Trends in Alcohol-Related Violence in Australia, 1991/92-1999/00.

Prepared by: Sharon Matthews*, Tanya Chikritzhs§, Paul Catalano§, Tim Stockwell§, Susan Donath*,
§National Drug Research Institute, Curtin University, WA
*Turning Point, Alcohol and Drug Centre Inc. Melbourne, Vic.

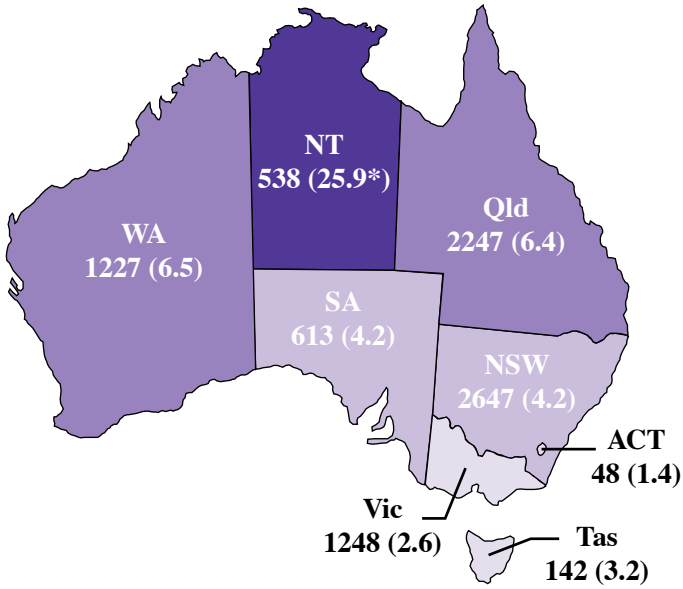
Summary Points

- **Measures of alcohol-related violence indicate a consistently high level in Australia during the 1990s.**
- **It was estimated that in 1998/99 there were 8,661 people admitted to hospital from alcohol-caused assaults in Australia (4.6 per 10,000 persons). Many more serious alcohol-related assaults were reported to the police (62,534) and still more were unreported.**
- **Of these hospital admissions, 74% were male and two-thirds were aged 15 to 34 years. About one third were aged 15 to 24 years.**
- **Non-metro areas of the NT, WA, Qld and SA had markedly higher levels of hospital admissions for assault than metro regions.**
- **For all years, the NT had the highest estimated rate of alcohol-caused assault hospitalisations and also the highest rate of per capita alcohol consumption.**
- **For most jurisdictions, estimated rates of alcohol-related police reported assaults showed similar trends to alcohol-caused assault hospitalisations.**
- **Most jurisdictions showed relatively steady trends in alcohol-related violence from 1995/96 to 1998/99. Although the NT and WA showed some evidence of an increase in recent years.**

Introduction. Alcohol is a major contributing cause of violence in Australia. English et al (1995) estimated that 47% of all perpetrators of assault and 43% of all victims of assault were intoxicated prior to the event. Chikritzhs et al (2001) estimated that in 1997 there were 124 deaths, 4,381 years of life lost prematurely and 26,882 hospital bed-days due to alcohol-caused violence. An authoritative review of evidence from pharmacological, psychological, sociological, epidemiological and ecological studies recently concluded that the causal link between alcohol consumption and violence is beyond dispute (Graham and West, 2001).

The purpose of this Bulletin is to present indicators of alcohol-related violence for each Australian state and territory. Trends across time and place were also examined in the context of trends in adult per capita alcohol consumption (APCC). Two sources of data were used: health data from hospital admission records and police data regarding serious assaults reported to police. For hospital data, the aetiologic fraction method was applied with updated estimates of these based on English et al (1995). For the police data, the difference between night-time incidents of serious assault (high alcohol-related) and day-time assault (low alcohol-related). Ireland and Thommeny (1993) found that 91% of assaults occurring in public places between 10am and 2pm were in or adjacent to licensed premises. Stockwell et al (1996) found strong relationships between local population rates of all night-time violent incidents reported to the police and local per capita alcohol consumption. Briscoe and Donnelly (2001) report that police estimates of alcohol involvement in assaults in and around Sydney licensed premises peaked in the early hours of the morning.

