

5. DEATHS DUE TO ALCOHOL

Comparison of data for Scotland with rest of UK

The Office for National Statistics (ONS) provides annual data on the number of alcohol-related deaths each year for the constituent countries of the United Kingdom. The figures are broken down by gender and age with the 2017 publication providing data for the period 2001 to 2016. ONS (in conjunction with the National Records of Scotland and the Northern Ireland Statistics and Research Agency) also provide data in a similar format for the total number of deaths by age and gender, but with the data for England and Wales combined. These 2 sources of data have been used to derive a comparison of the proportion of deaths each year that were related to alcohol for both males and females, comparing Scotland with England & Wales, and Northern Ireland.

To remove spikes caused by random variation within years the data have been averaged over 5-years. Male alcohol-related deaths in Scotland (Figure 20) are approximately double the rate for females in England & Wales and between 2.3 to 2.4 times higher in Scotland and Northern Ireland (Figure 20). Alcohol-related deaths are higher than in both England & Wales and Northern Ireland, but the gap between the countries is reducing. Since 2001 the proportion of alcohol-related deaths compared to all deaths in Scotland has gradually reduced from a high of 3.8% to 2.9%, while over the same period the rates for England & Wales and Northern Ireland, after an initial rise, and have plateaued around 1.9% and 2.5% respectively.

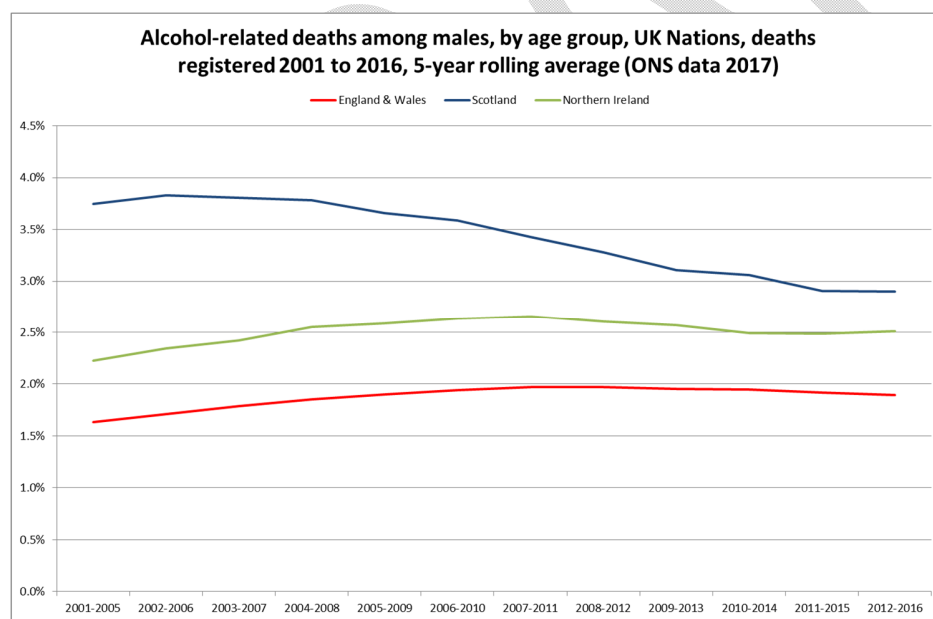


Figure 20: Proportion of alcohol-related deaths (Males) 2001-2016

The data for females in Scotland show a similar downwards trend, but from a much closer starting point. In 2001-2005 the proportion of alcohol-related deaths in Scotland was 1.5%, but this had reduced to 1.3% for the period 2012-2016. The figures for England & Wales show a rise from 0.8% in 2001-2005 to 1% in 2012-16, with Northern Ireland rising from 1% to 1.2% over the same period.

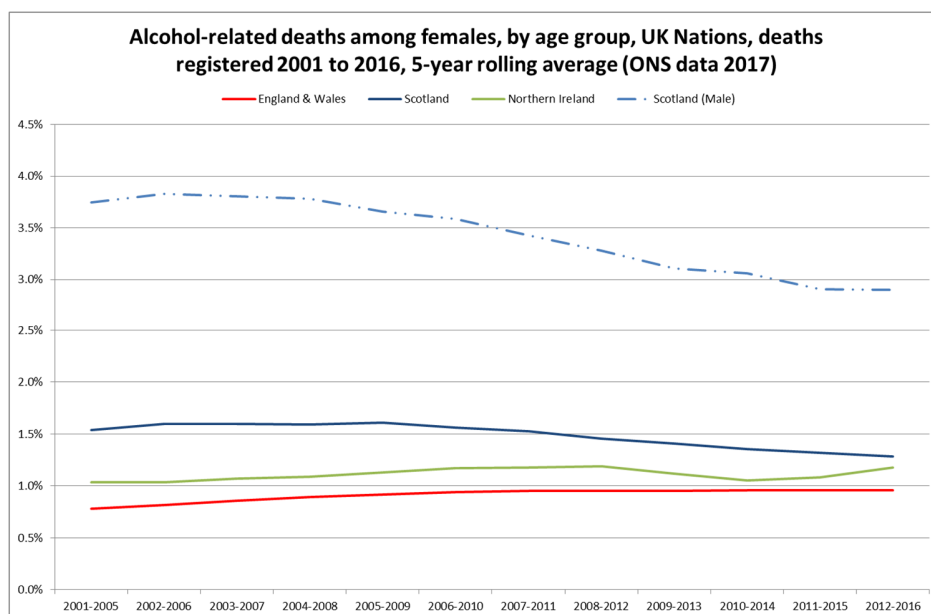


Figure 21: Proportion of alcohol-related deaths (Females) 2001-2016 – Rate for males in Scotland shown for comparison

The data for Moray are not available by age group or gender, but as Figure 22 illustrates the overall proportion of deaths in Moray related to alcohol has consistently been lower than the national rate. Note, however, there has been a slight rise during the most recent 5-year period.

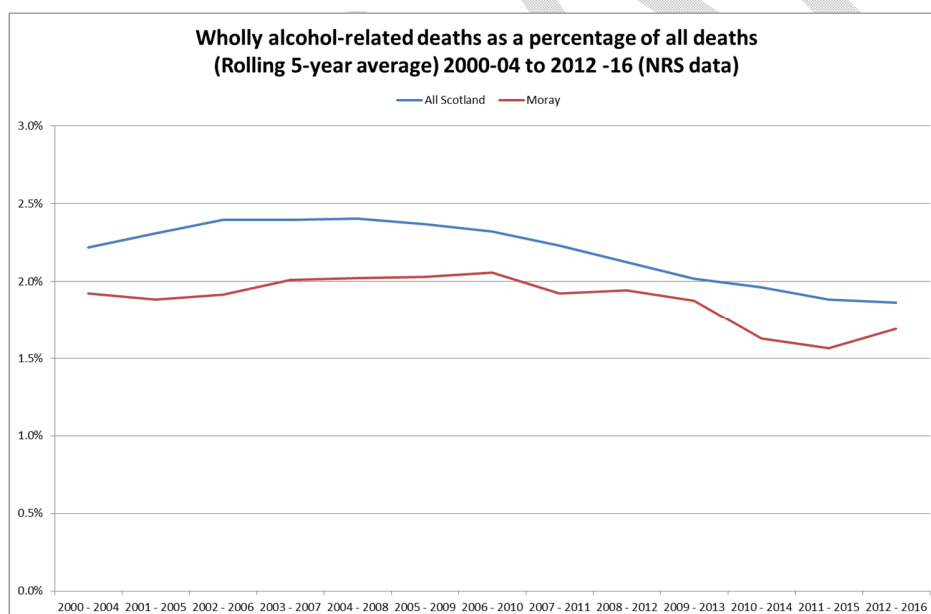


Figure 22: Wholly alcohol-related deaths - Moray 2000 - 2016

Alcohol-related deaths – changes by age group over time

The peak age group for alcohol related deaths for males in Scotland is 45-49 years old, but the rate amongst this age group has declined from a peak of 21.3% in 2005 to 11.9% in 2016. For most age

groups the proportion of alcohol-related deaths in men has reduced since 2001. For men aged 60 years old and above, the rates for each 5-year age-group has remained reasonably static (Figure 23).

