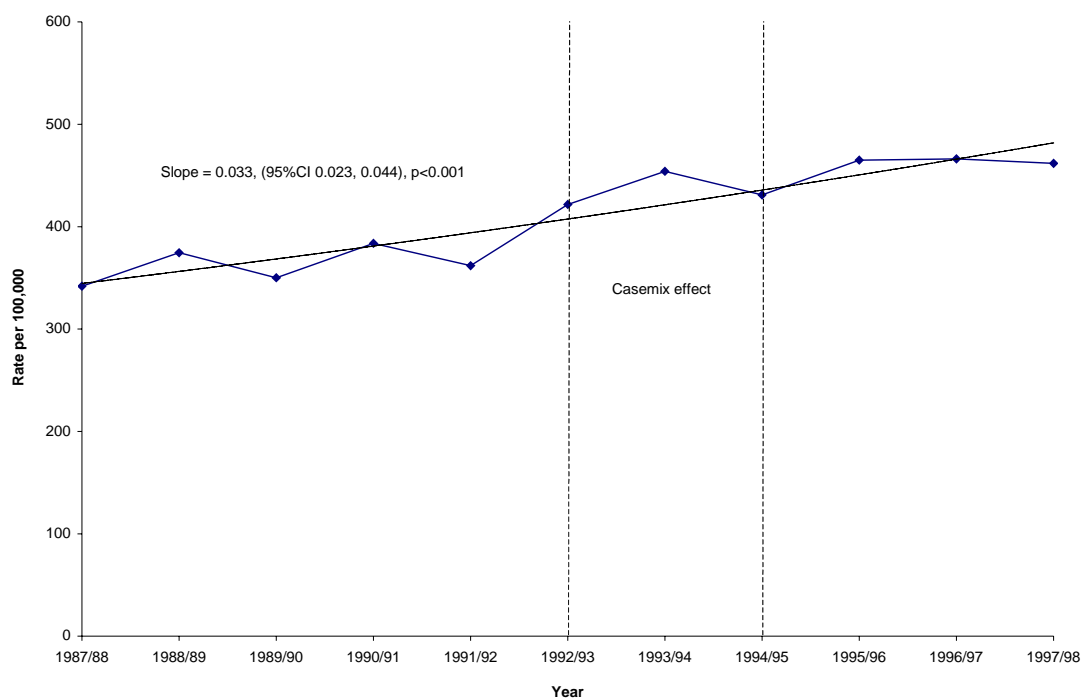


Figure 68: Falls (total), 65-69 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

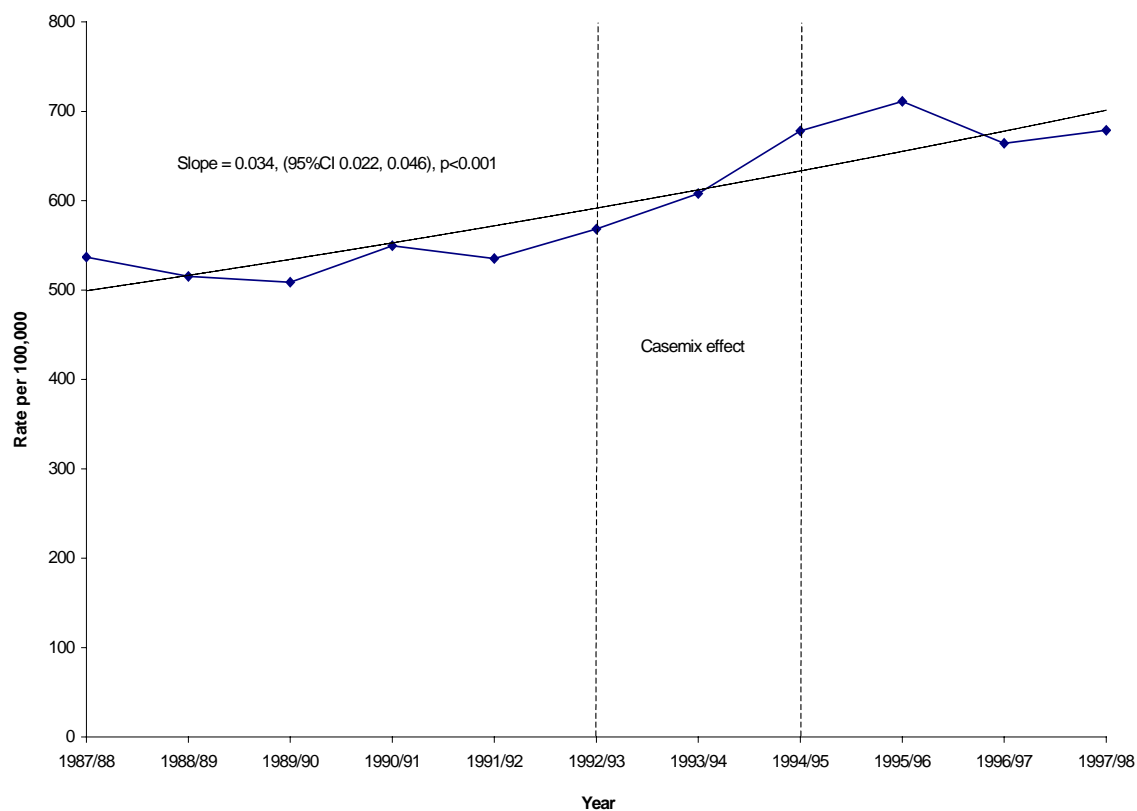


Figure 69: Falls (total), 70-74 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

