

CHAPTER 1

Alcohol use: Consumption and costs

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OVERVIEW

- The changing face of alcohol consumption around the world.
- Global alcohol morbidity and mortality.
- The growing burden and impact of alcohol misuse in the developing world.
- The rising health costs of alcohol at home and abroad.

Alcohol misuse is an issue that expands beyond its physical and psychological consequences. Overconsumption of, and addiction to alcohol, is a global health challenge. The social consequences of alcohol transcend class and its impact at the individual and population levels are of equal importance. At home it is a burden on the NHS budget (Figure 1.1) and abroad an issue that stifles development in resource-poor countries. It is through understanding the nature of excessive consumption that health professionals can act as advocates for the best use of resources at home and abroad.

Patterns of consumption

Although the United Kingdom over the past century has never been more than a moderate consumer in terms of the total amount of alcohol drunk per capita, it is nevertheless considered to have one of the more problematic relationships with alcohol, as a result of the drinking patterns and style that have developed. For the first half of the 20th century, the United Kingdom was relatively abstemious, but the decades after the Second World War saw a rapid increase, with per capita consumption almost doubling. This rise was highest within northern regions of the United Kingdom and was a divergence from the downward trend in southern European consumption. More recently the United Kingdom has reason to be positive in terms of alcohol consumption. Since 2008, there has been a downward trend in the proportion of adults drinking. In 1998, 75% of men and 59% of women had consumed alcohol in the week prior to a department of health interview. In 2011 this proportion dropped to 66% (men) and 54% (women). Over the past decade, there has been a 16% decline in the number of children of

school age admitting to regular alcohol consumption. Attitudes are also changing, with fewer young people (9% between 2003 and 2010) agreeing that it was acceptable for a person of school age to get drunk. Unfortunately this shift has yet to translate into a reduction in accident and emergency (A&E) attendances in this age group.

Baby boomer boozers

The cohort of problem drinkers in the United Kingdom however is changing rapidly. Costly healthcare impacts of the binge drinking culture of the 1990's were traditionally associated with 16 to 24 year olds. This demographic have now been surpassed by 55 to 74 year olds, costing £825.6 million in hospital admissions per year, 10 times that of their younger counterparts. This group of middle aged, and often middle-class drinkers, consistently drink above recommended limits and have the greatest complex care needs. Despite rising consumption within this age group (often parents), there has been a parallel decrease in alcohol consumption among young people. The cultural phenomenon of binge drinking remains a pervasive force for young people but is less likely in children with stronger school bonds that are bought alcohol by their parents, rather than their own expendable income (Bellis et al., 2007).

Alcohol and low- and middle-income countries

A large proportion of global alcohol consumption (24.8%) is home-made, produced illegally or sold outside of normal governmental controls. This unrecorded alcohol is much more prevalent in low- and middle-income countries where unregulated production often outweighs regulated brewers. In the eastern Mediterranean region and South East Asia, it amounts to more than 50% of consumption (WHO, 2014). Home-made spirits make up a particularly high proportion of consumption in India. The alcohol consumption rates of early economic development can worsen despite a shift to commercial alcohol production. A review by Riley and Marshall of middle-income countries showed that with economic development, the shift to industrial beverages can lead to more sustained drinking patterns within the population. Thus, alcohol is increasingly being identified as a health challenge that is part of a wider epidemiological shift to a non-communicative disease burden in resource-poor settings.

Alcohol-related healthcare costs in Manchester were an estimated £39.1 m, equating to £95 per adult

£9.3 m Cost of A&E (accident & emergency) attendances	£25.1 m Cost of inpatient admissions	£4.7 m Cost of outpatient attendances
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Cost of alcohol-related inpatient admissions by cause

£9.4 m Admissions wholly attributable to alcohol	£15.8 m Admissions partly attributable to alcohol
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Cost of alcohol-related inpatient admissions by gender

£16.7 m Male inpatient admissions cost	£8.4 m Female inpatient admissions cost
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Cost of alcohol-related inpatient admissions by age

£1 m 16–24 year olds	£9.9 m 25–54 year olds	£9.8 m 55–74 year olds	£4.5 m 75+ year olds
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The inpatient admissions and A&E attendances data in this map is for 2010/11. Estimates for outpatient attendances are based on benchmarks from the Birmingham Heavy Drinkers Project (1997 to 2004), The General Lifestyle Survey (2009) and the number of high risk drinkers taken from Local Alcohol Profiles (LAPE) (2005) estimates. 2010–11 costs were applied to estimate outpatient attendance costs.