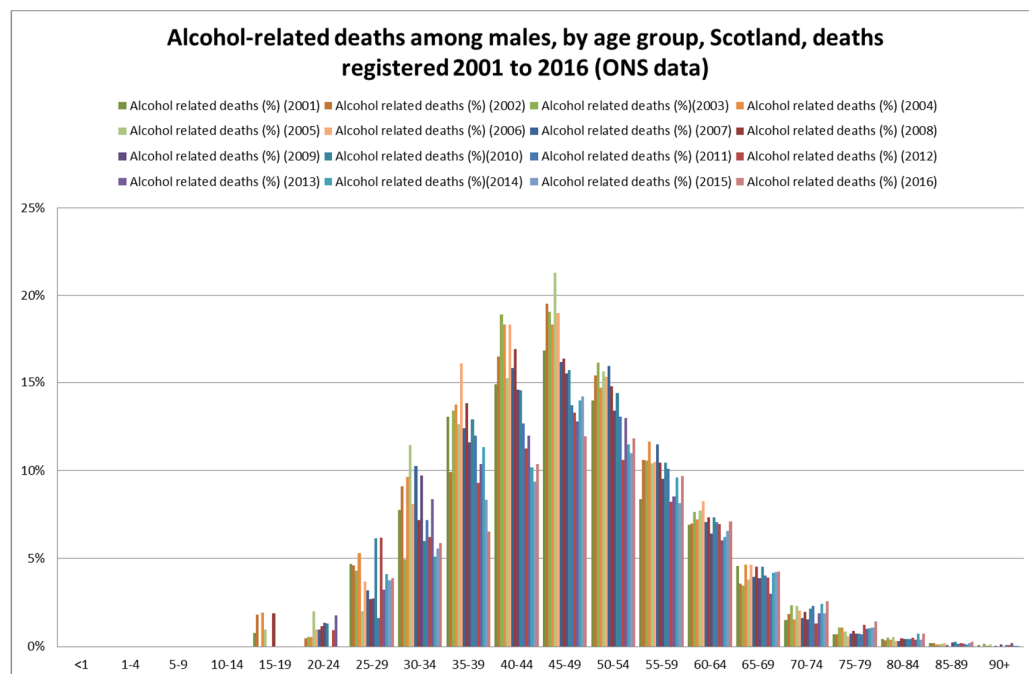


Figure 23: Alcohol-related deaths among males, by age group - Scotland

This contrasts sharply with the situation in England & Wales where deaths due to alcohol in the groups 50-54 years old through to 70-74 years old have all shown an upwards trend since 2001. There are some similarities with Scotland with the largest proportion of alcohol-related deaths occurring in the 40-44 and 45-49 age ranges (Figure 24). To put this in context, the overall peak age group for male deaths from all causes is in the 80-84 age group in both England & Wales and in Scotland (Figure 25).

Figure 23 also illustrates that for the 25-29 year old age group there has been a reduction in the proportion of alcohol-related deaths in males in Scotland from 4.6% in 2001 to 3.9% in 2016. However, the rate has fluctuated between a high of 6.2% and a low of 1.6% since 2001. This fluctuation may in part be due to the relatively small sample sizes, where a small change in numbers can disproportionately affect the percentage. In England & Wales, with a much larger population sample in this age range, the trend is clearer (Figure 24). Since peaking in 2011 the proportion of males aged between 25 and 29 years old dying from alcohol-related conditions has halved from 4.4% to 2.2% in 2016.

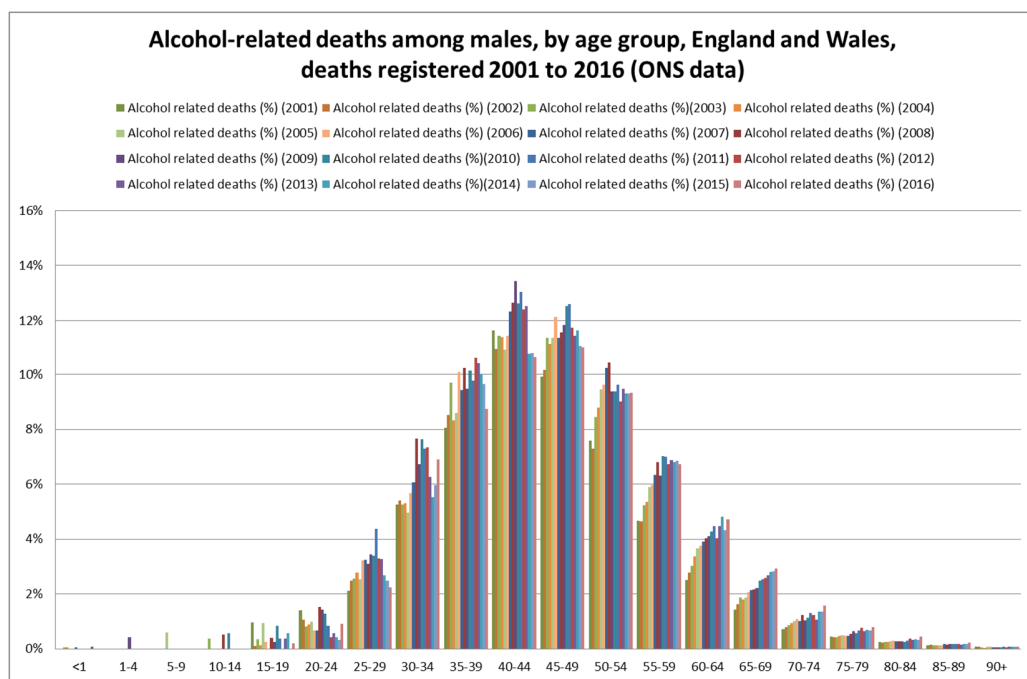


Figure 24: Alcohol-related deaths among males, by age group – England & Wales

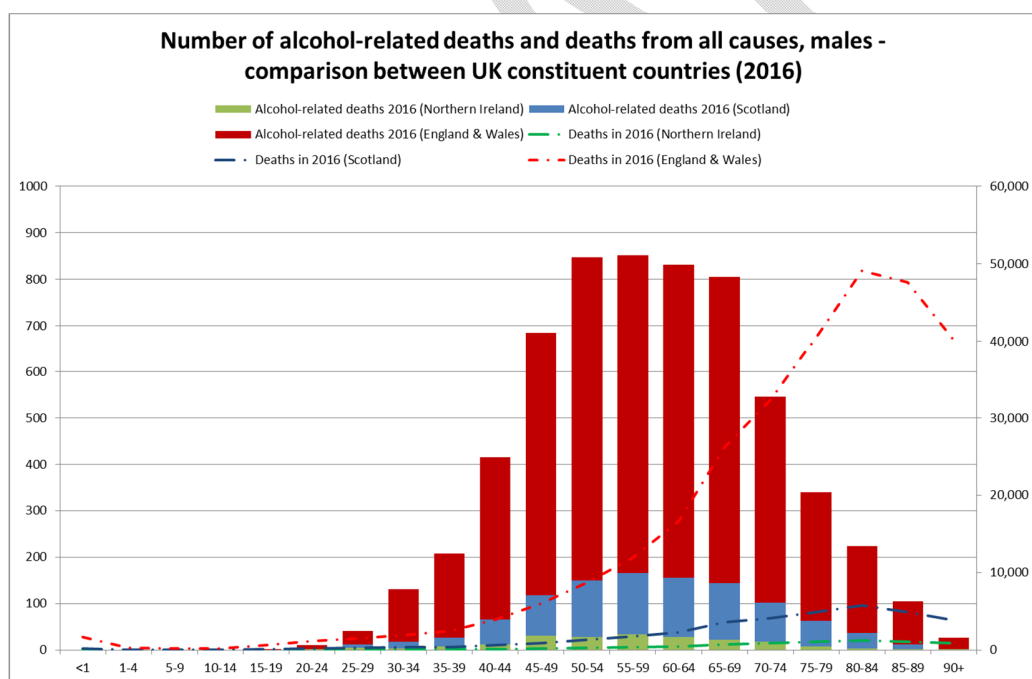


Figure 25: Number of male deaths, and alcohol-related deaths for the UK constituent countries (2016)

For females in Scotland alcohol-related deaths are a much lower proportion than males. For most age groups the proportion of alcohol-related deaths is reducing. Some of the spikes for younger women are caused by relatively small sample sizes, and may also be due to the random nature of incidents from year to year (Figure 26).