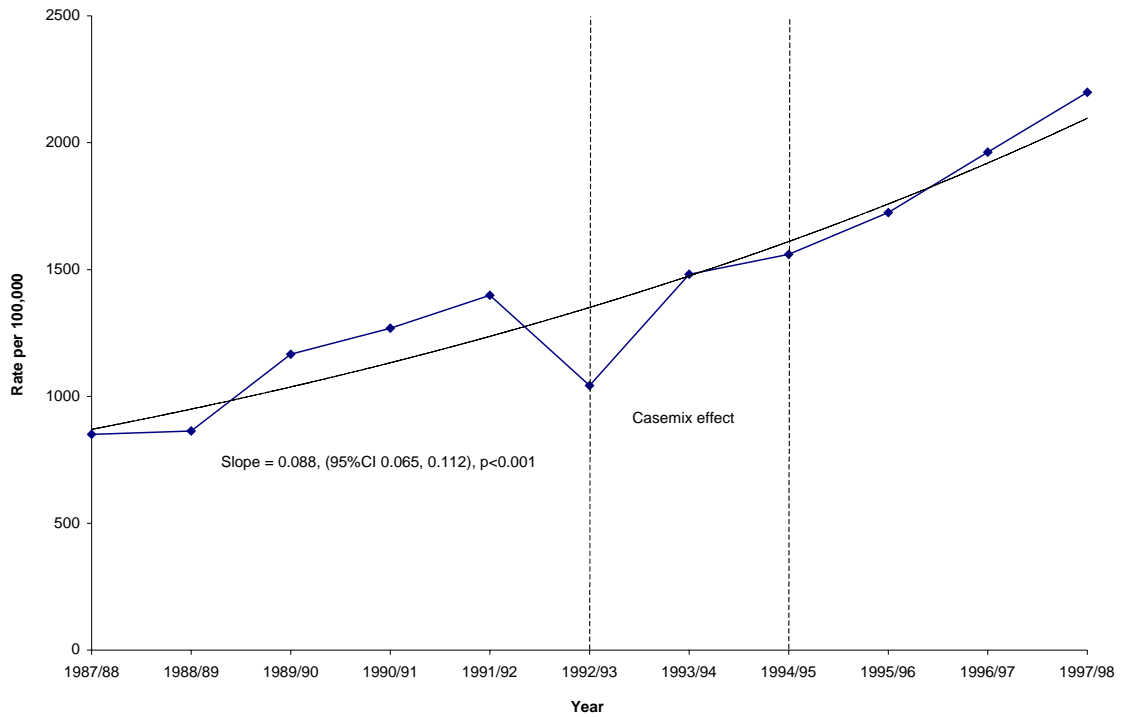


Figure 70: Falls (total), 75-79 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

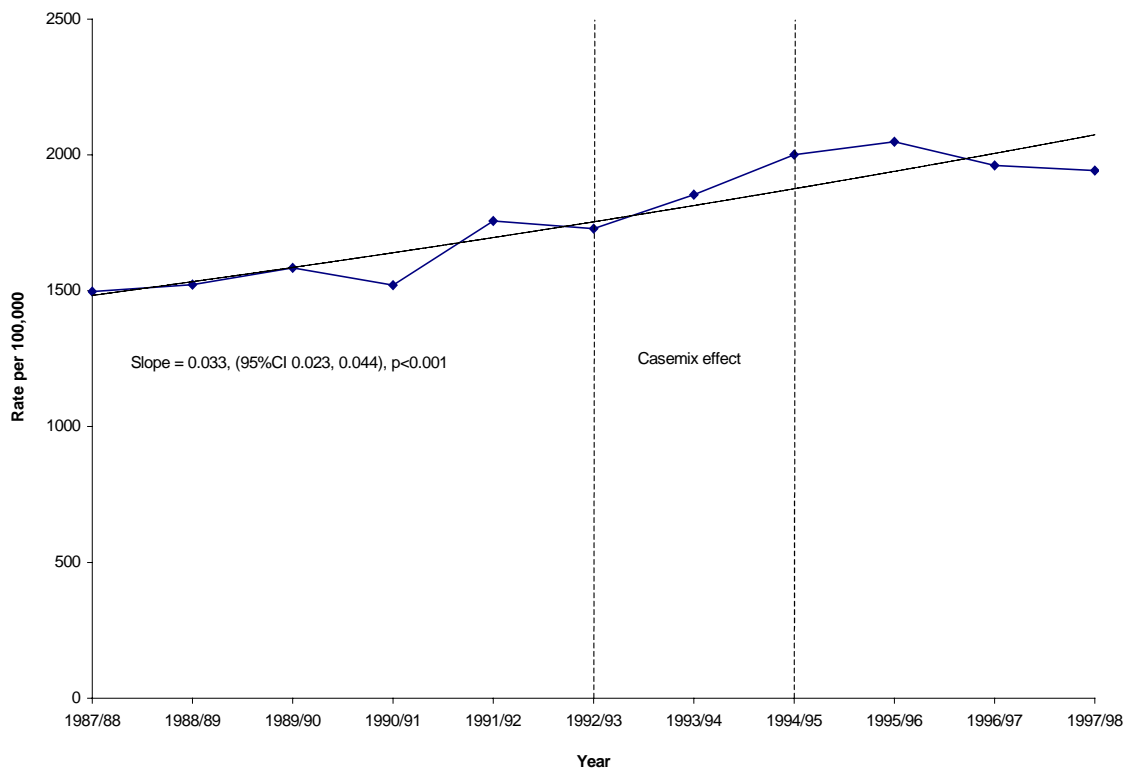


Figure 71: Falls (total), 80-84 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998