There are several potential threats to the validity of these types of official data sets, particular police data, as a means of reliably tracking changes in alcohol-related violence. Changes in enforcement and recording practices can influence the data and many incidents go unreported to the police. As a consequence the aim of this bulletin is to present both the hospital and police data alongside alcohol consumption data in order to identify common trends across both time and place. The states and territories also varied substantially in the time period for which the various data were available. A Technical Report describing methods and results in more detail is available on request.



Map 1: Total number and estimated rates (per 10,000) of alcohol-caused hospitalisations for assault by state/territory, 1998/99.

**1997/98 figures shown for NT, 1998/99 unavailable.*

Australia wide, a total of 8,661 hospitalisations for assaultive injuries were estimated to have been caused by alcohol in 1998/99. The estimated rate of alcohol-caused hospitalisations for that year was 4.6 per 10,000 persons. The Northern Territory recorded the highest rate of 25.9/10,000 while the ACT (1.4) and Victoria (2.6) recorded the lowest rates of alcohol-caused hospital admissions.

Correspondence. For copies of the technical report contact the National Drug Research Institute at GPO Box U1987, Perth, Western Australia, 6845. Send email requests to: enquiries@ndri.curtin.edu.au

As shown in Figure 1, in keeping with higher rates of alcohol-caused hospitalisations and reported assaults for serious offences, adult per capita pure alcohol consumption was also higher in non-metro (10.2ltrs/adult) than metro (8.4ltrs/adult) regions of Australia in 1995/96. Due to cessation of wholesale data collection by states and territories it was not possible to determine metro and non-metro per capita alcohol consumption beyond 1995/96. Data collection limitations also restricted metro/non-metro comparisons for police recorded assault offences to 1996/97 and later.

As described in Bulletin No. 1 and No. 4 (Chikritzhs et al, 1999; Catalano et al, 2001) for most states and territories, rates of other alcohol-caused conditions and per capita alcohol consumption were also generally higher in non-metro regions.

**most recent year available for per capita consumption by metro/non-metro was 1995/96, closest year police data available for comparison was 1996/97.*

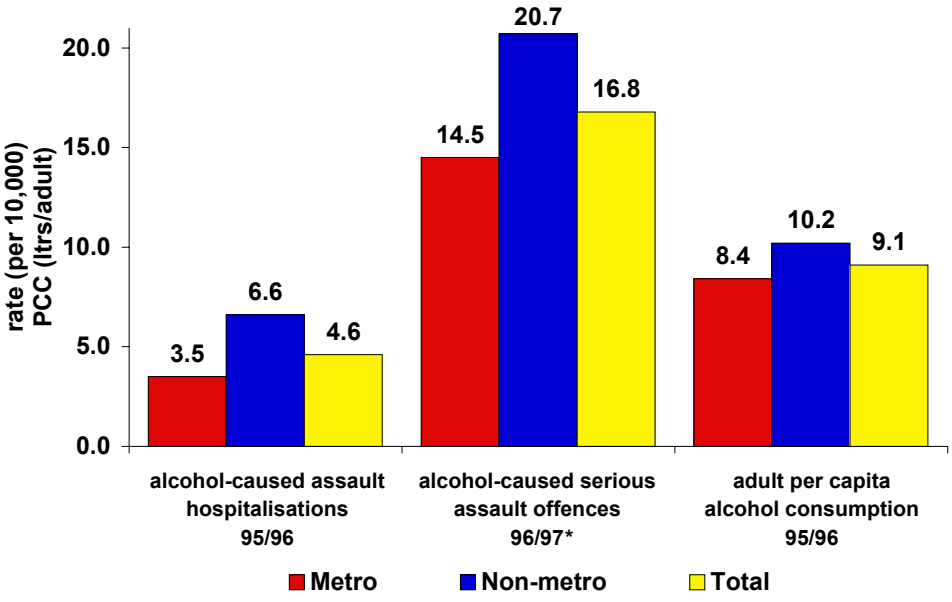


Figure 1: Australian rates of alcohol-caused hospitalisations for assault (1995/96), alcohol-caused serious reported assault offences (1996/97) and adult (15yrs and older) per capita pure alcohol consumption (1995/96) for metro and non-metro regions.

Age and sex profile of alcohol-caused assaults.

