

# Trends in estimated alcohol-attributable deaths and hospitalisations in Australia, 1996-2005

## Summary Points

- Over the last 10 years (1996–2005), an estimated 32,696 Australians aged 15 years and older died from alcohol-attributable injury and disease caused by risky/high risk drinking.
- An estimated 813,072 Australians aged 15 years and older were hospitalised for alcohol-attributable injury and disease over the 10-year period 1995/96 to 2004/05.
- In 2005, estimated alcohol-attributable death rates in the NT, Tas, the ACT, SA and Qld exceeded the national average. The NT, Qld and NSW also exceeded the national average for alcohol-attributable hospitalisations.
- Male death rates showed generally declining trends in most states/territories, except the ACT and Tas which both indicated more upward trends since the late 1990s.
- Female death rates declined steadily in the larger states/territories. Downward trends were less consistent in the NT, Tas and the ACT.
- Rates of alcohol-attributable hospitalisations increased in all jurisdictions, especially in Vic, Tas, the NT and the ACT.
- In 2005, the most common cause of alcohol-attributable death was alcoholic liver cirrhosis. Other common causes of death included non-pedestrian road injury, haemorrhagic stroke, suicide and colon cancer.
- Alcohol dependence, falls, assaults and alcohol abuse were the most common causes of alcohol-attributable hospitalisation in 2004/05.
- The ACT was the only jurisdiction where overall alcohol-attributable deaths increased between 1996 and 2005, a larger increase than for non-alcohol-attributable deaths.
- Vic had the largest increase in alcohol-attributable hospitalisations in the country from 1995/96 to 2004/05. Relative to non-alcohol-attributable hospitalisations, increases in alcohol-attributable hospitalisations were larger in the ACT, NSW, Vic and Tas.
- In WA, the rate of increase in alcohol-attributable hospitalisations between 1995/96 and 2004/05 was substantially lower than the concurrent increase in non-alcohol-attributable hospitalisations.

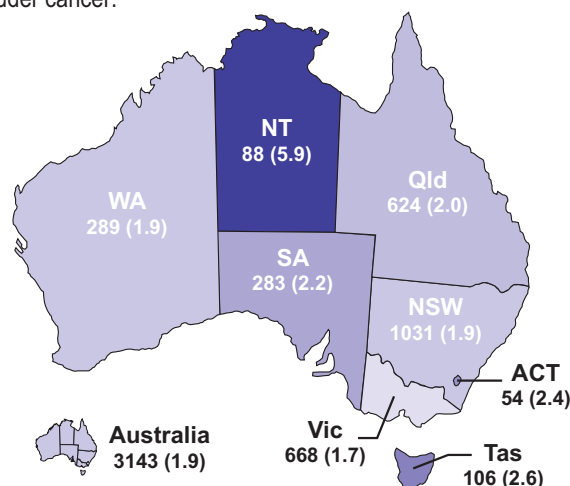
## Introduction

Alcohol was estimated to cost the Australian community some \$15 billion in 2004/05 – about twice the social cost of illicit drug use (Collins & Lapsley, 2008). Alcohol is a major cause of death and injury for many Australians and especially “at-risk” populations such as young, elderly and Indigenous populations (see previous NAIP bulletins).

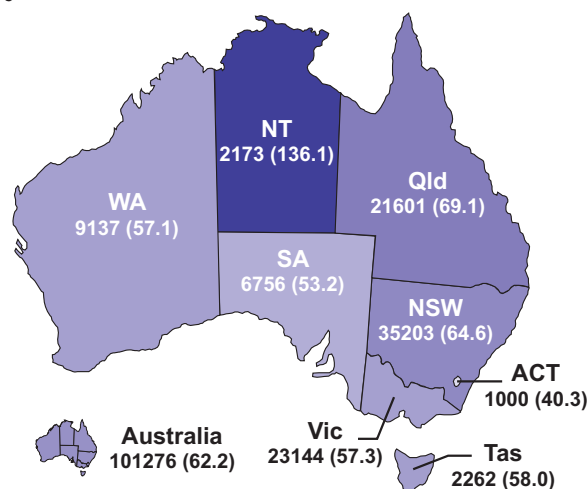
This bulletin shows trends in estimated population adjusted rates of deaths and hospitalisations attributable to risky/high risk alcohol

consumption (based on NHMRC 2001 drinking guidelines) across all jurisdictions for a period of 10 years (1996-2005). The rates shown here are for adults (15+ years) and are based on the aetiologic fraction method for quantifying alcohol-attributable mortality and morbidity (English *et al.* 1995; WHO 2000). As such, these rates are considered estimates of deaths and hospitalisations ‘caused’ as opposed to the more loosely defined estimates of ‘alcohol-related’ events. Rates have been directly age-standardised to the 2006 national population aged 15 years and older (ABS 2008).