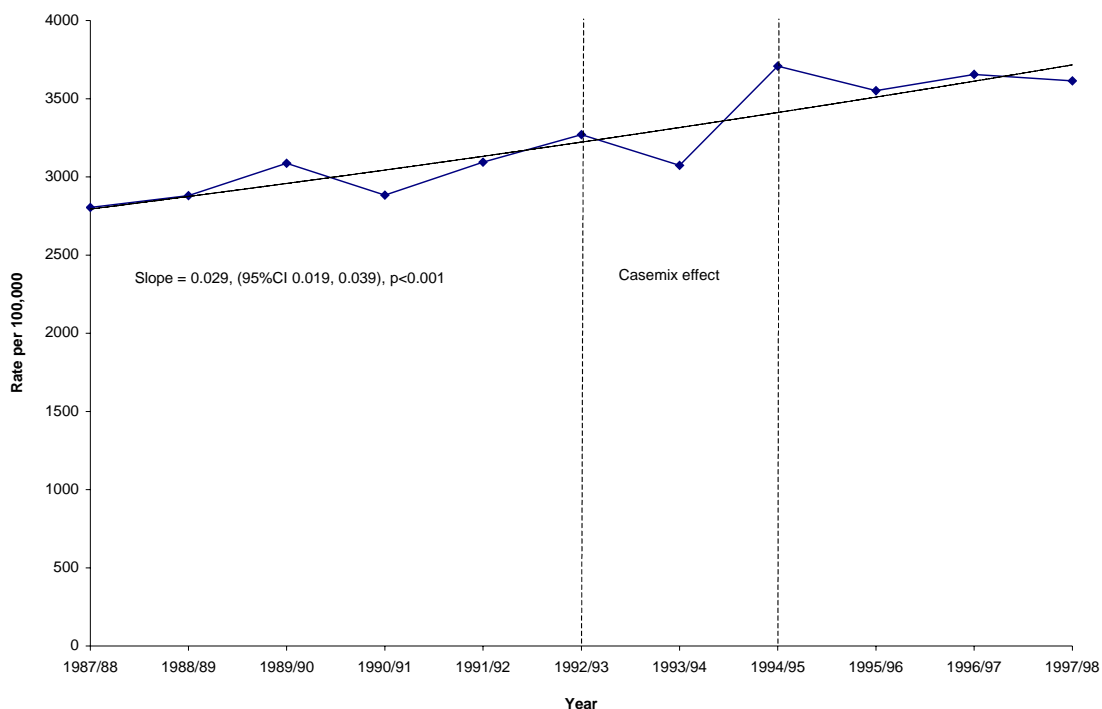
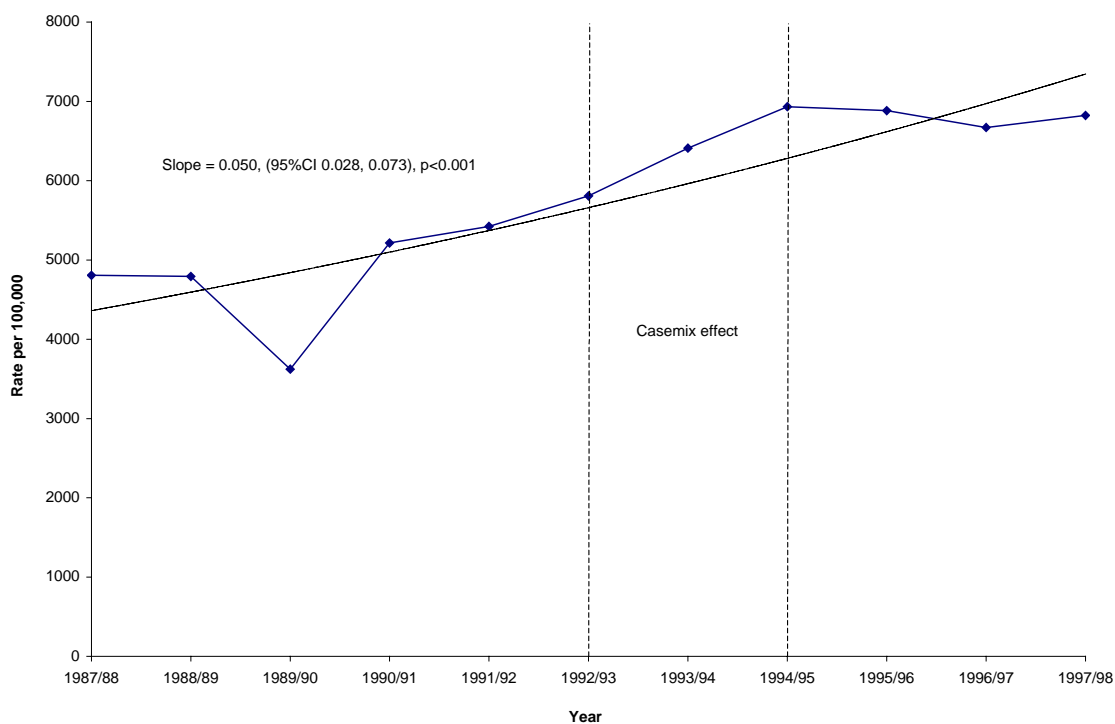


Figure 72: Falls (total), ≥85 years, rates and trend
Public Hospital Admissions, Victoria, July 1987 to June 1998



5. DISCUSSION AND RECOMMENDATIONS

5.1 METHOD

The Victorian Inpatient Minimum Database (VIMD) is a complete collection of admission data for all public hospitals in Victoria, representing approximately 75% of all hospital admissions for injury. It therefore provides good overview data of patterns and trends for relatively serious injury in Victoria. The approach and methods used in this report are consistent with previous studies, with some refinements. Linear regression previously used for trend analysis has been replaced with Poisson regression, considered to be more appropriate for injury data⁹⁻¹².

Limitations and sources of potential bias have been discussed in detail and include the exclusion of private hospital data, potential double counting of patients transferred between hospitals, coding inaccuracies, and the influence of Casemix funding.

Private hospital data have been excluded from analyses for both the 6-year and 11-year periods as coverage for Victoria varies from 60% for 1992/93 to 95% for 1993/94 and 100% for 1994/95 to 1997/98. It is recommended that future hospitalised injury reports include public and private hospital data.

While discrepancies in any coding field in the VIMD have been observed to be between 53% and 73%^{6,7}, the inaccuracies in the variable fields used for this report tend to be considerably lower. In the only published study of the E-code (cause of injury) variable, the error rate was found to be 16%⁷. Other variable types used in this report, age and sex, are less likely to be the subject of coding discrepancies. Coding validation studies need to be repeated on a regular basis for comparison purposes for all coding fields including E-codes at all character levels, i.e. the entire code.

