

OVERVIEW

- An estimated 5,785 Australians aged 15+ years died of alcohol-attributable disease and injury in 2015. Hospitalisations attributable to alcohol exceeded 144,000 in 2012/13.
- Nationally, trends in alcohol-attributable deaths appeared to have remained stable or slightly decreased over time. National hospitalisation rates increased marginally between 2003/04 and 2012/13.
- In most jurisdictions trends for male and female hospitalisations and deaths tended to track in similar directions. Exceptions to this were the ACT death and the NT hospitalisation trends.
- Overall, cancers were responsible for the largest proportion (36%) of alcohol-attributable deaths in 2015, while neuropsychiatric conditions were responsible for 37% of all alcohol-attributable hospitalisations in 2012/13.

Introduction

This bulletin shows trends in estimated alcohol-attributable deaths and hospitalisations across all Australian jurisdictions. Both trends cover a period of 10 years; hospitalisations are shown for financial years 2003/04 – 2012/13, while deaths are shown for calendar years 2006 – 2015. Rates shown are for adults 15+ years (except child abuse which includes children between 0–14 years) and based on the alcohol aetiologic fraction (AAF) method for quantifying alcohol-attributable death and hospitalisation (English et al. 1995; WHO, 2000; Sherk et al., 2017). AAFs define the degree to which alcohol is estimated to be a causal factor for a particular injury or disease (Matthews et al., 2002). As such, these figures are considered estimates of deaths and hospitalisations ‘caused’ by alcohol consumption (i.e. alcohol-attributable) as opposed to the more loosely defined estimates of ‘alcohol-related’ events.

AAFs were estimated based on Global Burden of Disease report methodologies (WHO, 2000; Sherk et al., 2017) and applied to the most recent Australian death and hospitalisation data, to provide updated estimates of alcohol attributable deaths and hospitalisations. For conditions where updated AAFs were not available, fractions from English et al. (1995) or relative risks based on research by Bagnardi et al. (2015) and Ridolfo and Stevenson (2001) were applied using the method outlined by English et al. (1995), see website for more details. AAF adjusted counts were converted to crude rates per 10,000 population (state, sex and age specific) using ABS estimated residential population (ABS, 2015).

Australia-wide, cancers were responsible for the largest proportion of male and female alcohol-attributable deaths in 2015 (34% male and 41% female deaths). Breast cancer was the leading cause of death among females (18%), while the leading cause of death among males was liver disease (18%).

Neuropsychiatric conditions were responsible for 37% of alcohol-attributable hospitalisations in 2012/13. The leading cause of hospitalisations was alcohol dependence for both males (17%) and females (26%).

Causes of alcohol-attributable deaths and hospitalisations

An overview of the most common causes of alcohol-attributable deaths for males and females in 2015 is shown in Table 1. Table 2 provides an overview of the 5 most common causes of alcohol-attributable hospitalisation by sex in 2012/13. Table 3 (p. 4) shows counts and percentages of alcohol-attributable deaths (2015) and hospitalisations (2012/13) in Australia for each condition.

Table 1: Top 5 causes of alcohol-attributable deaths (2015)

Top 5 causes of alcohol-attributable deaths			
Male	(%)	Female	(%)
Liver diseases	18	Breast cancer	18
Colorectal (bowel) cancer	10	Liver diseases	15
Oesophageal cancer	8	Haemorrhagic stroke	10
Oropharyngeal cancer	6	Colorectal (bowel) cancer	10
Suicide	6	Lower resp. infections	9

Table 2: Top 5 causes of alcohol-attributable hospitalisations (2012/13)

Top 5 causes of alcohol-attributable hospitalisations			
Male	(%)	Female	(%)
Alcohol dependence	17	Alcohol dependence	26
Falls	13	Falls	11
Alcohol abuse	10	Alcohol abuse	10
Assault	8	Lower resp. infections	8
Lower resp. infection	7	Breast cancer	7

Trends in alcohol-attributable deaths (15+ years)

Figure 1 (p. 2) shows trends in alcohol-attributable deaths for all Australian jurisdictions, by sex between 2006–2015. Trends in male and female alcohol-attributable deaths remained relatively stable over time, particularly for the larger states. The main exception was the NT where male death rates notably declined.