Figure 1.1 From the alcohol harm map 2013: City of Manchester. Source: Alcohol Concern (2013). Reproduced by permission of Alcohol Concern.

Currently the highest level of alcohol consumption is found in the high-income Western world (Figure 1.2), but this is partly due to a higher level of abstinence across Africa and South East Asia. This hides the fact that regions with high abstinence rates in the developing world and low average alcohol intake per capita often have the highest consumption per drinker. Any future reduction in abstinence rates worldwide could result in a large increase in the global burden of disease from alcohol.

Morbidity and mortality

That the effects of long-term heavy drinking can be serious and even fatal is generally well known. Less well known is the range of medical conditions to which alcohol contributes (Figure 1.3) and the relatively low levels of consumption at which the risk of harm begins to be important. The relationship between alcohol and health is complex. Alcohol-related disease has a direct dose–response relation: the greater the amount drunk, the more the harm done. This applies to liver cirrhosis, hypertension, and haemorrhagic stroke. Alcohol-attributable disease results from a series of factors that can be ‘related to levels and patterns of consumption but also other factors such as culture, regulation and beverage quality’ (WHO, 2011). These are deaths that would not have happened without the presence of alcohol. In cardiovascular disease a modest beneficial effect had been reported with moderate amounts of alcohol; however, recent research suggests that any benefit had

been overestimated and the so-called protective effect is losing favour among experts.

In 2012, 3.3 million deaths globally were attributable to alcohol (WHO, 2014), which amounts to 5.9% of global deaths in the year. This is greater than the proportion of deaths from HIV/AIDS, violence and tuberculosis combined. The incidence of alcohol-related mortality is highest among men (7.6% total deaths). This is believed to be due to higher levels of associated violence, injury, and cardiovascular disease. In the same year, 139 million disability-adjusted life years (DALYs) were attributed to alcohol consumption across the world, which is 5.1% of the global burden of disease. Alcohol is the third leading cause of disability in high-income countries after smoking and hypertension. Robust data have been notoriously difficult to collect due to doctors’ reluctance to certify alcohol as a cause of death and difficulty defining the contribution of alcohol. In the United Kingdom, alcohol accounts for 10% of the burden of disease as measured by DALYs. Fifteen thousand deaths a year in England are caused by alcohol (3% of total deaths) with only 21% of these deaths due to alcohol-related cirrhosis.

On a global scale, greater economic wealth results in a larger alcohol-attributable burden in keeping with the associated higher consumption in these areas. However the new ‘Global Status Report on Alcohol and Health 2014’ from the WHO suggests that this relationship may be more complex, with a trend developing in low-income countries, with traditionally lower consumption, having a higher alcohol-attributable burden of disease per litre of alcohol