Casemix based hospital funding was introduced in Victoria in July 1993 although hospitals had begun preparing for it in the preceding months. Unusually high increases in injury rates were observed over the 1992/93 – 1994/95 period, which presented difficulties in assessing the degree of actual change in injury rates. Caution is therefore required when interpreting the trends presented in this report as they are all subject to the influence of Casemix by varying and unknown magnitudes. The time and effort required to develop correction factors or data adjustments for Casemix were far beyond the scope of this project.

A report evaluating the effectiveness of the Bicycle Helmet Wearing Law on changes in head injuries¹³, utilised VIMD data and attempted to make adjustments for Casemix. The authors compared VIMD data with Transport Accident Commission (TAC) data for head injuries over the same period and reported the differences in the numbers of injuries recorded. TAC data had not increased as dramatically as VIMD data. A formal study should be undertaken to thoroughly determine the effect of Casemix funding on admission policy in public hospitals and how this might affect any analysis of the VIMD for injury prevention purposes. Casemix effect modelling for public hospital admissions is strongly needed for accurate trend analysis studies.

5.2 IMPLICATIONS FOR PREVENTION

The overview presented here confirms that ongoing investment in injury prevention is required. The trend for the all-age all-cause injury rate is increasing significantly, more so with the exclusion of transport injuries and despite Casemix. Intentional self-inflicted injury rate trends are also high overall, particularly among young adults and the 25-64 year old group. The poisoning injury rate for under 5 year olds is rising as is the trend for falls. Perhaps the most dramatic trend of all is that for medical injuries among over 65 year olds with a corresponding estimated annual percentage increase of 13.2%. A formal detailed descriptive epidemiological study should be undertaken to determine the validity of data and reasons for the high rate of medical injuries. This may provide useful information for the evaluation of medical procedures and hospital quality control programs.

Interestingly, the trends for sports fall and collision injuries for 15-24 and 25-64 year olds post-Casemix, appears to be decreasing despite the trends for the entire 11-year period being positive but not significant.

The shift in the frequency distribution of injury from younger people to older people is a cause for great concern. Higher life expectancy and an ageing population will increase the demand for health services, estimated by the Victorian Burden of Disease Study¹⁴, to require at least a 37% increase in hospital expenditure by 2016 to meet current levels of ill health.

The data presented here should be utilised to review progress towards meeting injury prevention targets as set in *Taking Injury Prevention Forward*¹⁵, and in setting new targets for the next 5 years.

5.3 FUTURE DIRECTIONS

The current coding frameworks used for the VIMD greatly facilitate identification of injury issues. However, some types of injury categories remain difficult or impossible to identify in the VIMD. These include all occupational injury, and most sports and product-related injuries. For example, some machinery and cutting/piercing sub-categories list individual products such as woodworking machinery and lawn mowers but there are few others contained in the ICD-9-CM coding manual. As product-related injury cannot be clearly identified in the VIMD there is a strong need to improve the existing coding system, a key recommendation also made by the National Injury Prevention Advisory Council in its *Directions in Injury Prevention*¹⁶ report. Due to the lack of suitable injury hospitalisation data, emerging trends over the 11-year period for product-related injury cannot be reported.

Information regarding activities undertaken at the time of the injury event assists, along with other factors, in the understanding of injury events and therefore in the development of appropriate intervention strategies. Such information is currently collected in the Victorian Emergency Minimum Dataset (VEMD) of emergency department presentations for injury. The introduction of an activity code within ICD-10-AM coding¹⁷, introduced in July 1998, may improve the detail available in the VIMD. The seven activity codes are broad and relatively non-specific. Occupational and sport activities can be identified as “working for income” and “engaged in sports” but no further detail is allowed for.

These kinds of shortfalls in detail should be supplemented with other data sources via linkage of VIMD with other relevant databases e.g., VEMD and road traffic accident databases. Linkage with other data sources could also assist in addressing coding discrepancy issues.

Cost-benefit analysis and impact studies are emerging as important tools in identifying the full burden of injury to the community in terms of costs, long-term disability and societal impacts¹⁸. The *Cost of Injury*¹⁸ study evaluated the total economic cost of injury to the Victorian community in terms of direct costs (treatment costs) and indirect costs (production/output losses). These economic costs need to be supplemented by other measures of injury costs relating quality of life issues and disability. Hospital admission data should therefore, be used to inform the development of an Injury Cost and Consequences Model.

5.4 RECOMMENDATIONS

1. *Use should be made of the data presented here to contribute to the review of progress towards meeting injury prevention targets and the setting of new targets for the next 5 years.*
2. *Future hospitalised injury reports should include public and private hospital data.*
3. *A formal detailed descriptive epidemiological study should be undertaken to determine the validity of data and reasons for the high and rising rate of medical injuries. This may provide useful information for the evaluation of medical procedures and hospital quality control programs.*
4. *A formal study should be undertaken to thoroughly determine the effect of Casemix funding on admission policy in public hospitals and how this might affect any analysis of the VIMD for injury prevention purposes.*
5. *Casemix effect modeling for public hospital admissions is strongly needed for accurate trend analysis studies.*
6. *The Department of Human Services should continue to monitor the quality of all the data being included in the VIMD (now known as the VAED), and make the results of their monitoring readily available. This is particularly important considering the changeover to ICD10 coding. Particular attention should be paid to place and activity codes for injury cases.*
7. *These coding validation studies need to be repeated on a regular basis for comparison purposes for all coding fields including E-codes at all character levels, i.e. the entire code.*
8. *Existing coding systems should be improved to facilitate identification of all product-related injury, and more specific identification of occupational and sports injury.*
9. *The data presented in this report indicate the need for further investment in injury prevention.*
10. *Consumer product safety seems to have been relatively neglected in research and prevention of injury. There are a sufficient number of injuries apparently resulting from consumer products to warrant further major effort in this area.*
11. *Linkage of health surveillance systems is recommended to clearly enable the identification of sequences and causes of injury events, to provide more detail for each case, and to improve data reliability.*
12. *Hospital admission data should be used to inform the development of an Injury Cost and Consequences Model.*