Trends in alcohol-attributable hospitalisations (15+ years)

Figure 2 (p. 3) shows trends in alcohol-attributable hospitalisations by state and sex between 2003/04 and 2012/13. Overall, alcohol-attributable hospitalisation trends in the larger states, which drive the national trend, increased slowly to about 2009/10 then stabilised or declined to the end of the series. There was considerably greater variability in the smaller states with large increases seen for both sexes in the ACT and Tas. There was also some indication of divergence among males and females in the NT and Vic.

The National Drug Research Institute at Curtin University is supported by funding from the Australian Government under the Drug and Alcohol Program. We sincerely thank the AIHW, Australian Coordinating Registry and all jurisdiction Health Departments for access to data.

Citation:

Lensvelt, E., Gilmore, W., Liang, W., Sherk, A. and Chikritzhs, T. (2018). Estimated alcohol-attributable deaths and hospitalisations in Australia 2004 to 2015. National Alcohol Indicators, Bulletin 16. Perth: National Drug Research Institute, Curtin University.

References and further acknowledgements:

[See website](#)

Trends in alcohol-attributable deaths (15+ years)

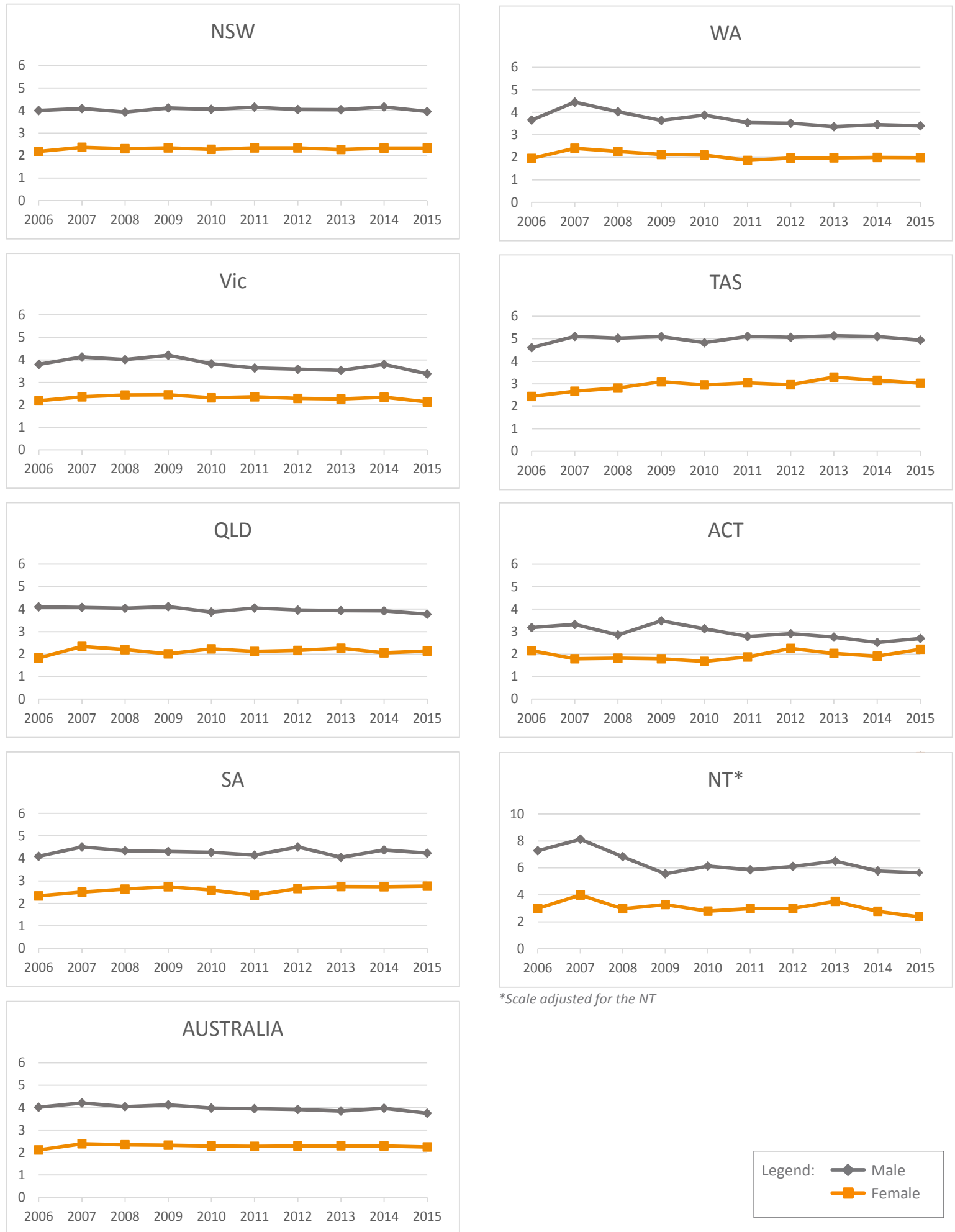
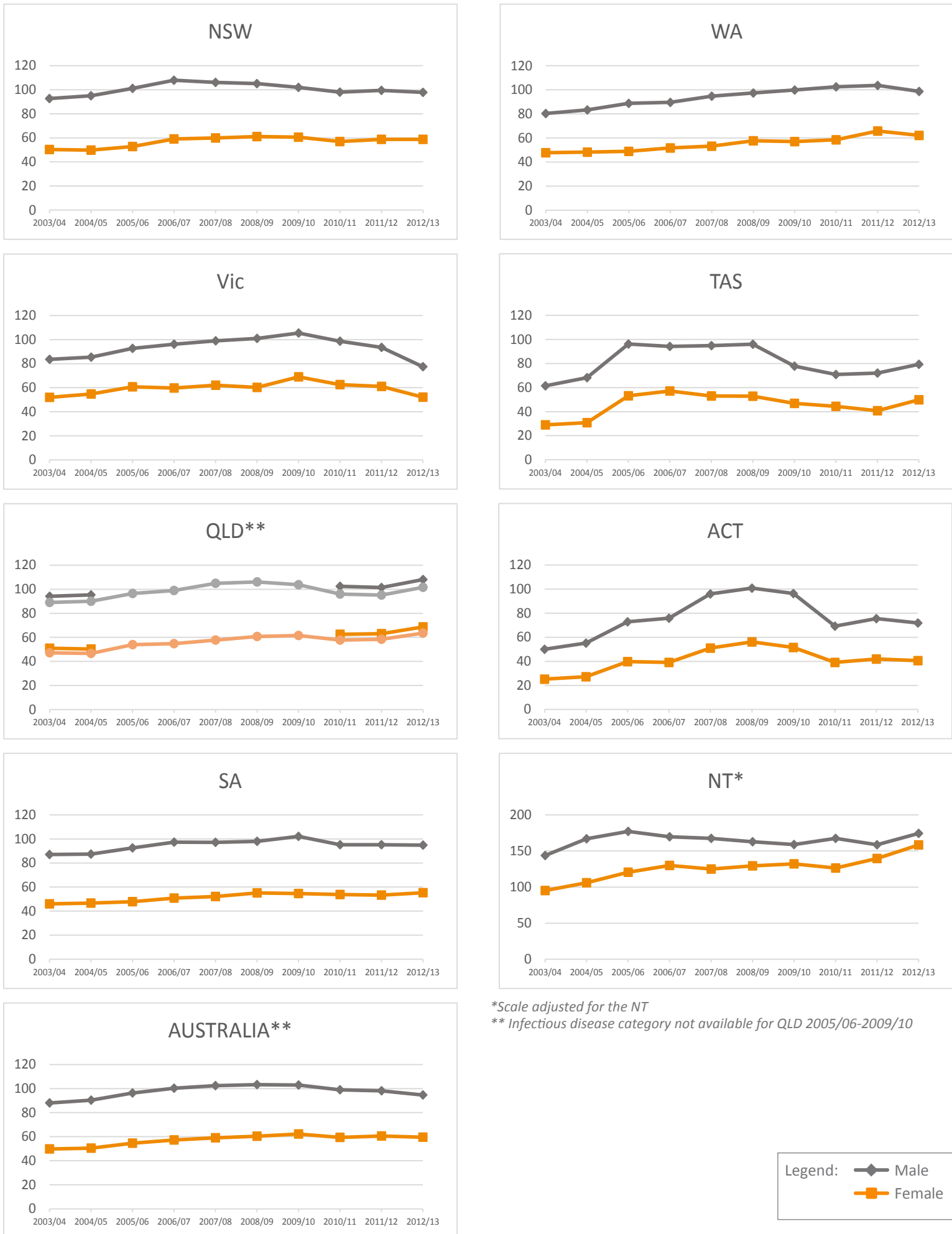