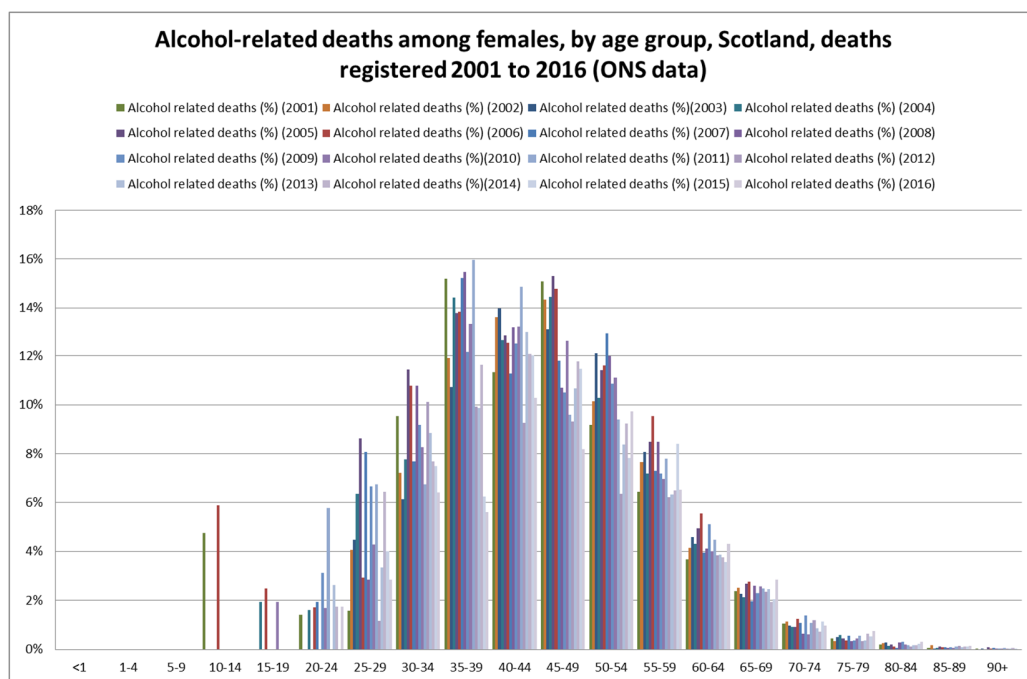


Figure 26: Alcohol-related deaths among females, by age group – Scotland

England & Wales with a larger population tends to have fewer spikes, and demonstrate more clearly the trends noticed with alcohol-related deaths in older men. Alcohol-related deaths in females in England & Wales has reduced, generally, for the under 40s, but for the 40 year olds up to the 75-79 year old cohort rates of alcohol related deaths have risen since 2001. In Scotland this trend is not evident, and it could be argued that the alcohol-related rate of deaths for the majority of age groups has steadily reduced since the peak rate between 2005 and 2007 (Figures 26 and 27).

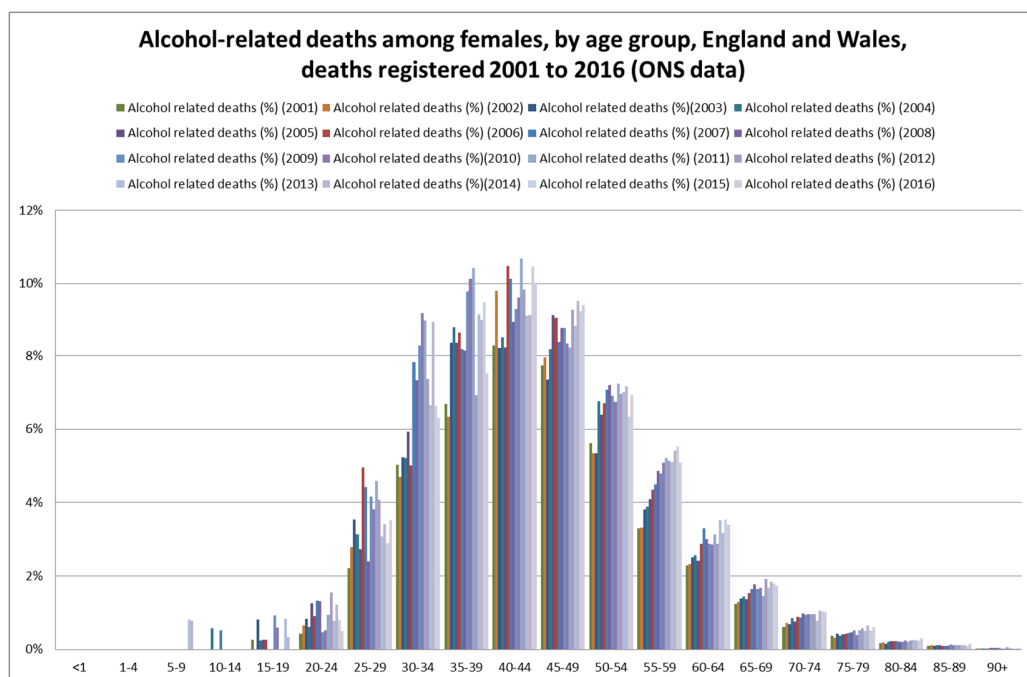


Figure 27: Alcohol-related deaths among females, by age group – England & Wales

For women the most deaths due to alcohol occur in the 55-59 year old group, with the 50-54 year olds the next highest. The peak death rate in women, due to all causes, occurs in the 90 year olds and over group (Figure 28).

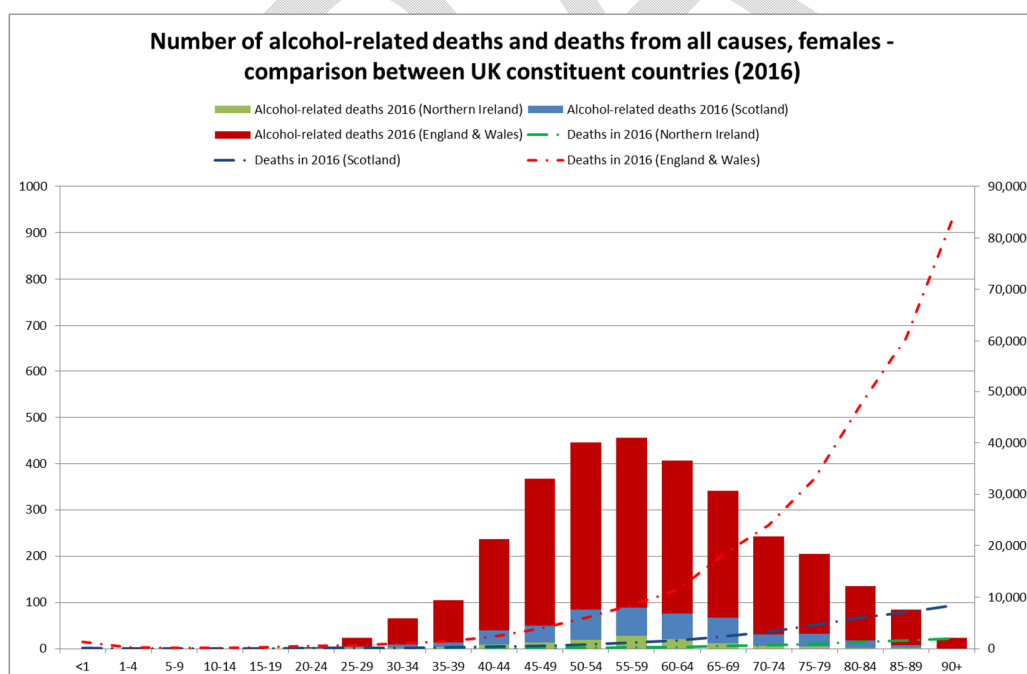


Figure 28: Number of female deaths, and alcohol-related deaths for the UK constituent countries (2016)

Data from the Office for National Statistics gathered in 2011 showed a clear correlation in death rates due to alcohol for residents in England and Wales aged from 16-64 years old depending on their occupation¹⁶ (Figure 29); particularly for males. Males in routine occupations have a death rate due to alcohol-related conditions which is 4 times greater than their counterparts in higher managerial or professional occupations. Females have lower death rates than males; females in routine occupations have a death rate, due to alcohol, that is 2 and a half times greater than females in higher managerial and professional occupations (Figure 29). While similar data has not been found for Scotland or Moray it is interesting to read this across to the occupation profile of Moray.

Moray tends to have fewer residents working in professional and associate professional & technical occupations compared to the rest of Great Britain, and Scotland (Figure 30). Conversely, Moray has a higher proportion of residents in elementary occupations and employed as process plant & machine operatives. This suggests that Moray may be susceptible to higher than the national average alcohol-related death rates. However, this does not appear to be the case and is examined in more detail in a later section.