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APPENDIX 1

All – injury
Frequency and Rate
By Financial year and six-year total
By Five year age groups
and sex

TABLE A
Public Hospital Injury Admissions, Victoria
Six years, 1 July 1992 to 30 June 1998

Frequency

Age Group (Years)	1992/1993			1993/1994			1994/1995		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
0-4	2851	1898	4749	3247	2151	5398	3102	2209	5311
5-9	2303	1428	3731	2488	1573	4061	2471	1568	4039
10-14	2403	1237	3640	2689	1472	4161	2762	1440	4202
15-19	3649	1770	5419	3954	1896	5850	4246	2030	6276
20-24	4415	1953	6368	4722	2337	7059	5020	2586	7606
25-29	3330	1806	5136	3699	2091	5790	4118	2451	6569
30-34	2831	1827	4658	3234	2204	5438	3485	2491	5976
35-39	2301	1745	4046	2625	2112	4737	2847	2387	5234
40-44	2060	1583	3643	2437	2108	4545	2590	2371	4961
45-49	1852	1448	3300	2245	1890	4135	2524	2263	4787
50-54	1711	1264	2975	2150	1644	3794	2268	1935	4203
55-59	1796	1413	3209	2203	1790	3993	2450	1951	4401
60-64	2173	1868	4041	2731	2172	4903	2931	2343	5274
65-69	2522	2370	4892	3274	2876	6150	3682	3065	6747
70-74	2224	2594	4818	3156	3425	6581	3927	3808	7735
75-79	2035	2946	4981	2424	3488	5912	3069	3850	6919
80-84	1493	2856	4349	1790	3241	5031	2270	3864	6134
>=85	1087	2977	4064	1356	3653	5009	1745	4134	5879
Total	43036	34983	78019	50424	42123	92547	55507	46746	102253

Age Group (Years)	1995/1996			1996/1997			1997/1998		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
0-4	3214	2205	5419	3359	2382	5741	3369	2350	5719
5-9	2585	1637	4222	2552	1742	4294	2653	1738	4391
10-14	2897	1500	4397	2787	1366	4153	2938	1527	4465
15-19	3941	2052	5993	3888	1905	5793	4051	2117	6168
20-24	4861	2416	7277	4602	2297	6899	4606	2372	6978
25-29	4053	2595	6648	4044	2629	6673	4221	2696	6917
30-34	3429	2579	6008	3427	2541	5968	3434	2466	5900
35-39	2899	2396	5295	3114	2606	5720	3221	2698	5919
40-44	2651	2423	5074	2743	2464	5207	2798	2522	5320
45-49	2548	2338	4886	2735	2467	5202	2711	2475	5186
50-54	2299	2043	4342	2563	2289	4852	2802	2316	5118
55-59	2472	2091	4563	2730	2219	4949	2704	2135	4839
60-64	2915	2328	5243	3254	2479	5733	3067	2500	5567
65-69	3645	3214	6859	3828	3316	7144	3806	3101	6907
70-74	3730	3779	7509	4214	4249	8463	4183	3969	8152
75-79	3001	3944	6945	3560	4384	7944	3443	4236	7679
80-84	2194	3850	6044	2558	4204	6762	2309	4082	6391
>=85	1785	4329	6114	1893	4672	6565	2046	4769	6815
Total	55119	47719	102838	57851	50211	108062	58362	50069	108431

TABLE B

Public Hospital Injury Admissions, Victoria

Six years, 1 July 1992 to 30 June 1998

Six-year Total Frequency

Age Group (Years)	July 1992 to June 1998		
	Males	Females	<i>Total</i>
0-4	19142	13195	32337
5-9	15052	9686	24738
10-14	16476	8542	25018
15-19	23729	11770	35499
20-24	28226	13961	42187
25-29	23465	14268	37733
30-34	19840	14108	33948
35-39	17007	13944	30951
40-44	15279	13471	28750
45-49	14615	12881	27496
50-54	13793	11491	25284
55-59	14355	11599	25954
60-64	17071	13690	30761
65-69	20757	17942	38699
70-74	21434	21824	43258
75-79	17532	22848	40380
80-84	12614	22097	34711
>=85	9912	24534	34446
Total	320299	271851	592150

TABLE C
Public Hospital Injury Admissions, Victoria
Six years, 1 July 1992 to 30 June 1998

Rate

Age Group (Years)	1992/1993			1993/1994			1994/1995		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
0-4	1731	1210	1476	1972	1374	1680	1890	1418	1660
5-9	1432	930	1187	1551	1025	1294	1538	1022	1286
10-14	1514	819	1175	1695	973	1342	1736	947	1350
15-19	2155	1101	1642	2395	1214	1821	2619	1324	1990
20-24	2345	1053	1704	2543	1278	1915	2757	1442	2105
25-29	1882	1010	1444	2114	1182	1645	2355	1387	1868
30-34	1529	984	1256	1753	1186	1469	1906	1347	1625
35-39	1339	1004	1171	1514	1205	1359	1622	1348	1484
40-44	1269	971	1120	1502	1285	1393	1588	1429	1507
45-49	1292	1031	1163	1504	1284	1395	1645	1488	1567
50-54	1500	1152	1330	1847	1461	1657	1889	1655	1773
55-59	1843	1464	1654	2222	1819	2021	2421	1945	2184
60-64	2334	1983	2157	2970	2330	2648	3216	2524	2867
65-69	2995	2553	2763	3846	3103	3459	4299	3323	3793
70-74	3595	3367	3469	4838	4247	4511	5788	4568	5116
75-79	4908	4941	4927	5874	5917	5900	7317	6508	6844
80-84	6214	6966	6688	7084	7553	7379	8622	8643	8635
>=85	8278	9120	8878	9790	10722	10452	11882	11650	11718
Total	1947	1553	1748	2274	1861	2066	2493	2054	2271