Throughout Australia in 1998/99, males made up about 74% of all alcohol-caused hospitalisations for assaultive injuries. Young people were also highly over represented among those seeking hospital treatment for assault with 32% admitted aged between 15 and 24 years. A further 32% were aged between 25 and 34 years. Together, these two age groups made up the majority of hospital admissions for assault related injuries caused by alcohol (64%). A substantial proportion were also aged between 35 and 44 years (20%). In all, 84% of people admitted to hospital for injuries caused by violence were aged between 15 and 44 years. Only 5% of persons hospitalised for assault were aged 55 and older and only 3% under 15 years of age.

A similar age and sex profile was evident among alcohol-related serious road injuries, as shown in Bulletin 2 of this series (Chikritzhs et al. 2000). On average, 72% of all serious alcohol-related road injuries occurred among males and 86% were aged between 15 and 44 years. Seventy five percent were aged between 15 and 34 years.

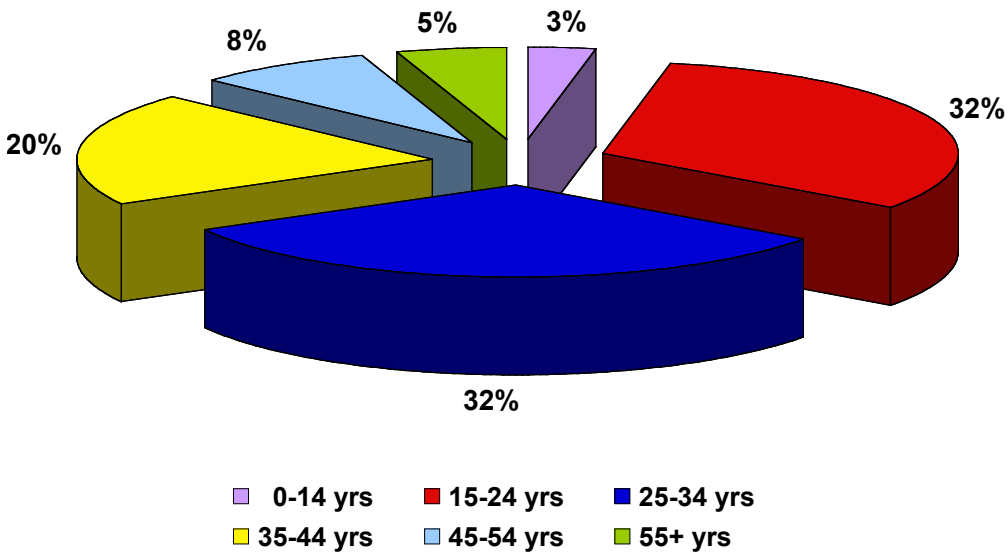


Figure 2: Overall age distribution among alcohol-caused hospital admissions for assaultive injuries, 1998/99.

Acknowledgements. The authors would like to thank the AIHW for providing us with National Hospital Morbidity Data, as well as all Australian police departments. We would also like to thank Paul Jones of NDRI for his assistance.

Trends in per capita alcohol consumption and rates of alcohol-caused hospitalisations for assault and the rate ratio of alcohol-related police reported assaults by jurisdiction. Legend: ■ alcohol-caused hospital admissions for assault. ● alcohol-related police reported assaults (rate ratio) ▲ adult per capita consumption. Y Axis: Rate per 10,000 persons/ litres per adult. *(Note: no data available for the ACT. State/territory specific police assault data should not be combined).*