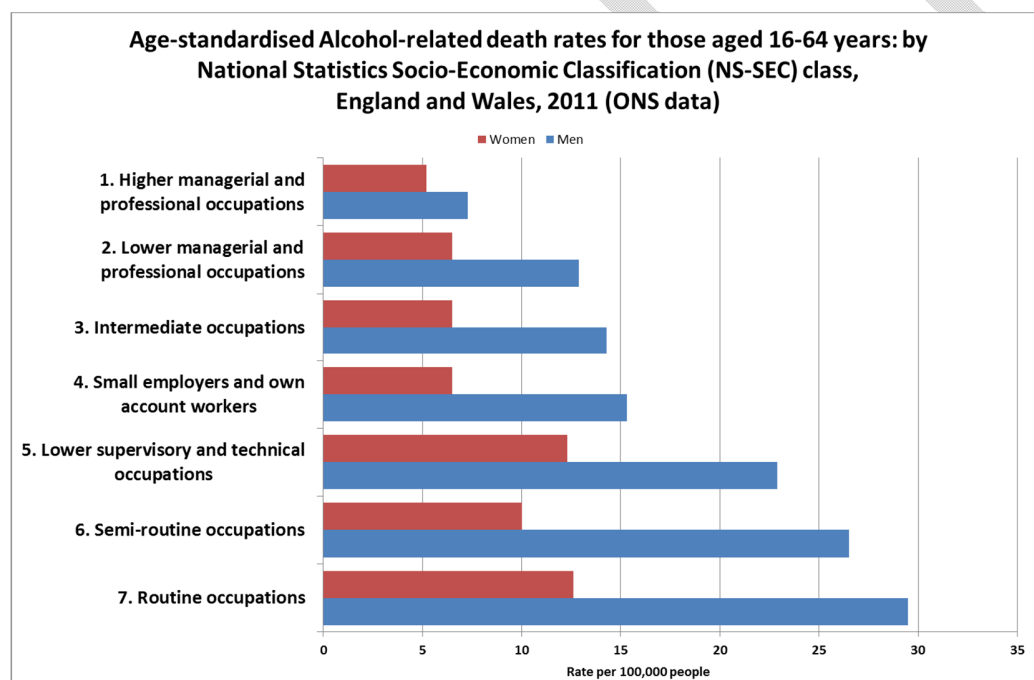


Figure 29: Age-standardised Alcohol-related death rates for those aged 16-64 years by socio-economic classification, England and Wales (2011)

¹⁶<http://webarchive.nationalarchives.gov.uk/20160105202741/http://www.ons.gov.uk/ons/rel/subnational-health4/alcohol-related-deaths-in-the-united-kingdom/2013/sty-lives-lost-to-alcohol.htm>

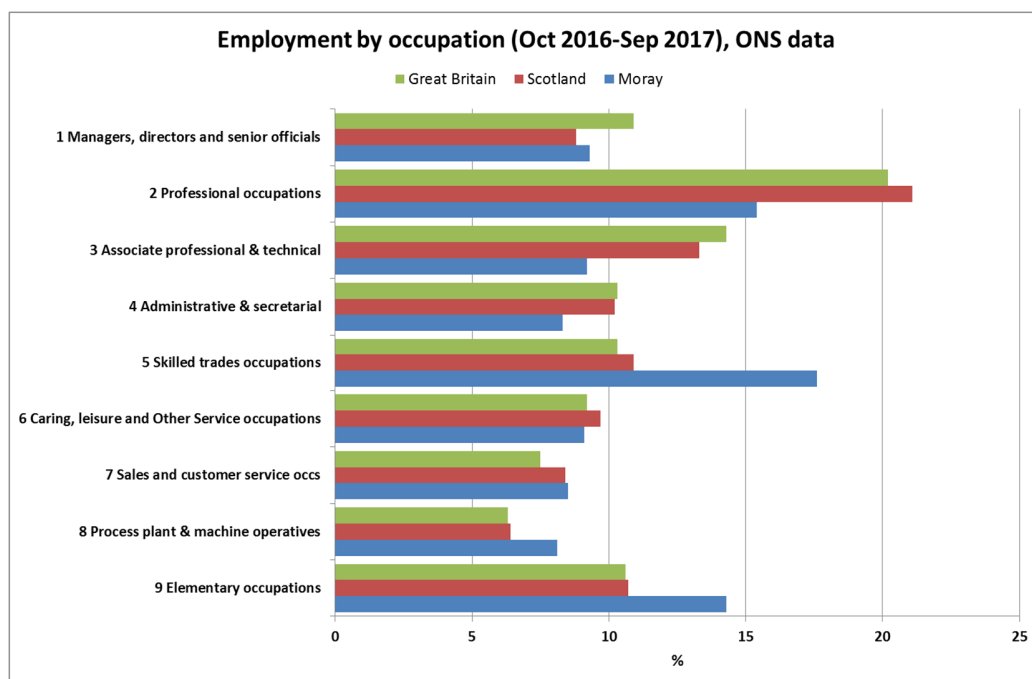


Figure 30: Employment by occupation (Oct 2016-Sep 2017) (ONS data)

In 2011 data from across the UK (Figure 31) identified that the peak age group for males dying of alcohol related conditions was between 55 and 64 years old (approximately 47 deaths per 100,000 population), with the peak for females being 55 to 59 years old (half the male rate at 22.4 deaths per 100,000 population).

This data has some correlation with the drinking habits identified previously:

- Males aged between 55 and 64 years old had the highest proportion of people drinking more than 14 units per week and were also the largest group drinking over 4 units per week.
- However, the largest proportion of males drinking over 8 units per week were 16-24 and 25 – 34 years old.
- Female drinking levels are generally lower than male levels, except in the 16-24 year old age group.
- Females aged between 55-64 years old were the second highest group consuming more than 3 units on their heaviest drinking day.

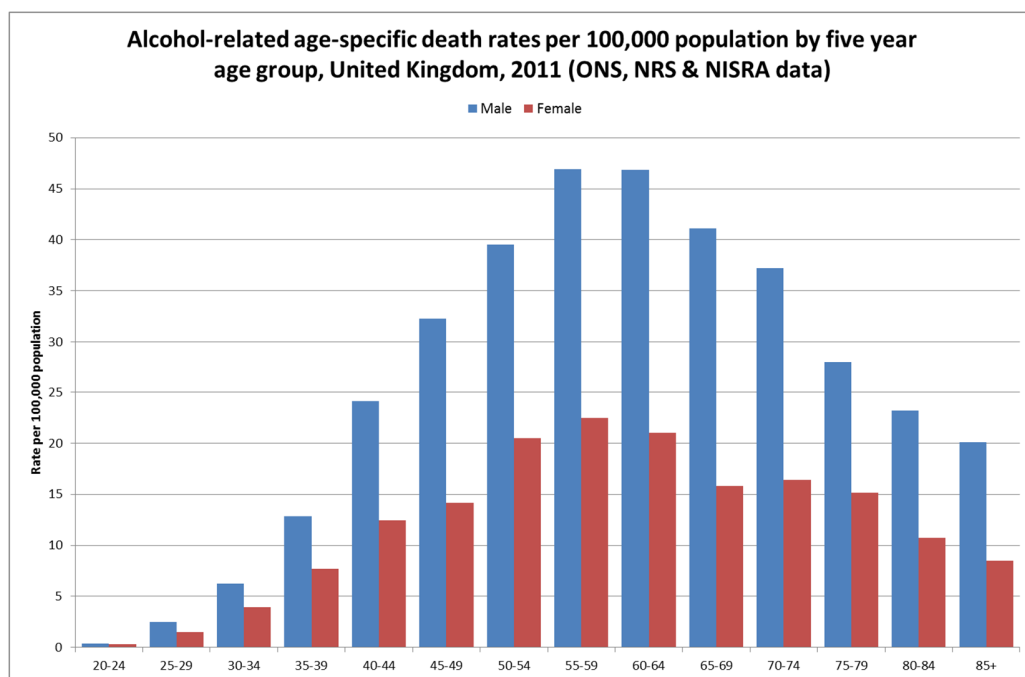


Figure 31: Alcohol-related age-specific death rates per 100,000 population by five year age group, United Kingdom, 2011 (ONS, NRS & NISRA data)

Alcohol related deaths in Moray

Despite having an occupational demographic that might lead to higher than average alcohol-related death rates Moray was mid-table in the ranking of local authorities over the 5-year period 2012- 2016 (14th highest out of the 32 local authorities in Scotland). Figure 32 illustrates that over this period Moray's alcohol-related mortality rate sat almost midway between the highest local authority, Glasgow City, and the lowest, Shetland Islands.