Age Group (Years)	1995/1996			1996/1997			1997/1998		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
0-4	1972	1427	1707	2078	1555	1824	2095	1543	1827
5-9	1596	1060	1334	1563	1120	1347	1614	1112	1369
10-14	1813	980	1405	1737	890	1323	1826	991	1417
15-19	2444	1344	1909	2401	1238	1835	2482	1361	1935
20-24	2732	1381	2062	2637	1347	1999	2650	1409	2039
25-29	2287	1447	1864	2232	1434	1830	2286	1449	1866
30-34	1901	1407	1652	1926	1400	1660	1942	1367	1651
35-39	1627	1331	1478	1725	1426	1574	1765	1459	1611
40-44	1606	1441	1522	1635	1442	1537	1642	1452	1546
45-49	1621	1487	1554	1729	1544	1636	1713	1542	1627
50-54	1847	1677	1763	1950	1774	1863	2004	1676	1841
55-59	2382	2038	2211	2563	2112	2339	2475	1986	2232
60-64	3220	2511	2862	3579	2656	3112	3326	2641	2979
65-69	4230	3493	3849	4443	3631	4025	4450	3430	3926
70-74	5373	4460	4871	5943	4963	5407	5790	4620	5155
75-79	6824	6438	6599	7659	6826	7176	6995	6264	6572
80-84	8102	8398	8288	9257	9065	9137	8298	8805	8615
>=85	11442	11658	11594	11489	12018	11860	11603	11672	11651
Total	2457	2079	2266	2555	2165	2358	2549	2136	2340

TABLE D

Public Hospital Injury Admissions, Victoria

Six years, 1 July 1992 to 30 June 1998

Average Annual Rate

Age Group (Years)	July 1992 - June 1998		
	Males	Females	Total
0-4	1955	1420	1695
5-9	1549	1045	1303
10-14	1721	933	1336
15-19	2414	1263	1854
20-24	2608	1315	1968
25-29	2193	1320	1754
30-34	1824	1281	1551
35-39	1601	1299	1449
40-44	1542	1339	1440
45-49	1589	1404	1497
50-54	1848	1578	1715
55-59	2325	1900	2114
60-64	3105	2440	2769
65-69	4047	3253	3636
70-74	5260	4389	4781
75-79	6632	6161	6357
80-84	7975	8270	8160
>=85	10847	11199	11095
Total	2381	1977	2177

TABLE E

Public Hospital Injury Admissions, Victoria

Six years, 1 July 1992 to 30 June 1998

Average Annual Frequency

Age Group (Years)	July 1992 - June 1998		
	Males	Females	<i>Total</i>
0-4	3190	2199	5390
5-9	2509	1614	4123
10-14	2746	1424	4170
15-19	3955	1962	5917
20-24	4704	2327	7031
25-29	3911	2378	6289
30-34	3307	2351	5658
35-39	2835	2324	5159
40-44	2547	2245	4792
45-49	2436	2147	4583
50-54	2299	1915	4214
55-59	2393	1933	4326
60-64	2845	2282	5127
65-69	3460	2990	6450
70-74	3572	3637	7210
75-79	2922	3808	6730
80-84	2102	3683	5785
>=85	1652	4089	5741
Total	53383	45309	98692

APPENDIX 2

ICD-9-CM E-codes used for grouping of injury causes

Cause of Injury	E-codes
Transport (total)	800.0 - 829.9, 831.0 - 831.9, 833.0 - 848.9
<i>Motor vehicle traffic (total)</i>	810.0 - 819.9
Motor vehicle driver	810.0, 811.0, ...819.0
Motor vehicle passenger	810.1, 811.1, ...819.1
Motorcyclist/passenger	810.2, 811.2, ...819.2
	810.3, 811.3, ...819.3
Pedal cyclist	810.6, 811.6, ...819.6
Pedestrian	810.7, 811.7, ...819.7
Other person (Includes occupant of streetcar, animal rider, occupant of animal-drawn vehicle, other person).	810.4, 811.4, ...819.4
	810.5, 811.5, ...819.5
	810.8, 811.8, ...819.8
	810.9, 811.9, ...819.9
<i>Motor vehicle non-traffic (total)</i>	820.0 - 825.9
Motor vehicle occupant	820.0, 821.0, ...825.0
	820.1, 821.1, ...825.1
Motorcyclist/passenger	820.2, 821.2, ...825.2
	820.3, 821.3, ...825.3
Pedestrian	820.7, 821.7, ...825.7
Other person (Includes occupant of streetcar, rider of animal, occupant of animal-drawn vehicle, pedal cyclist, other person).	820.4, 821.4, ...825.4
	820.5, 821.5, ...825.5
	820.6, 821.6, ...825.6
	820.8, 821.8, ...825.8
	820.9, 821.9, ...825.9
<i>Other vehicle (total)</i>	800.0 - 807.9, 826.0 - 829.9, 831.0 - 831.9, 833.0 - 848.9
Railway	800.0 - 807.9
Bicycle	826.0 - 826.9
Animal being ridden	828.0 - 828.9
Water transport	831.0 - 831.9, 833.0 - 838.9
Air transport	840.0 - 845.9
Vehicle NEC (Includes animal drawn vehicle accident, other road vehicle accidents).	827.0 - 827.9, 829.0 - 829.9, 846.0 - 848.9
<i>Near-drowning (total)</i>	830.0 - 830.9, 832.0 - 832.9, 910.0 - 910.9
Pool	910.5, 910.6, 910.8
While engaged in sport/recreational activity (without diving equipment)	910.2
Other drowning	830.0 - 830.9, 832.0 - 832.9, 910.0, 910.1, 910.3, 910.4, 910.7, 910.9