This Bulletin also includes estimates of non-alcohol-attributable deaths and hospitalisations as a comparison measure (page 4). Non-alcohol-attributable conditions were those not currently considered to be attributable to either alcohol or tobacco use (changes in population tobacco use may influence underlying mortality/morbidity trends). Non-alcohol-attributable conditions include for example; pancreatic cancer, unspecified dementia, and cataracts but exclude tobacco-attributable conditions such as lung cancer, peptic ulcer, chronic bronchitis, peripheral vascular disease, renal pelvic cancer and bladder cancer.



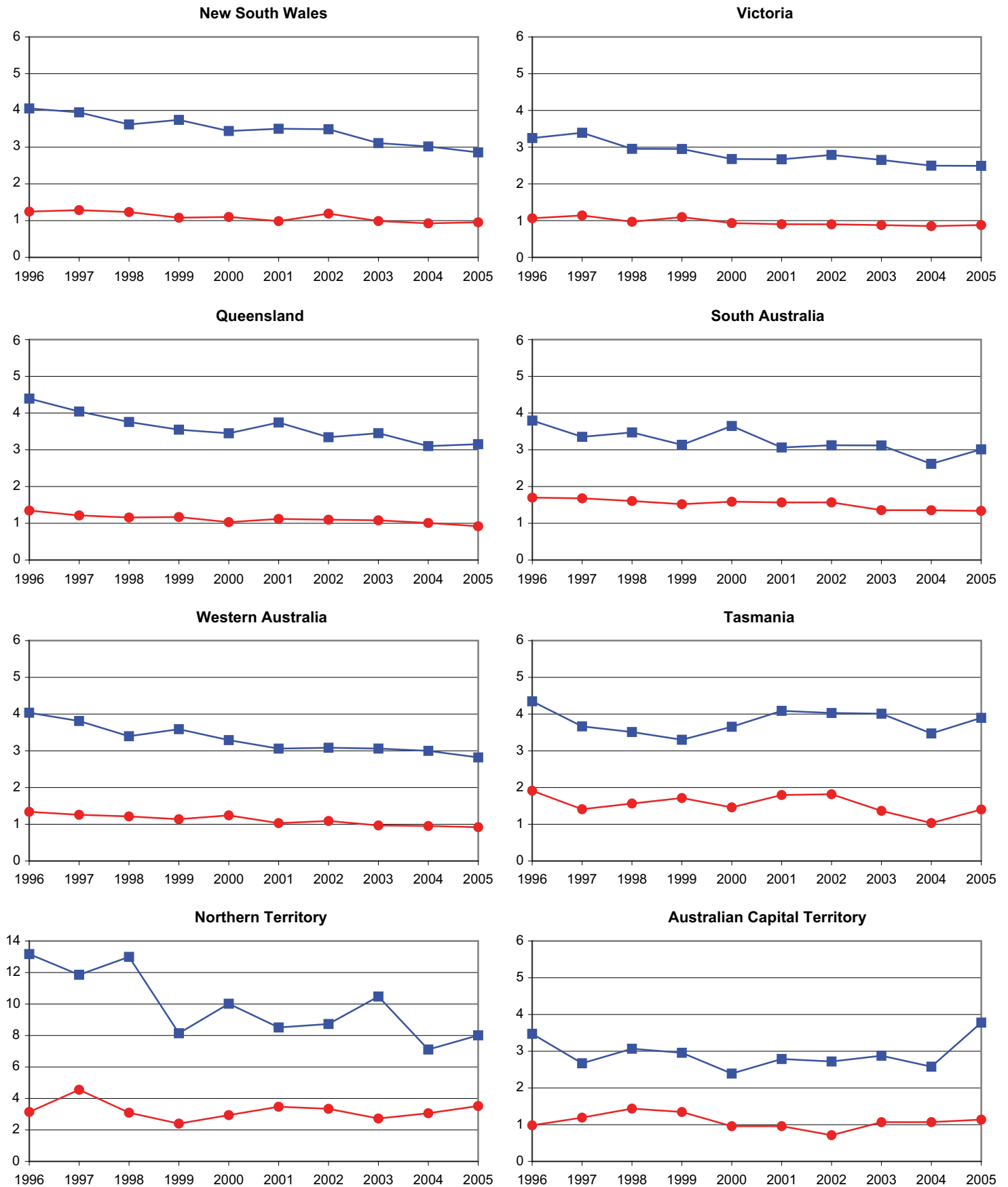
Map 1: Estimated numbers and age standardised population rates (per 10,000) of alcohol-attributable deaths for adults (15+ years), 2005



Map 2: Estimated numbers and age standardised population rates (per 10,000) of alcohol-attributable hospitalisations for adults (15+ years), 2004/05