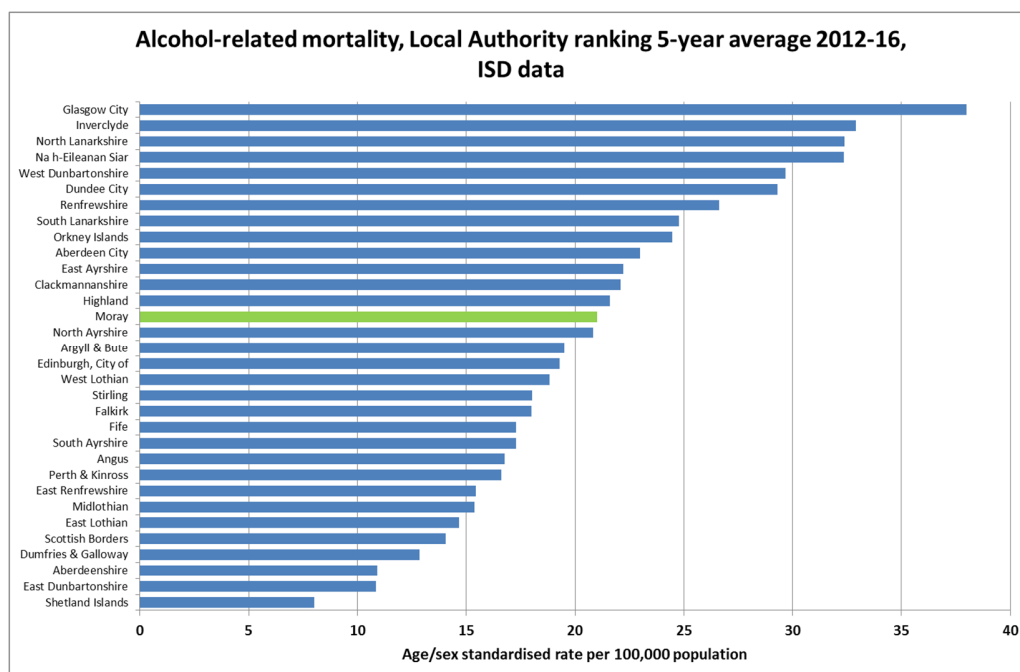


Figure 32: Alcohol-related mortality, Local Authority ranking 2016 (ISD data)

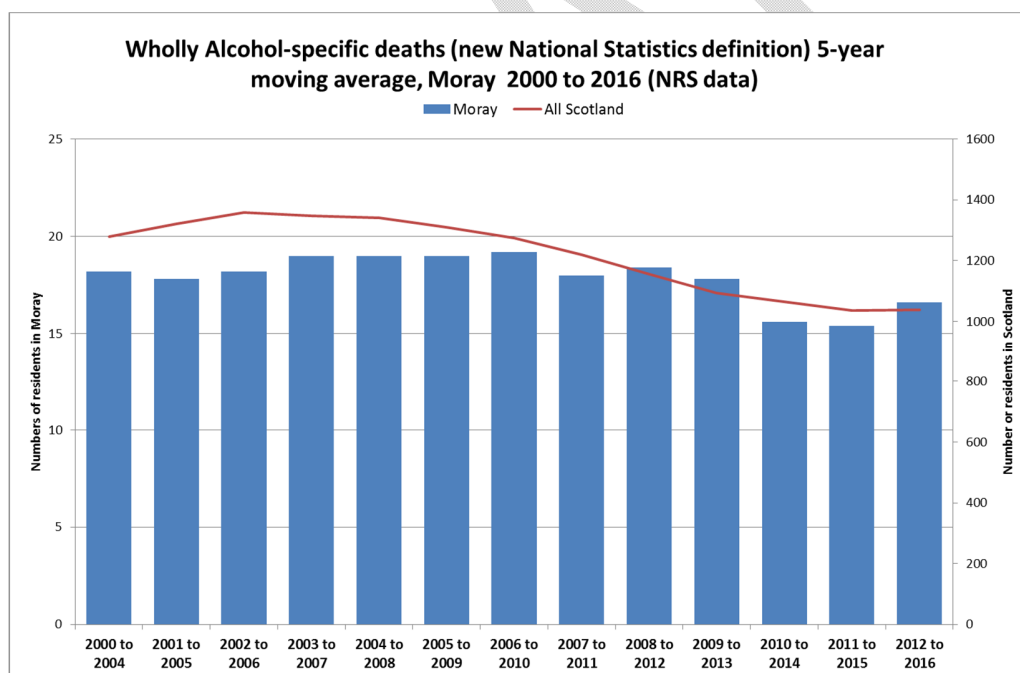


Figure 33: Wholly alcohol-specific deaths 5-year moving average 2006-2016

As the numbers of individuals in Moray dying each year of alcohol-related conditions are small the rate per 100,000 population can vary significantly from year to year, hence the 5-year average used in Figure 33. The average number of alcohol-related deaths in Moray is between 15 and 19 per year, and the trend had been gradually downward since 2008-2012, but during 2012-16 the average rose to 17. To put

these numbers in context during the period 2012-16 there were on average of 1,008 deaths per year from all causes (Figure 34).

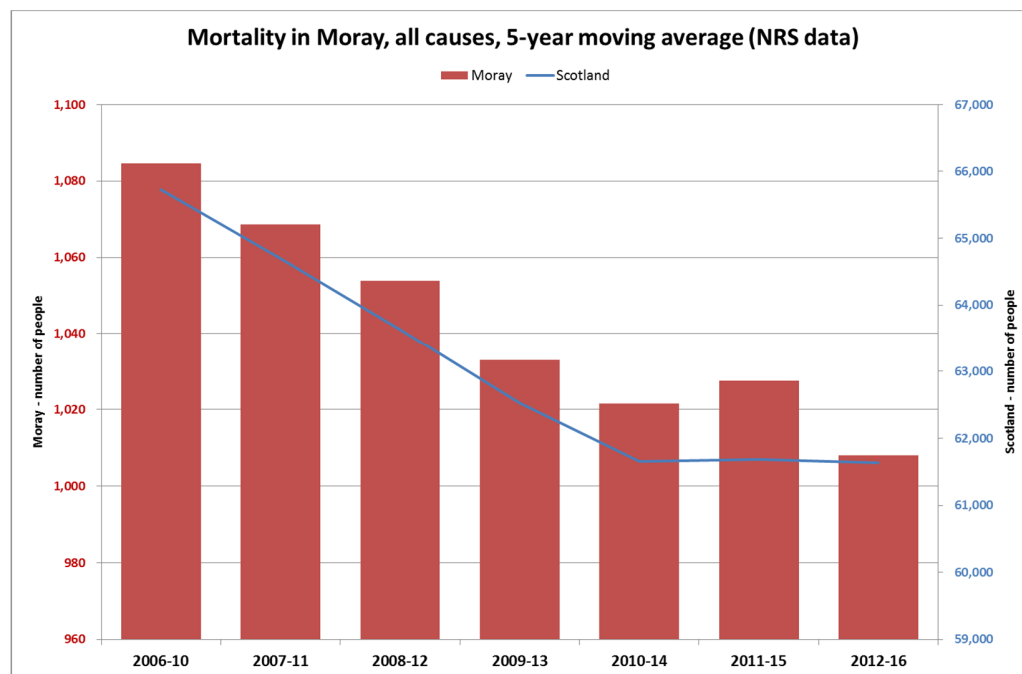


Figure 34: Mortality in Moray from all causes, 5-year moving average (2006/10 to 2012/16)

As Figure 35 illustrates the alcohol-related mortality rates vary quite significantly across the different communities that make up Moray. The 5-year rolling average for 2010-14 in Lossiemouth East and Seatown is 2 and a half times the Moray average and around 10 times higher than in Elgin Central West, and significantly higher than in Lossiemouth West and Rural Keith & Strathisla, which both recorded no alcohol-related deaths (ScotPHO data, 2014). There is some correlation with higher death rates due to alcohol in more deprived areas, but it is not an exact match as Table 1 shows. For example, Elgin Central West mainly comprises data zones in the least deprived quintile overall for SIMD¹⁷. In contrast, Buckie Central East, Keith and Fife Keith, Elgin Bishopmill East and Ladyhill & Elgin Cathedral to Ashgrove and Pinefield all contain at least 2 data zones each in the second most deprived quintile, and have relatively high alcohol-related mortality rates.