Cause of Injury	E-codes
Poisoning (total)	850.0 – 869.9
<i>Drugs, medicinal substances and biologicals (total)</i>	850.0 – 858.9
Heroin/opiates	850.0 – 850.2
Paracetamol	850.4
Tranquillisers	853.0 – 853.9
Other drugs/medications	850.3, 850.5 – 852.9, 854.0 – 858.9
<i>Other solid and liquid substances, gases and vapours (total)</i>	860.0 – 869.9
Other solids/liquids (Alcohol, cleansing and polishing agents, disinfectants, paints, varnishes, petroleum products, solvents, agricultural and horticultural chemical and pharmaceutical preparations, corrosives and caustics, foodstuffs and poisonous plants).	860.0 – 866.9
Gas/vapour (Utility gas, motor vehicle exhaust gas, carbon monoxide from various sources, nitrogen oxides, sulphur oxide, freon, tear gas and other gases).	867.0 – 869.9
Falls (total)	880.0 – 888.9
<i>Falls, different level (total)</i>	880.0 – 884.9
Stairs	880.0 – 880.9
Ladders/scaffolds	881.0 – 881.9
Building/structure	882.0 – 882.9
Playground equipment	884.0
Chair or bed	884.2, 884.4
Different level, other	883.0 – 883.9, 884.1, 884.3, 884.5 – 884.9,
<i>Falls, same level (total)</i>	885.0 – 888.9
Same level/trip/slip/stumble (not sport)	885.0 – 885.9
Falls in sport	886.0
Fracture, cause unspecified	887.0 – 887.9
Other falls	886.1 – 886.9, 888.0 – 888.9
<i>Fires/burns/scalds (total)</i>	890.0 – 899.9, 924.0 – 924.9
House fires	890.0 – 890.9
Clothing ignition	893.0 – 893.9
Hot liquids/vapours/steam	924.0, 924.2
Caustic/corrosive substance & other hot objects	924.1, 924.8, 924.9
Other fires/burns	891.0 – 892.9, 894.0 – 899.9
<i>Natural/Environmental (total)</i>	900.0 – 901.9, 904.9 – 909.9
Excessive heat/cold	900.0 – 901.9
Venomous animals/plants	905.0 – 905.9
Dog bite	906.0
Other bite/injury caused by animal	906.1 – 906.9
Other natural/environmental	904.0 – 904.9, 907.0 – 909.9

Cause of Injury	E-codes
<i>Choking/suffocation/foreign body (total)</i>	911.0 – 915.9
Aspiration of food	911.0 – 911.9
Aspiration of other object	912.0 – 912.9
Mechanical suffocation	913.0 – 913.9
Foreign body in eye	914.0 – 914.9
Foreign body in other orifice	915.0 – 915.9
<i>Hit/struck/crush (total)</i>	916.0 – 918.9
Struck by falling object	916.0 – 916.9
Struck/knocked in sport	917.0
Caught/crushed in or between objects	918.0 – 918.9
Other hit/struck/crush	917.1 – 917.9
<i>Machinery (total)</i>	919.0 – 919.9
Agricultural/farm machinery	919.0
Lifting machines and appliances	919.2
Metalworking machinery	919.3
Woodworking machinery	919.4
Earthmoving machinery	919.7
Other machinery	919.1, 919.5, 919.6, 919.8, 919.9
<i>Cutting/piercing (total)</i>	920.0 – 920.9
Powered lawn mower	920.0
Other powered hand tools	920.1
Powered household appliances	920.2
Knives/daggers	920.3
Other hand tools/implements	920.4
Other cutting/piercing instruments/objects	920.5, 920.8, 920.9
<i>Other unintentional (total)</i>	902.0 – 903.9, 921.0 – 923.9, 925.0 – 928.9
Firearms	922.0 – 922.9
Explosion	921.0 – 921.9, 923.0 – 923.9
Electric current	925.0 – 925.9
Overexertion	927.0 – 927.9
Other unintentional	902.0 – 903.9, 926.0 – 926.9, 928.0 – 928.9
<i>Intentional – Self-inflicted (total)</i>	950.0 – 958.9
Poisoning, tranquillisers and other psychotropic agents	950.3
Poisoning, other solids/liquids	950.0 – 950.2, 950.4 – 950.9
Poisoning, motor vehicle exhaust gas	952.0
Poisoning, other gases/vapours	951.0 – 951.9, 952.1 – 952.9
Firearms/explosives	955.0 – 955.9
Cutting/piercing	956.0 – 956.9
Other means	953.0 – 954.9, 957.0 – 958.9

Cause of Injury	E-codes
<i>Intentional – Inflicted by other (total)</i>	960.0 – 968.9
Unarmed fight/brawl	960.0
Firearms/explosives	965.0 – 965.9
Cutting/piercing	966.0 – 966.9
Child battering/maltreatment	967.0 – 967.9
Struck by blunt/thrown object	968.2
Other means	960.1, 961.0 – 964.9, 968.0, 968.1, 968.3 – 968.9
<i>Undetermined/Other intent (total)</i>	970.0 – 976.9, 978.0 – 978.9, 980.0 – 988.9, 990.0 – 998.9
Undetermined, poisoning (solids/liquids)	980.0 – 980.9
Undetermined, firearm/explosives	985.0 – 985.5
Other	970.0 – 976.9, 978.0 – 978.9, 981.0 – 984.9, 986.0 – 988.9, 990.0 – 998.9
<i>Medical injuries (total)</i>	870.0 – 876.9, 878.0 – 879.9, 930.0 – 949.9
Medical misadventure	870.0 – 876.9
Post-operative complications	878.0 – 879.9
Adverse drug effects	930.0 – 949.9
<i>Late effects (total)</i>	929.0 – 929.9, 959.0 – 959.9, 969.0 – 969.9, 977.0 – 977.9, 989.0 – 989.9, 999.0 – 999.9