Fig 3: New South Wales

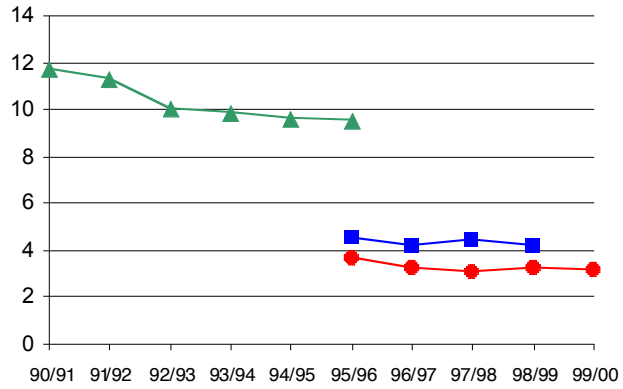


Fig 4: Victoria

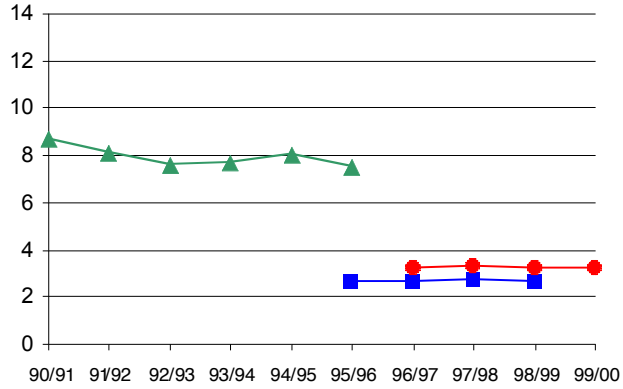


Fig 5: Queensland

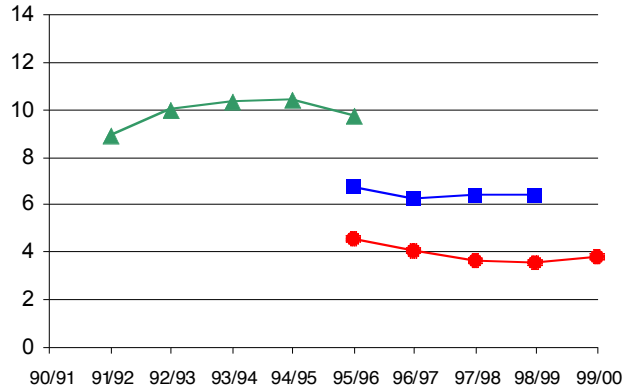


Fig 6: South Australia

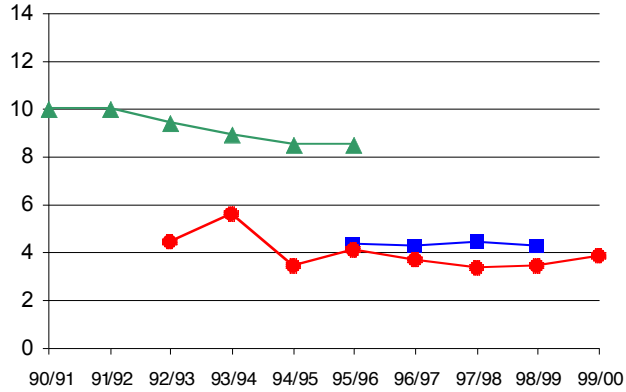


Fig 7: Western Australia

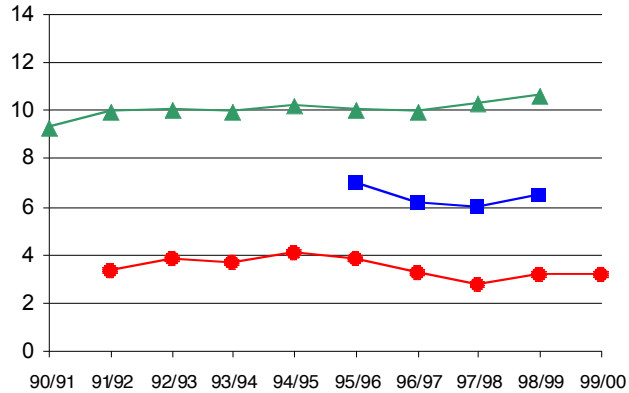


Fig 8: Tasmania

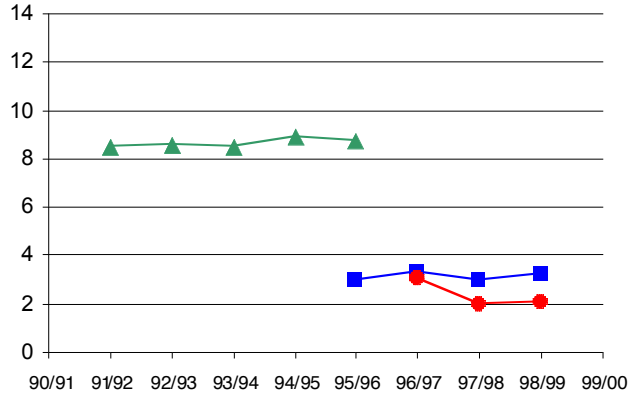


Fig 9: Northern Territory

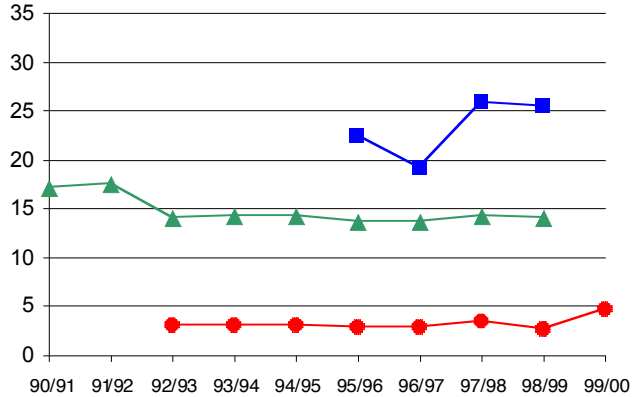
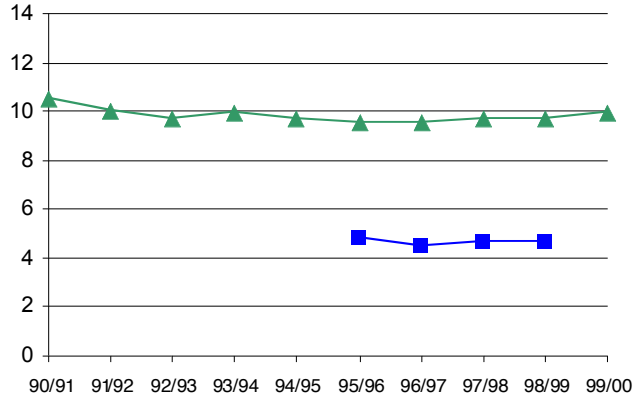


Fig 10: Australia



National metro and non-metro comparisons.

Table 1: Estimated national metro and non-metro rates of alcohol-caused hospitalisations for assault and all serious alcohol-caused violent offences (adjusted by aetiologic fraction) reported by police (per 10,000), 1995/96- 1998/99.

	Metro		Non-metro	
	Hospital admissions	Violent offences	Hospital admissions	Violent offences
1995/96	3.66	-	6.88	-
1996/97	3.74	14.51	6.52	20.71
1997/98	3.57	15.55	6.57	22.00
1998/99	3.49	15.35	6.56	22.76

Australia-wide, estimated rates of hospitalisation for alcohol-caused assaultive injuries were highest in non-metro areas. Similarly, the level of police reported alcohol-caused serious assaults were consistently higher in non-metro regions. Notably, estimated rates of serious assault offences were likely to be largely underestimated since they included only those events which were brought to the attention of authorities. Non-metro levels of alcohol-caused assault hospitalisations were much higher in WA and the NT and also higher in Qld and SA.