Figure 1: Alcohol-attributable deaths per 10,000 persons, 15+ years, by sex, 2006 – 2015

Trends in alcohol-attributable hospitalisations (15+ years)



*Scale adjusted for the NT

** Infectious disease category not available for QLD 2005/06-2009/10

Legend: ◆ Male ■ Female

Figure 2: Alcohol-attributable hospitalisations per 10,000 persons, 15+ years, by sex, 2003/04 – 2012/13

Number of alcohol-attributable deaths and hospitalisations

Table 3: Alcohol-attributable deaths (2015) and hospitalisations (2012/13) by condition

Attributable conditions	Deaths		Hospitalisations	
	Number	Percent of total	Number	Percent of total
Cancers				
Breast cancer	397	7%	3,754	3%
Colorectal (bowel) cancer	570	10%	3,997	3%
Laryngeal cancer	65	1%	460	<1%
Liver cancer	257	4%	661	<1%
Oesophageal cancer	345	6%	1,217	1%
Oropharyngeal cancer	284	5%	2,256	2%
Pancreatic cancer	174	3%	396	<1%
Stomach cancer	14	<1%	78	<1%
Total	2,106	36%	12,819	9%
Cardiovascular diseases				
Cardiac arrhythmias	249	4%	9,041	6%
Haemorrhagic stroke	408	7%	1,863	1%
Hypertension	269	5%	1,487	1%
Ischaemic stroke -- MALE ONLY	NP	<1%	63	<1%
Alcoholic cardiomyopathy	54	1%	135	<1%
Oesophageal varices	NP	<1%	1,073	1%
Total	980	17%	13,661	9%
Digestive diseases				
Liver diseases	960	17%	6,915	5%
Pancreatitis	42	1%	4,686	3%
Alcoholic gastritis	NP	<1%	1,776	1%
Gastro-oesophageal haemorrhage	NP	<1%	488	<1%
Total	1,002	17%	13,865	10%
Infectious diseases				
HIV	NP	<1%	6	<1%
Tuberculosis	10	<1%	213	<1%
Lower respiratory infections	366	6%	10,662	7%
Total	376	7%	10,881	8%
Neuropsychiatric conditions				
Epilepsy	64	1%	3,579	2%
Alcoholic psychosis	66	1%	5,536	4%
Alcohol dependence	133	2%	29,780	21%
Alcohol abuse	49	1%	14,276	10%
Alcoholic polyneuropathy	–	–	51	<1%
Total	312	5%	53,222	37%
Injuries				
Alcohol poisoning	68	1%	713	<1%
Aspiration	70	1%	363	<1%
Murder/Assault	89	2%	10,165	7%
Child abuse (aged <15yrs)	NP	<1%	103	<1%
Drowning	49	1%	100	<1%
Falls	186	3%	17,061	12%
Fire	21	<1%	1,010	1%
Occupational machine injuries	NP	<1%	2,242	2%
Suicide/Intentional self-harm	272	5%	2,675	2%
Road traffic injury non-pedestrian	208	4%	4,645	3%
Road traffic injury pedestrian	26	<1%	667	<1%
Total	989	17%	39,744	28%
Grand total	5,785	100%	144,192	100%
Protective conditions				
Diabetes	-191	14%	-6,647*	38%
Ischaemic heart disease	-703	51%	-6,903	39%
Ischaemic stroke -- FEMALE ONLY	-481	35%	-2,213	13%
Cholelithiasis	NP	<1%	-1,845	10%
Grand total	-1,375	100%	-17,607	100%

NP: Small numbers not available for publication and excluded from subtotals

* 2012 count due to coding change in 2013