APPENDIX 3

Examples of injury types for injury categories

Injury category/ Definition	Example
<p>Motor vehicle traffic</p> <p>A motor vehicle traffic accident is any motor vehicle accident occurring on a public highway.</p> <p>A motor vehicle is defined as any mechanically or electrically powered device, not operated on rails, upon which any person or property may be transported or drawn upon a highway. These include cars, buses, construction, farm and industrial machinery, tractors, motorcycles, trucks and vans.</p> <p>Motor vehicle non-traffic</p> <p>A motor vehicle non-traffic accident is any motor vehicle accident which occurs entirely in any place other than a public highway.</p> <p>Accidents involving vehicles being used in recreational or sporting activities off the highway are also included.</p> <p>Other vehicle</p> <p>Other vehicle accidents are transport accidents involving road vehicles other than motor vehicles. These include trains, trams, bicycles, horse-drawn vehicles, harnessed animals and animals carrying a person or goods.</p>	<p>Collisions between a car and a pedestrian, animal drawn vehicles, parked vehicles and stationery objects, such as light poles.</p> <p>Falls from a bus or car while boarding or alighting.</p> <p>Other non-collision motor vehicle traffic accidents include explosions, fires and breakages occurring in the vehicle while in motion.</p> <p>Overturning of off-road motorcycle.</p> <p>Collision of racing car on speedway</p> <p>Collision between a bicycle and pedestrian.</p> <p>Horse-rider thrown from animal.</p> <p>Boating and aircraft accidents.</p>
<p>Near drowning</p>	<p>Submersion from overturned boat.</p> <p>Fall from water-skis with submersion or drowning.</p> <p>Swimming pool, spa, dam and bathtub submersions.</p>
<p>Poisoning</p> <p>Unintentional poisoning by drugs, medicinal substances and biologicals include unintentional overdoses of drugs, wrong drugs given or taken in error, and drugs taken inadvertently.</p>	<p>Paraldehyde mistakenly taken instead of paracetamol.</p> <p>Ingestion of insecticides.</p> <p>Carbon monoxide poisoning from incomplete combustion of utility gases, i.e. stove or fireplace.</p>

Falls	<p>Tripping on an escalator.</p> <p>Falling through a roof.</p> <p>Swimming pool diving accident.</p> <p>Falls from trampolines, beds and trees.</p>
Fire/burns/scalds	<p>Carbon monoxide poisoning from house fire.</p> <p>Ignition of nightwear.</p> <p>Scalding by boiling water and steam.</p> <p>Caustic burn by oven cleaner.</p> <p>Burn caused by electric radiator.</p>
Natural/environmental	<p>Dehydration caused by lack of water.</p> <p>Bite of venomous snake, ant or jellyfish.</p> <p>Bite of dog, rat, non-venomous animal.</p> <p>Lightning strike, floods, landslide, dam collapse.</p>
Choking/suffocation/ foreign body	<p>Fish bone caught in throat.</p> <p>Aspirated regurgitated food.</p> <p>Suffocation in bed or cradle, plastic bag.</p> <p>Metal grindings in the eye.</p> <p>Objects wedged in the ear.</p>
Hit/struck/crush	<p>Struck by falling tree branch.</p> <p>Kicked by a horse.</p> <p>Stepped on while playing football.</p> <p>Crushed in a crowd.</p> <p>Finger jammed in cupboard door.</p>

<p>Machinery</p>	<p>Pinned under tractor.</p> <p>Struck by forklift.</p> <p>Caught in moving parts of machinery.</p> <p>Cut by bench saw.</p>
<p>Cutting/piercing</p>	<p>Stapled by staple gun.</p> <p>Stepped on nail.</p> <p>Cuts and lacerations from lawn mowers, knives, broken glass and blenders.</p>
<p>Other non-intentional</p>	<p>Unintentional firearm injuries.</p> <p>Exploding aerosol cans.</p> <p>Electric shock from faulty electrical wiring.</p> <p>Flash burns and other injuries from explosion of explosive material, fireworks.</p> <p>Overexertion caused by lifting heavy object.</p>
<p>Intentional – Self inflicted</p> <p>Includes attempted suicide and self-inflicted injuries specified as intentional.</p>	<p>Attempted suicide by overdose of tranquillisers, motor vehicle exhaust, hanging, suffocation by plastic bag, firearms, jumping from bridges, lying on train tracks, crashing of motor vehicle.</p>
<p>Intentional – Inflicted by other</p> <p>Includes injuries inflicted by another person with the intent to injure or kill, by any means.</p>	<p>Unarmed brawls, fights.</p> <p>Rape.</p> <p>Assault by poisoning, firearms, explosives, knives.</p> <p>Child battering and other maltreatment.</p>
<p>Undetermined/ Other intent</p> <p>Undetermined intent injuries are defined as such when after thorough investigation by the medical examiner, coroner, or other legal authority it cannot be determined whether the injuries were unintentional, suicidal or homicidal.</p>	

<p>Other intent includes those injuries caused by legal intervention such as police or other law-enforcing agents in the course of arresting or attempting to arrest lawbreakers, maintaining order and other legal actions.</p>	
<p>Medical</p> <p>Includes misadventures during surgical and medical care (medical misadventure), surgical and other medical procedures as the cause of abnormal reaction of patient or later complication (post-operative complications) without mention of misadventure at the time of procedure and drugs causing adverse effects given in therapeutic doses (adverse drug effects).</p>	<p>Accidental haemorrhage during surgical procedure.</p> <p>Accidental puncture during administration of enema.</p> <p>Foreign object left in body during a surgical procedure.</p> <p>Failure of sterile precaution during endoscopic examination.</p> <p>Bacterially-contaminated fluid infused.</p> <p>Suture failure in operation.</p> <p>Removal of other organ.</p> <p>Endotracheal tube wrongly placed during anaesthetic procedure.</p>
<p>Late effects</p> <p>Conditions occurring as sequelae one year or more after unintentional injury.</p>	