There are some exceptions that don't conform to this correlation however. For example, Lossiemouth West has 2 data zones in the second most deprived quintile and has the lowest alcohol-related mortality rate, and New Elgin East, with data zones covering the most-deprived to the second least deprived quintiles is close to the Moray average for alcohol-related mortality. This suggests a more complex relationship between alcohol abuse and level of deprivation, possibly providing evidence that parts of Moray follow the national trend of those on lower earnings drinking less frequently (Figure 18) and a higher proportion of non-drinkers in the most deprived data zones (Figure 19).

¹⁷ Scottish Index of Multiple Deprivation – 2016 data used

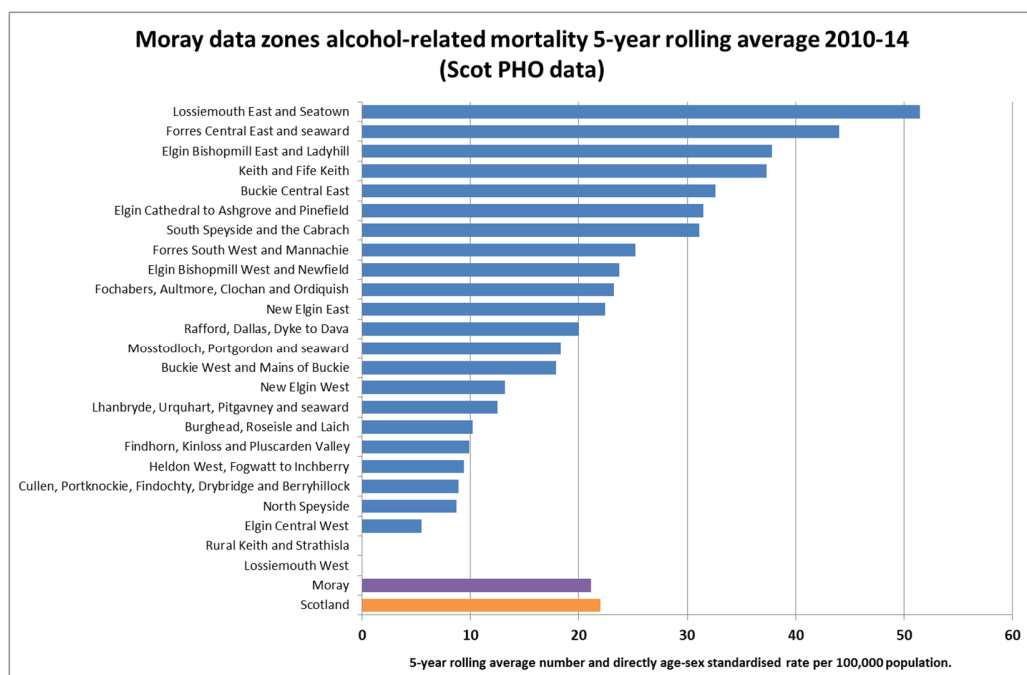


Figure 35: Moray data zones alcohol-related mortality 5-year rolling average 2010-14 (Scot PHO data)

Intermediate Zone	Overall SIMD Quintiles for data zones in the intermediate zone							
Lossiemouth West	2	2	3	3	4	5		
Rural Keith and Strathisla	3	3	4	4	4			
Elgin Central West	4	5	5	5				
North Speyside	3	4	4	4	5			
Cullen, Portknockie, Findochty, Drybridge and Berryhillock	3	3	3	3	4	4	4	4
Heldon West, Fogwatt to Inchberry	2	2	4	4	5			
Findhorn, Kinloss and Pluscarden Valley	4	4	4	5	5			
Burghead, Roseisle and Laich	3	4	4	4	5	5		
Lhanbryde, Urquhart, Pitgavney and seaward	2	3	4	4	4			
New Elgin West	2	3	5	5	5			
Buckie West and Mains of Buckie	2	3	4	4	5			
Mosstodloch, Portgordon and seaward	3	3	4	4	4			
Rafford, Dallas, Dyke to Dava	3	3	4	4				
New Elgin East	1	2	3	4	4			
Fochabers, Aultmore, Clochan and Ordiquish	2	4	4					
Elgin Bishopmill West and Newfield	3	3	4	5	5			
Forres South West and Mannachie	2	2	3	3	3	3	4	5
South Speyside and the Cabrach	3	3	4	4	4			
Elgin Cathedral to Ashgrove and Pinefield	2	2	2	3	3	3		
Buckie Central East	2	2	3	4	4			
Keith and Fife Keith	2	2	4	4	4			
Elgin Bishopmill East and Ladyhill	2	2	3	3	4			
Forres Central East and seaward	2	3	3	5	5	5		
Lossiemouth East and Seatown	3	3	4	4	5			

Table 1: Overall SIMD 2016 quintiles for data zones in each intermediate zone (SIMD 2016)

Alcohol Focus Scotland reported that alcohol-related death rates in the neighbourhoods with the most off-sales outlets were 4.3 times higher than in neighbourhoods with the least¹⁸. However, by plotting the location of pubs, hotels, night-clubs and retail premises with off-licences throughout Moray, the picture does not appear to be as clear-cut as the Alcohol Focus Scotland report suggests. The following maps (Figures 35 to 40) show the alcohol related deaths (where alcohol was the underlying cause). The figures are 5-year rolling averages per 100,000 population (using a standardised rate for age and sex of the population), with the green areas having an alcohol-related death rate of 6 or fewer per 100,000 population, and the orange and red areas with 26 or more deaths and 39 or more deaths per 100,000 population, respectively.

The following Moray neighbourhoods recorded greater than the Scottish average of 22 deaths per 100,000 population in 2014:

- Lossiemouth East and Seatown
- Forres Central East and seaward
- Elgin Bishopmill East and Ladyhill
- Keith and Fife Keith
- Buckie Central East
- Elgin Cathedral to Ashgrove and Pinefield
- South Speyside and the Cabrach
- Forres South West and Mannachie
- Elgin Bishopmill West and Newfield
- Fochabers, Aultmore, Clochan and Ordiquish
- New Elgin East

Lossiemouth East and Seatown had a population of 3,464 at the times of the 2011 Census, and contains 3 pubs, 2 off-licences and one hotel, which equates to 1.73 alcohol outlets per 1,000 residents (of all ages). By contrast the adjacent intermediate zone is Lossiemouth West which is in the lowest band for alcohol-related deaths and contains 4 alcohol outlets (Figure 36).

One of the 2 intermediate zones in Forres with above national average alcohol-related death rates is in the highest band (red) for Moray, while the other is in the middle band (yellow). Forres Central East and seaward had a Census 2011 population of 3,695 and contains a total of 6 hotels, 4 pubs, a night-club, and 2 shops; a total of 13 alcohol-outlets, which equates to 3.52 outlets per 1,000 residents. Forres South-West and Mannachie has 4 shops with off-licences with a population of 5,352 in 2011. However, the pubs and 3 of the hotels in Forres Central East and seaward are in close proximity to many of the residents of Forres South-West and Mannachie (Figure 37).