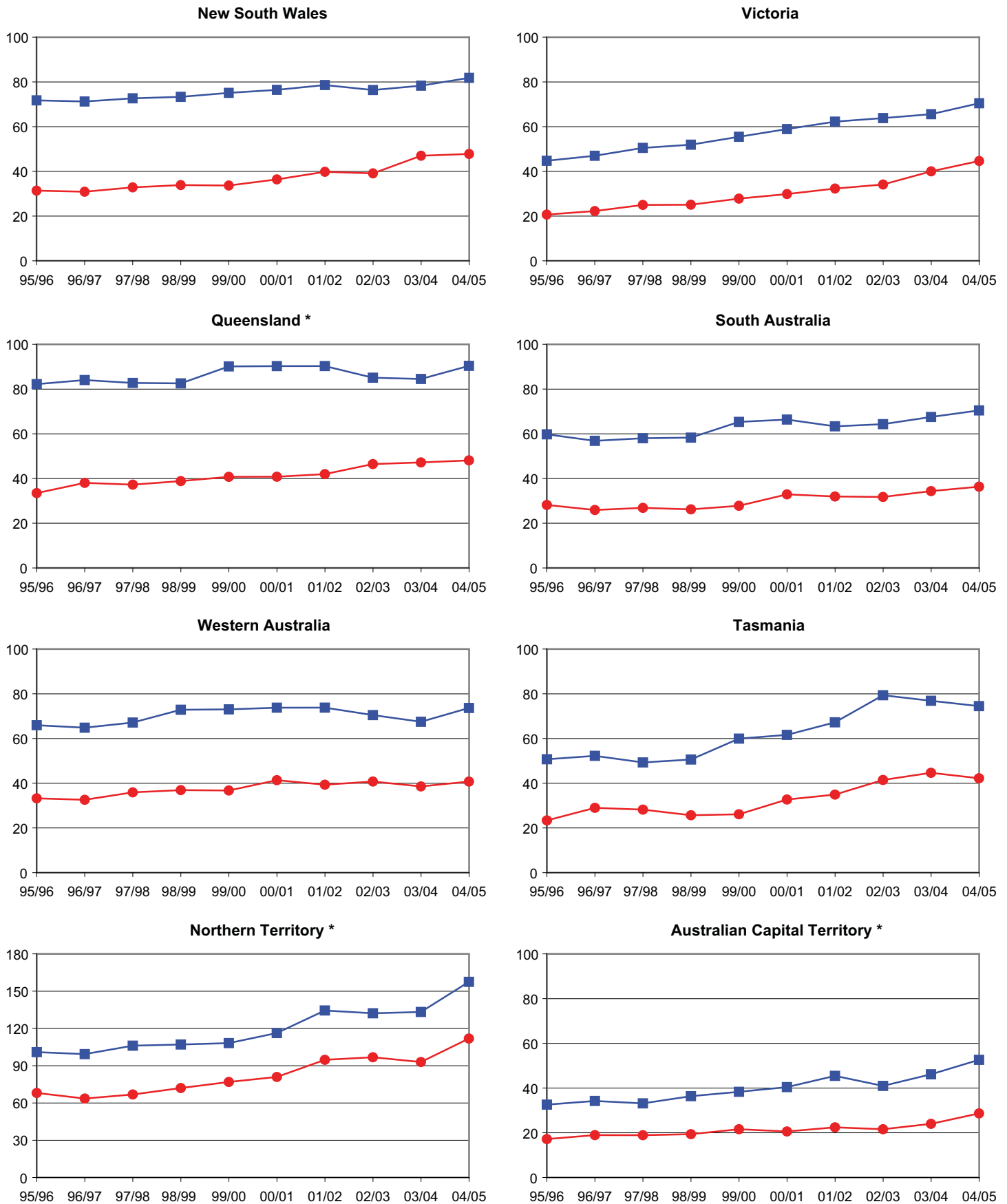
**Figure 1:** Alcohol-attributable deaths for adults (15+ years), males and females, 1996–2005

Legend: ■ males; ● females. Y Axis: Alcohol-attributable death rate per 10,000 15+ yr olds.



**Figure 2: Alcohol-attributable hospitalisations for adults (15+ years), males and females, 1995/96–2004/05**

Legend: ■ males; ● females. Y Axis: Alcohol-attributable hospitalisation rate per 10,000 15+ yr olds.



\* Rates for the NT (00/01-04/05), Qld (02/03-04/05) and the ACT (04/05) had to be estimated as parts of the data could not be obtained. The rate for the NT (98/99) was extrapolated as data was unavailable for that year.

**Trends in alcohol-attributable deaths and hospitalisations**

As shown in Figure 1 (overleaf) all jurisdictions, except Tas and the ACT, indicated declining trends in alcohol-attributable deaths for males. Deaths among females also declined but were less consistent in the NT, ACT and Tas. All states and territories showed increasing trends in alcohol-attributable hospitalisation rates between 1995/96 and 2004/05 but trends appeared markedly steeper for Vic, Tas, the NT and the ACT.