State and territory trends in alcohol-caused hospital admissions and alcohol-related violent offences. As shown in Fig. 3 to 10, for most jurisdictions, estimated rates of alcohol-caused assault hospitalisations showed similar trends to alcohol-related police reported assaults. However, hospital data was restricted to four years and for some, police data was also limited. Overall, most jurisdictions showed steady trends in indicators of alcohol-related violence from 1995/96 to 1998/99. In WA there was some evidence of general declining trends with an increase from 1998/99. Hospitalisation rates in the NT also increased rapidly from 1996/97 to 1997/98 and were extremely high throughout. Due to limited information on alcohol consumption, it was not possible to compare adult per capita consumption to levels of alcohol-related violence for all jurisdictions. Although Australia wide per capita consumption showed a similar flat trend to national rates of alcohol-caused assault hospitalisations.

It should be noted, that since trends in serious alcohol-related police reported assaults were subject to different definitions of "serious" by each jurisdiction, they are not comparable *between* jurisdictions.

Conclusions. Overall, both hospital and police data on assaults showed that levels of alcohol-related violence have not declined in Australia – despite community concern, the proliferation of Alcohol Accords and the introduction of harm reduction strategies into legislation. Some jurisdictions also showed small increases in hospital and/or police data which may have reflected changes to hospital recording systems or changing patterns of policing, later trading hours as well as actual increases in alcohol-related violence. Levels of alcohol-caused assault hospitalisations were notably high in the NT.

References.

Briscoe, S. and Donnelly, N. (2001) *Temporal and regional aspects of alcohol-related violence and disorder*. BOCSAR and NDRI, No. 1.