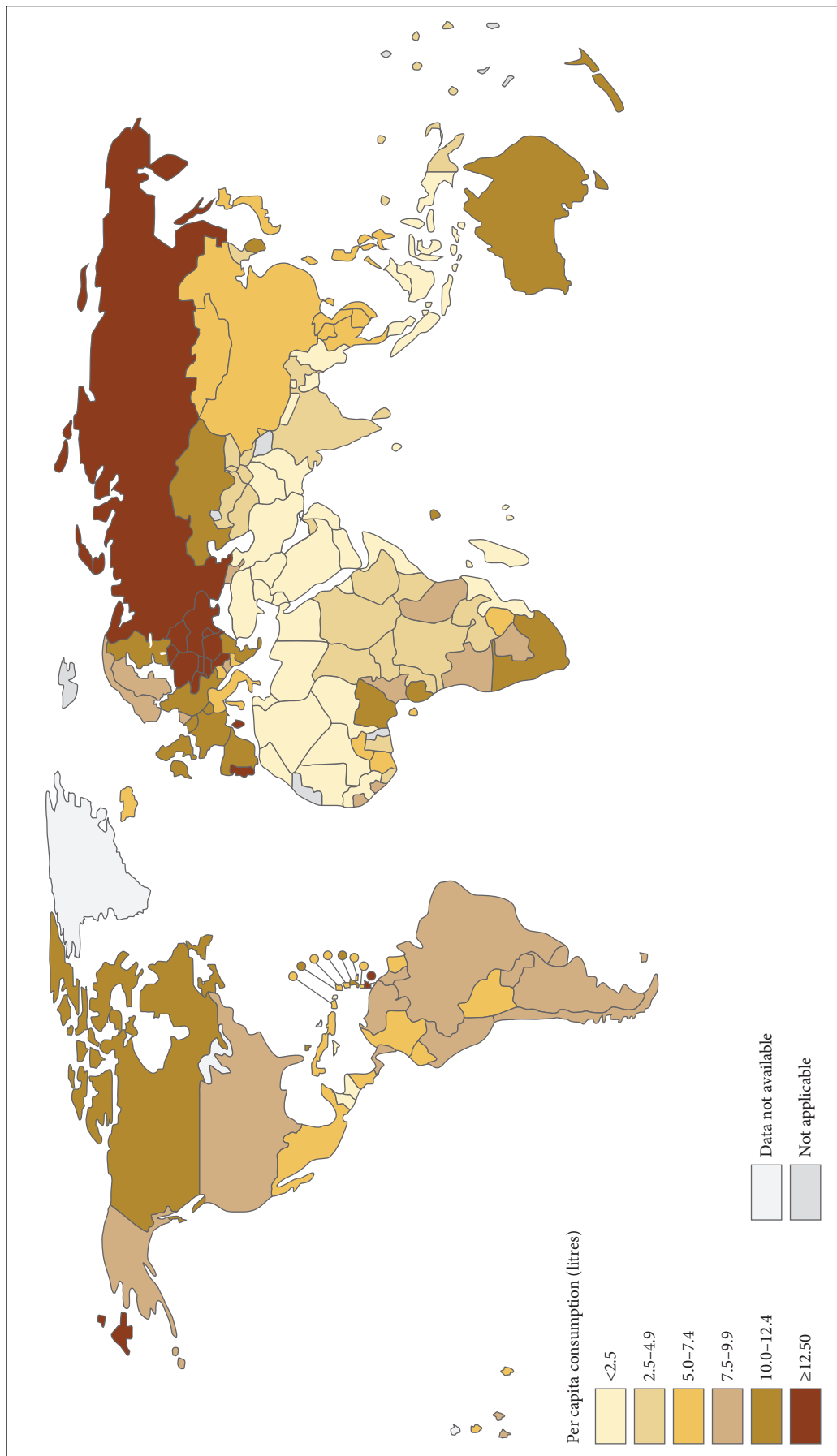
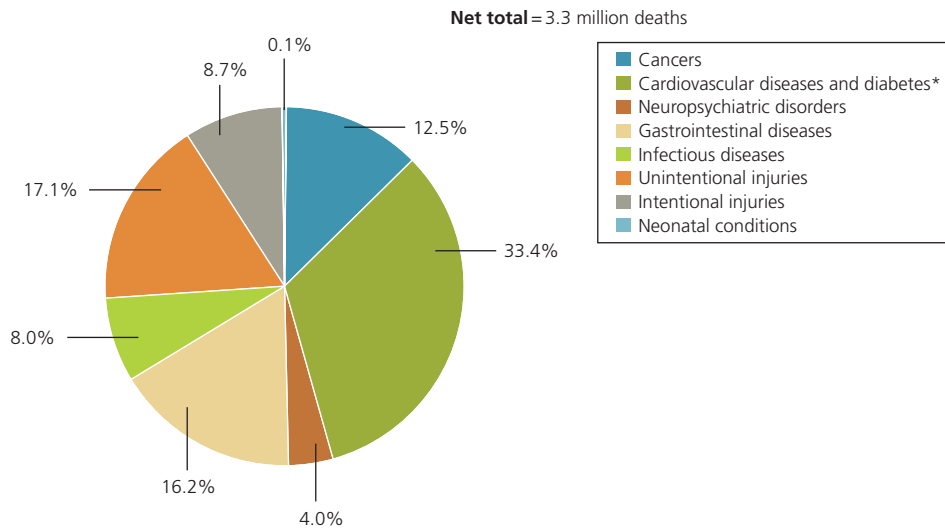