¹⁸ Alcohol Focus Scotland & Centre for Research on Environment, Society and Health (CRESH), April 2018, *"Alcohol Outlet Availability and Harm in Moray"*

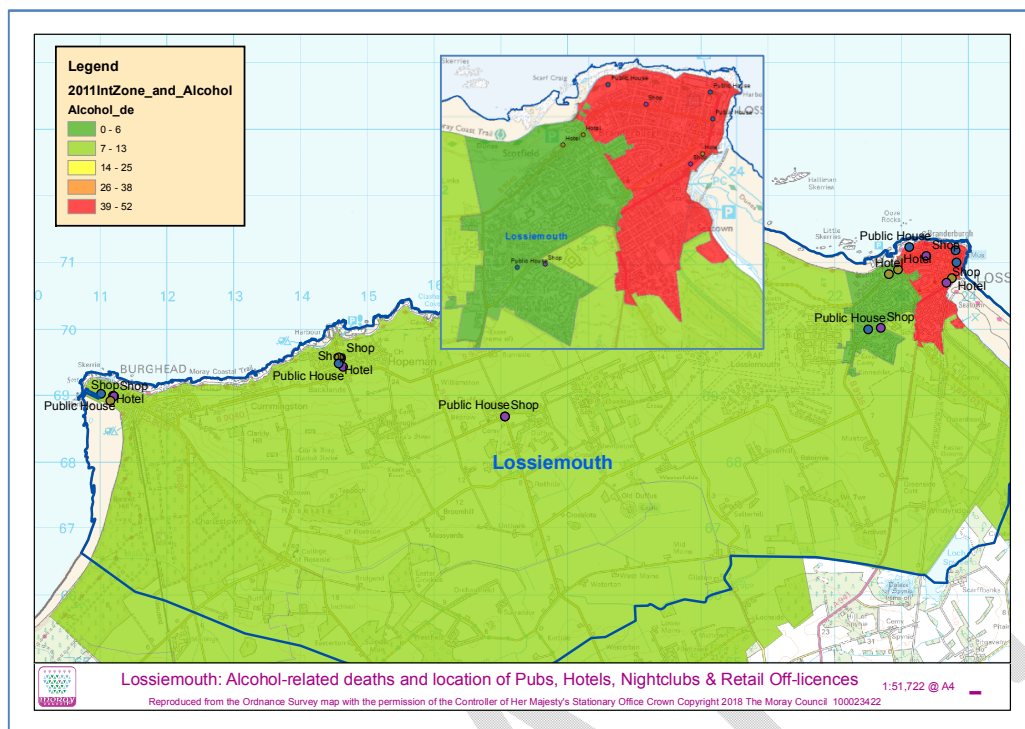


Figure 36: Lossiemouth - alcohol-related deaths and location of alcohol outlets

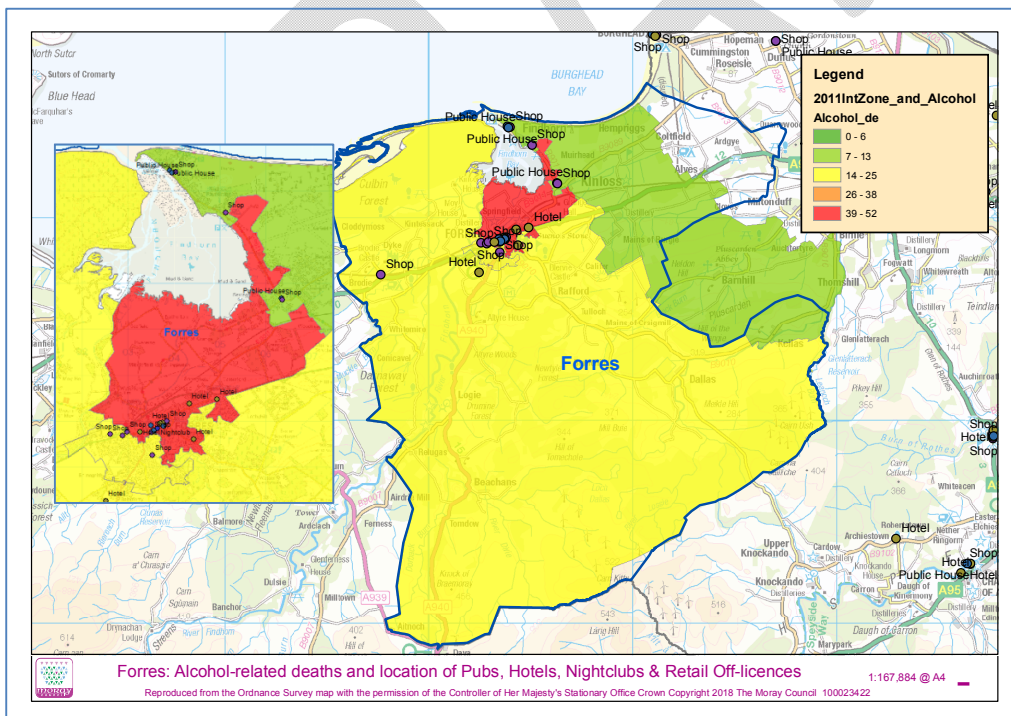


Figure 37: Forres - alcohol-related deaths and location of alcohol outlets

Elgin town centre has a relatively high concentration of pubs, nightclubs and hotels, but none of the adjacent intermediate zones have an alcohol-related death rate in the highest quintile (Figure 38). In the 4 intermediate zones that comprise the majority of residences in Elgin, but excluding New Elgin, there are 9 public houses, 16 shops, 8 hotels, a nightclub and a service station where members of the public can purchase alcohol. The combined Census 2011 population for these 4 intermediate zones was 14,168 residents of all ages. The ratio of alcohol outlets to population is 2.47 per 1,000 residents, which is a greater density than for Lossiemouth East and Seatown, the data zone with the highest alcohol-related death rate in Moray.

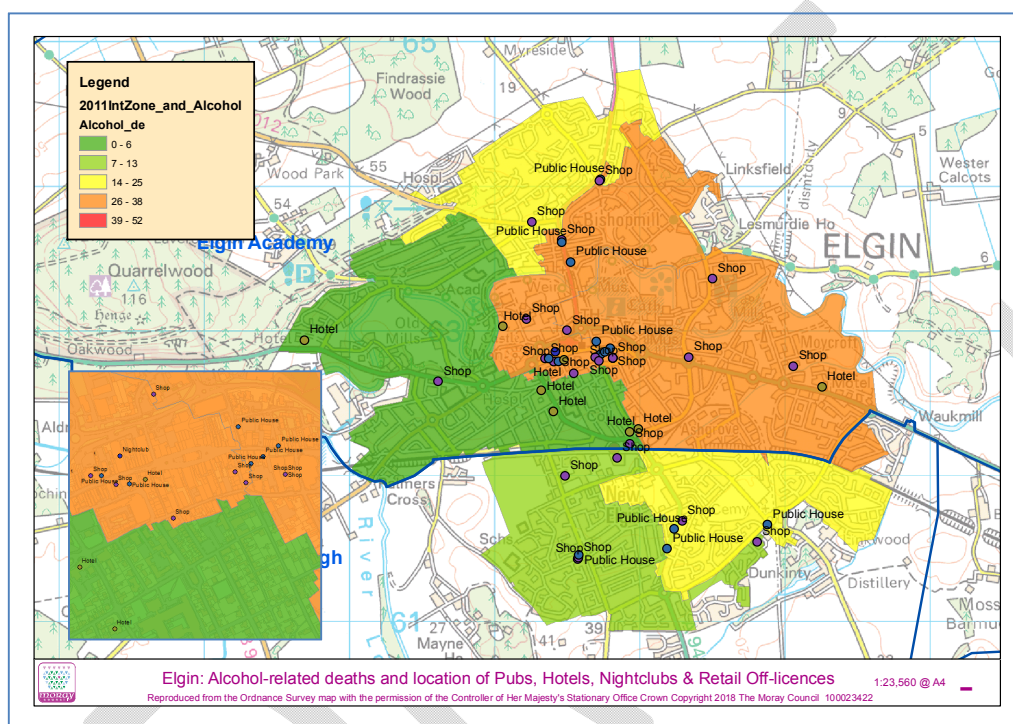


Figure 38: Elgin - alcohol-related deaths and location of alcohol outlets

The centre of Keith is in the second highest quintile for alcohol-related deaths and had a population of 4,653 at the time of the 2011 census. With 5 hotels, 2 pubs, 6 shops and a service station there are 14 alcohol outlets giving a ratio of 3 outlets per 1,000 residents (Figure 39). In Buckie there are more alcohol-outlets in Buckie West and Mains of Buckie (13 in total), which has a lower alcohol-related death rate than Buckie Central East (6 outlets). The alcohol outlet density in Buckie West and Mains of Buckie is 2.93 outlets per 1,000 residents, whereas Buckie Central East has a much lower density of 1.7 alcohol outlets per 1,000 residents (Figure 40).