Catalano, P., Chikritzhs, T., Stockwell, T., et al (2001) *Trends in Per Capita Alcohol Consumption in Australia, 1990/91-1998/99*. National Alcohol Indicators, Bulletin No.4. NDRI

Chikritzhs. T., Jonas, H., Heale, P., Dietze, P., Hanlin, K. & Stockwell, T. (1999) *Alcohol-caused deaths and hospitalisations in Australia, 1990-1997*. National Alcohol Indicators, Bulletin No.1. NDRI.

Chikritzhs, T., Stockwell, T. Heale, P., et al. (2000) *Trends in Alcohol-related Road Injury in Australia, 1990-1997*. National Alcohol Indicators, Bulletin No.2. NDRI.

Chikritzhs, T., Stockwell, T., Hendrie, D., Ying, F., Fordham, R et al (1999). *The public health, safety and economic benefits of the Northern Territory's Living With Alcohol Program 1992/2 to 1995/6*. NDRI, Monograph No. 2.

English, D.R., Holman, C.D.J, Milne, E., et al (1995) *The Quantification of drug caused morbidity and mortality in Australia, 1995.* Commonwealth Department of Human Services and Health, Canberra.

Graham, K. & West, P. (2001) Alcohol and crime: examining the link. In: Heather, N. et al "International Handbook of Alcohol Dependence and Problems". New York, Brisbane, Toronto: John Wiley & Sons. Ireland, C.S. and Thommeny, J.L. (1993) The crime cocktail: Licensed premises, alcohol and street offences. *Drug and Alcohol Review*, 12, 2, 143-150.

Ireland, C.S., & Thommeny, J.L. (1993). The crime cocktail: licensed premises, alcohol and street offences. *Drug and Alcohol Review,* 12, 143-150.

Stockwell, T., Daly, A., Phillips, M., et al (1996) Total versus hazardous per capita alcohol consumption a predictors of acute and chronic alcohol-related harm. Drug and Alcohol Review The Measurement of Alcohol Problems and Policy Project (MAPP). *Contemporary Drug Problems*, 23 (3), 441- 464.

Method

Data sources. This bulletin is based on two sources of data. Hospital admissions for assault for all jurisdictions except Qld were identified from the Australian Institute of Health and Welfare's National Hospital and Morbidity Database. Morbidity records for Qld were obtained from Qld Health. Police reported offences against victims of violent assault were obtained from individual police departments in each jurisdiction. This data was restricted to only serious assaults, e.g. grievous bodily harm, wounding, bodily harm, due to large numbers of inconsistently recorded very minor "common" assaults and excluded sexual assaults. No police data was available for the ACT.

Metro and non-metro regions. Capital cities within each jurisdiction were defined as 'metro' with remaining areas defined as 'non-metro'.

Estimated numbers and rates of alcohol-caused assault hospitalisations and alcohol-related violent assault offences. Numbers of alcohol-caused hospitalisations were estimated using the aetiologic fraction method (English et al, 1995). Alcohol aetiologic fractions (AFs) define the degree to which alcohol is known to be a causal factor in any particular disease or injury. The alcohol AF for assault identified in English et al., (1995) was 47%. However this estimate does not reflect changes in national levels of consumption over time and is not representative of the atypically high drinking levels in the Northern Territory. For this reason alcohol AFs for assault for Australia and all jurisdictions except the NT, were adjusted annually according to changes in national per capita alcohol consumption. NT specific alcohol AFs for assault were based on NT specific levels of consumption (see Chikritzhs et al, 2000).

State and territory police reported assault data were used to determine trends in violent offences shown in Figures 3 to 10. Since police do not consistency record the presence or absence of alcohol among victims or perpetrators of violence, a proxy measure of alcohol-relatedness was used. Trends in police reported alcohol-related violent assaults were identified as the rate ratio of high alcohol-related (mostly night-time) incidents of assault to low alcohol-related incidents (mostly day-time assaults). Specific high and low alcohol times for each jurisdiction were identified from Bulletin 2 (Chikritzhs et al. 2000).

As residential status was available for hospitalisations, population rates (per 10,000) were based on Australian Bureau of Statistics estimates of residential populations (ERP). For assault offences, rates (per 10,000) were based on Estimated Service Populations (ESP) including adjustments for tourists and absent residents (see Catalano et al., 2001). This is an important consideration since not all assaults occur in the residential area of the victim.

Assault hospitalisation rates were age standardised with Australia 1999 as the reference year. Age adjustment was not possible for the violent offence data since (i) service population estimates were only available for total populations and not by age groups and (ii) victim age data is often incomplete.