Figure 1.2 Total alcohol per capita consumption (15+ years; in litres of pure alcohol), 2010. Source: WHO (2014). Reproduced with permission from the World Health Organization.



*Including beneficial effects of low risk drinking patterns on some diseases.

Figure 1.3 Distribution of alcohol-attributable deaths, as a percentage of all alcohol-attributable deaths by broad disease category, 2012. Source: WHO (2014). Reproduced with permission from the World Health Organization.

consumed (WHO, 2014). This is thought to be in keeping with more risky patterns of drinking. Worryingly, middle-income countries expanding economically, such as India and China, have relatively high and increasing alcohol-related consumption and mortality (Figure 1.4). The highest alcohol-related mortality is in the Russian Federation and neighbouring countries where every fifth death among men is attributable to alcohol. In parts of Siberia this figure rises to more than one in two male deaths (Zaridze, 2009). In Russia, surrogate alcohols (not designed for drinking) feature highly as a cause for alcohol-related harm and surgical spirits and perfumes are both popular and particularly harmful. They are often twice as potent as vodka and with specific health risks, such as blindness and act as an important black market commodity. Since the dissolution of the Soviet state the biggest shift in drinking pattern has been in the consumption of beer (only classified as an alcoholic drink in 2013). Foreign breweries entered the Russian market in 1995 and beer consumption has increased from 151 per year (per capita) to 81 l. This increase in consumption is unequalled by any other nation.

Burdens and costs

Unfortunately the recent shift in UK attitudes to drinking has not resulted in a lower health expenditure on alcohol. Alcohol-related hospital admissions have rocketed by 40% since 2003. A total of 198,900 admissions in 2010–2011 had alcohol as the primary diagnosis (Figure 1.5) and 1,168,300 admissions were to some degree attributable to alcohol, leaving the cost of alcohol-related harm to the NHS at £3.5 billion per year (2009–2010 costs) (Figure 1.6). The full economic impact of alcohol misuse has a wider scope than just healthcare costs, and the obvious loss to society due to premature deaths. Perhaps the most insidious and costly aspect of alcohol misuse is lost productivity, costing the UK £7.3 billion a year. Secondary costs resulting from social care, drink driving, and other alcohol-related crimes place the overall

estimate of cost to society at £25.1 billion in the United Kingdom alone (Department of Health, 2007).

The cost to the individual is devastating; in England the average years of life lost for men and women dying from alcohol-attributable conditions was 20 and 15 years, respectively (Department of Health, 2005). Although the association between alcohol and mental health problems is complex, links are indisputable. People who have a pre-existing mental health problem are more likely to drink hazardously than those without, and people who drink hazardously are more likely to develop a mental health problem than those who do not.

In resource-poor settings, the higher burden of alcohol-related disease and injury per litre of alcohol consumed is in part explained by lower socioeconomic status, poorer diet, and deprivation in general. Alcohol misuse in low- and middle-income countries has also been shown to have a causal relationship with infectious disease such as tuberculosis and pneumonia, as alcohol depresses the immune system leaving drinkers more susceptible to these endemic infections associated with poverty.

In primary care there has been a drive over the past decade to identify problem drinkers. ‘Identification and brief advice’ interventions (IBAs), where patients answer screening questions and are then given advice on the risks of their consumption as well as advice on how to cut down are common practice. IBAs have proven benefit in reducing alcohol consumption in primary care settings, and these positive effects can last up to 48 months after the consultation. This approach has been combined with wider access to alcohol liaison services in hospitals and to some extent in the community.