**Causes of alcohol-attributable death and hospitalisation**

In 2005, the most common cause of death due to risky/high risk drinking was alcoholic liver cirrhosis. The top 5 types of disease and injury account for about 54% of all deaths attributable to risky/high risk drinking in that year. The most common conditions leading to hospitalisation in 2004/05 were alcohol dependence, falls, assault and alcohol abuse and accounted for about 61% of all alcohol-attributable hospitalisations in that year. A breakdown of the most common conditions by sex is shown in Table 1 below.

**Table 1:** Top 5 causes of alcohol-attributable death and hospitalisation (%), males and females

	Deaths (%)	Hospitalisations (%)
<b>Males</b>		
1 Alc. liver cirrhosis	25	Alc. dependence 17
2 Non-pedestrian RI	12	Falls 16
3 Suicide	7	Assault 10
4 Haemorrhagic stroke	6	Alcohol abuse 10
5 Colon cancer	6	Non-pedestrian RI 8
<b>Females</b>		
1 Alc. liver cirrhosis	22	Alc. dependence 24
2 Haemorrhagic stroke	9	Falls 20
3 Female breast cancer	7	Alcohol abuse 10
4 Colon cancer	7	Assault 7
5 Non-pedestrian RI	5	Suicide 6

Based on 2005 (deaths) and 2004/05 (hospitalisations) data

**Change in alcohol- and non-alcohol-attributable rates**

A comparison of 1996 and 2005 death rates (Fig 3) indicates that apparent declines in alcohol-attributable deaths for most states/territories exceeded concurrent changes in non-alcohol-attributable deaths (which have typically increased). The exception was the ACT which recorded a 12% increase in alcohol death rates compared with an 8% increase for non-alcohol-attributable death rates. Conversely, the percentage change in alcohol-attributable hospitalisation rates from 1995/96 to 2004/05 (Fig 4) appeared to exceed the percentage change in non-alcohol-attributable hospitalisation rates in all jurisdictions except Qld and WA. At more than double the national average, Vic recorded the largest increase in alcohol-attributable hospitalisation rates. The ACT, NSW, Vic and Tas all reported increases in alcohol-attributable hospitalisation rates that were at least twice as large as the concurrent increases in non-alcohol-attributable hospitalisation rates from 1995/96 to 2004/05.

**References**

Australian Bureau of Statistics (2008). *Population Estimates by Age and Sex, Australia by Geographic Classification [ASGC 2006] datacube. Cat 3235.0.* Canberra: Australian Bureau of Statistics.  
 Collins, D. J., & Lapsley, H. M. (2008). *The costs of tobacco, alcohol and illicit drug abuse to Australian society in 2004/05.* Canberra: Australian Commonwealth Department of Health and Ageing.

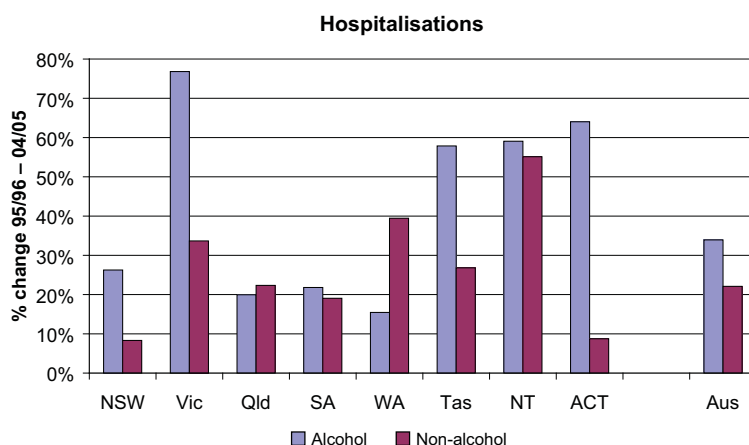
English, D., Holman, C., Milne, E., et al. (1995). *The quantification of drug caused morbidity and mortality in Australia, 1995.* Canberra: Commonwealth Department of Human Services and Health.

National Health and Medical Research Council (2001). *Australian alcohol guidelines: Health risks and benefits.* Canberra: National Health and Medical Research Council.

World Health Organization (2000). *International guide for monitoring alcohol consumption and alcohol related harm.* Geneva: World Health Organization.



**Figure 3:** Percentage change in death rates for alcohol-attributable and non-alcohol-attributable conditions, from 1996 to 2005, by state.



**Figure 4:** Percentage change in hospitalisation rates for alcohol-attributable and non-alcohol-attributable conditions, from 1995/96 to 2004/05, by state.

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