The interaction between the health service and alcohol misuse is by no means confined to the hospital ward or GP surgery. Anyone familiar with emergency departments, particularly on a weekend evening, will know that doctors, nurses and increasingly security staff spend considerable time not just treating patients but controlling the behaviour of those who are extremely intoxicated and have received an injury or been assaulted. Similarly, ambulance

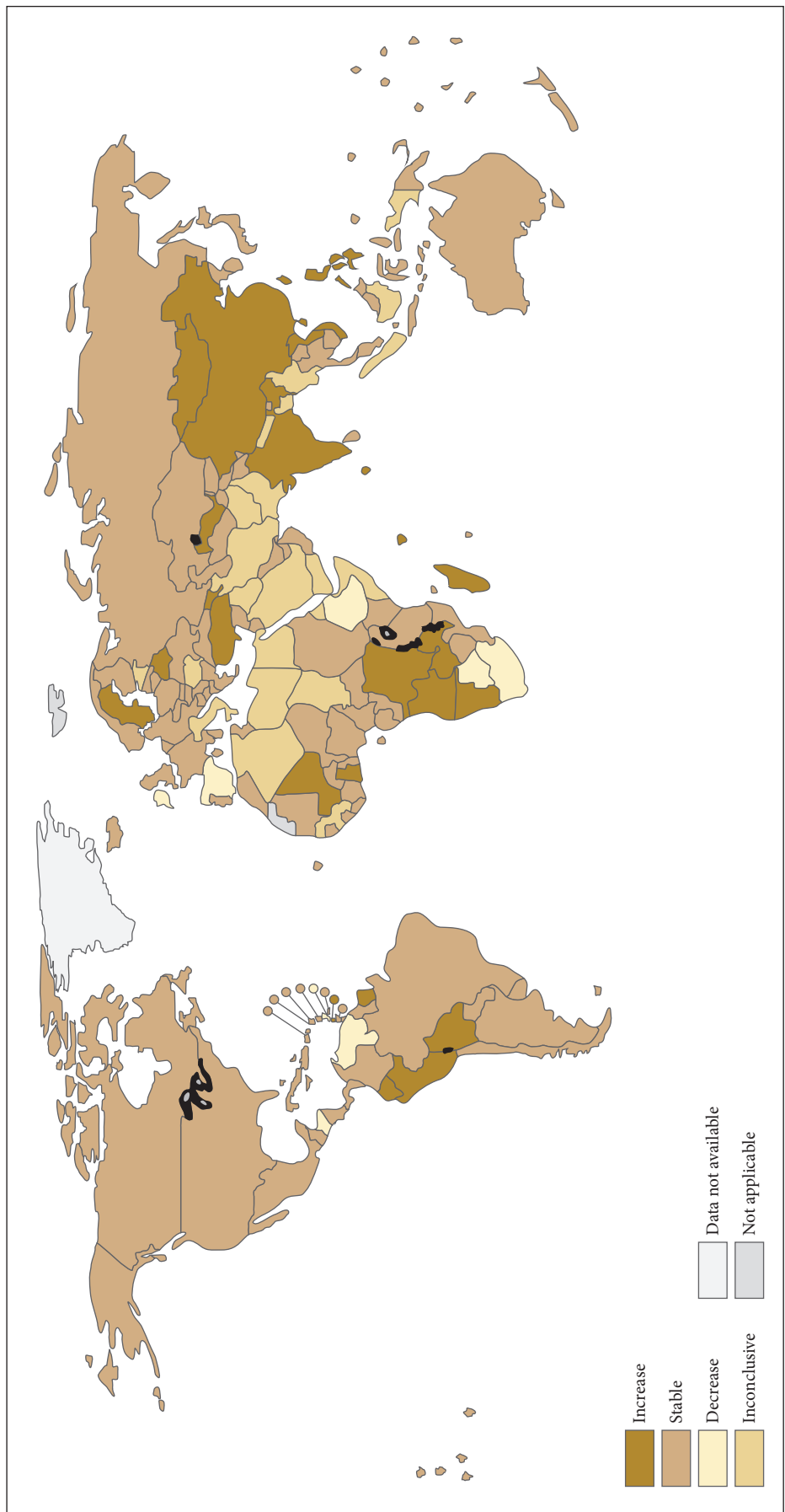


Figure 1.4 Five-year change in recorded alcohol per capita (15+ years) consumption, 2006–2010. Source: WHO (2014). Reproduced with permission from the World Health Organization.

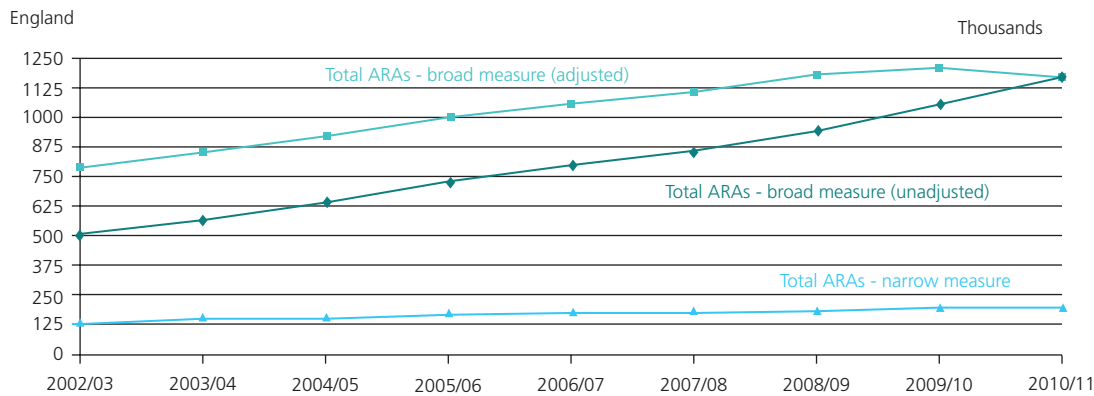


Figure 1.5 Alcohol-related NHS hospital admissions (ARAs) 2002/2003 to 2010/2011. Source: Health and Social Care Information Centre (2012).

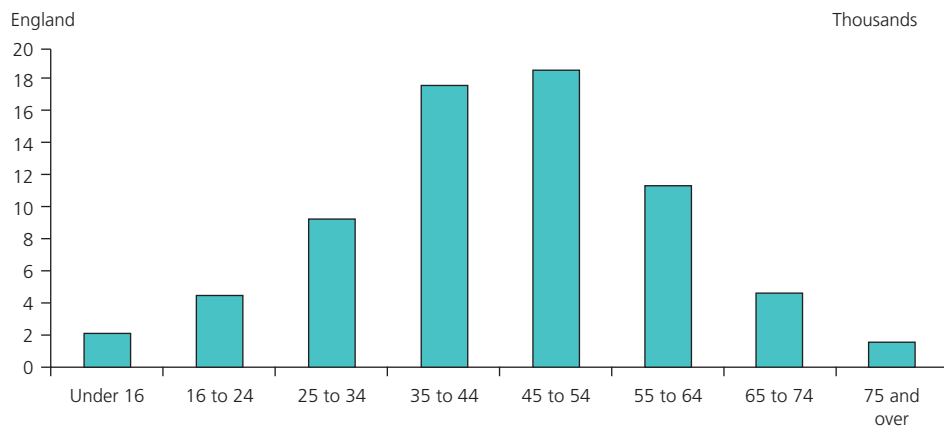


Figure 1.6 Number of hospital admissions where there was a primary diagnosis of a disease or condition wholly attributable to alcohol, by age, 2010/2011. Source: Health and Social Care Information Centre (2012).

paramedics estimate that most of their work at these times involves dealing with the aftermath of drinking.

Public opinion and governmental policy has been centred on public order issues and anti-social behaviour associated with alcohol misuse. This focus risks inattention and lack of investment in the insidious and growing health costs of alcohol.

Further reading

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