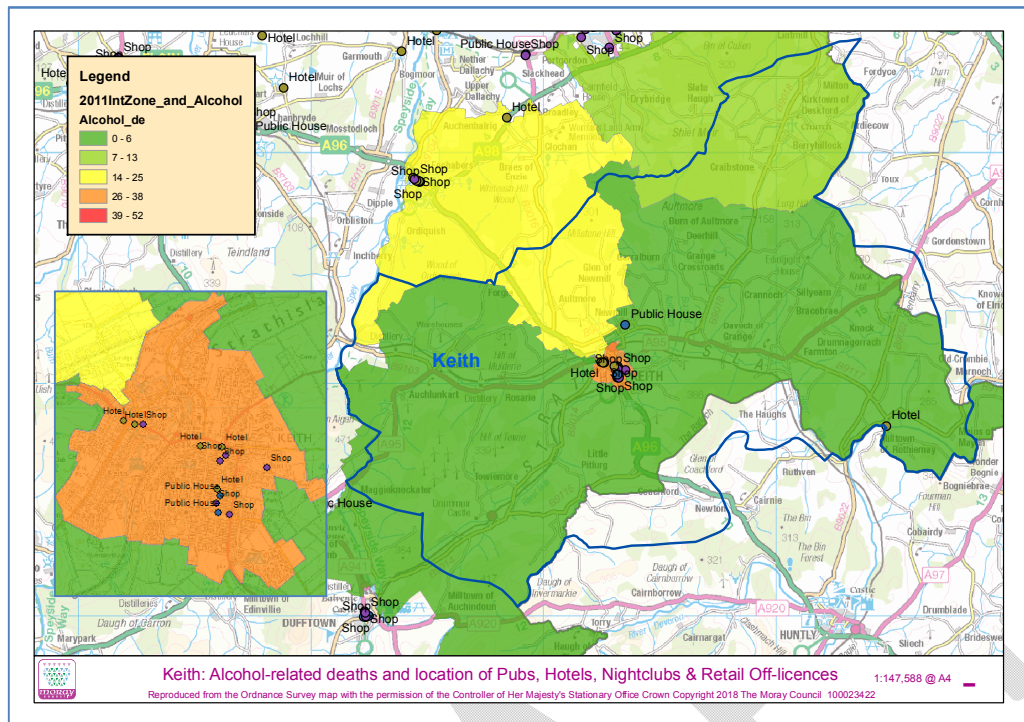


Figure 39: Keith - alcohol-related deaths and location of alcohol outlets

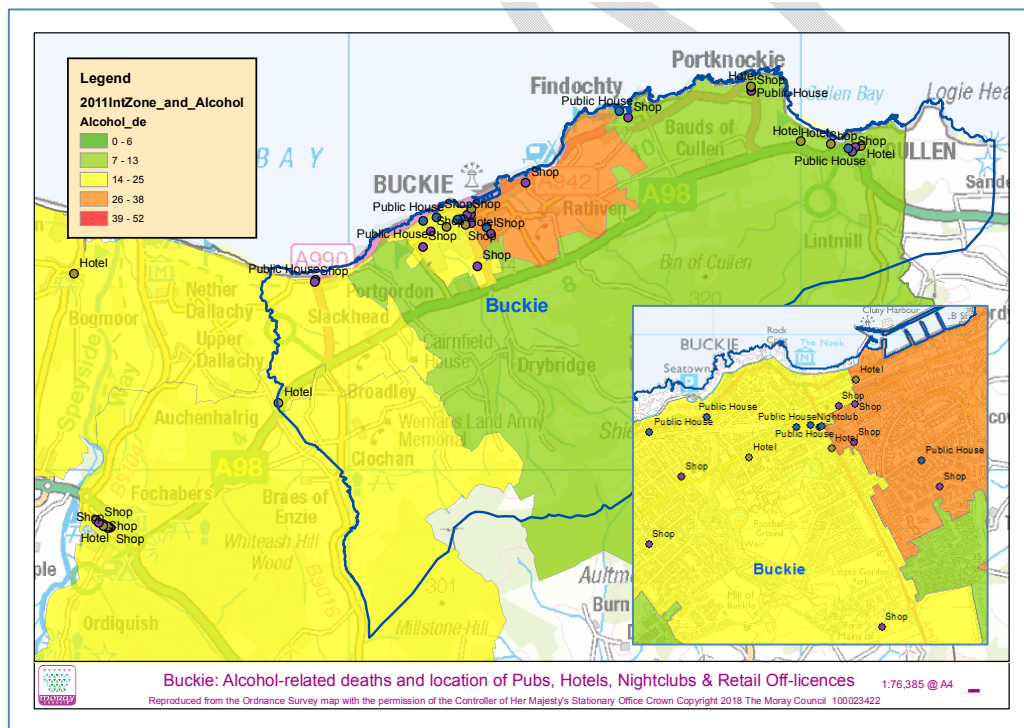


Figure 40: Buckie - alcohol-related deaths and location of alcohol outlets

South Speyside and the Cabrach covers a wide area of Moray and, at the time of the 2011 census, had a population of 4,312 residents. The largest settlement is Dufftown, which contains most of the alcohol outlets in this intermediate zone. Altogether there are 15 alcohol outlets in this area, almost 3.5 for every 1,000 residents, giving it one of the highest alcohol-outlet densities in Moray.

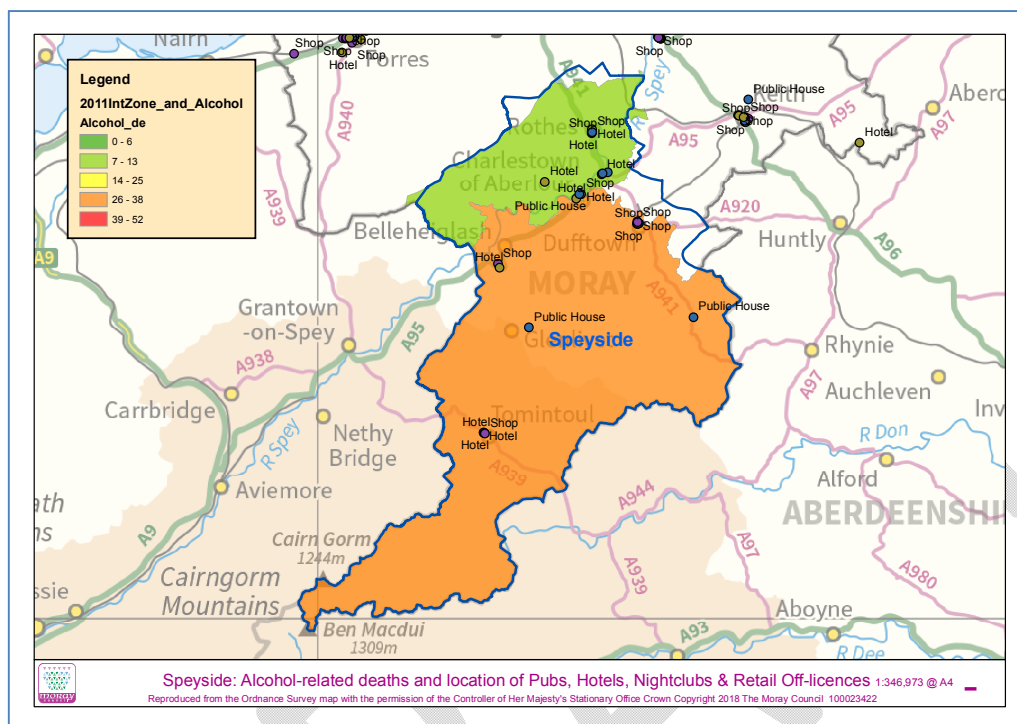


Figure 41: Speyside - alcohol-related deaths and location of alcohol outlets

The above excluded distilleries and the impact of visitor centre sales on local communities, nor has the potential impact of discounted prices for distillery-workers living in these areas been considered.

Summary of alcohol-related deaths:

- Across Scotland men are twice as likely to die from alcohol-related causes compared to women, and people living in Scotland are more likely to die than their counterpart in England & Wales, and Northern Ireland. The gap between the countries is reducing, however.
 - Against this backdrop wholly alcohol-related deaths in Moray have consistently been below the national figure, since 2000-04. Note though that the Moray rate has increased during the most recent 5-year period 2012-16.
- The highest proportion of alcohol-related deaths for males in Scotland occurs in the 45-49 year old age group, although the proportion has reduced from its peak in 2015. This is a younger age group than in England & Wales, where the 50-54 year olds have the highest proportion of alcohol-related mortality.
- For females in Scotland the age group with the highest rate of alcohol-related deaths is the 40-44 year olds, but generally the rate for such deaths are reducing across most age-groups.

- Over the 5-year period 2012-16 Moray had the 14th highest alcohol-related death rate of the 32 local authorities in Scotland.
 - Since 2000 the number of such deaths has been between 15 and 19 per year, compared to an overall death-rate for Moray of just over 1,000 per year.
- Across Moray alcohol-related mortality varies significantly between communities:
 - In Lossiemouth East and Seatown intermediate zone the 5-year average for 2010-14 was over 50 alcohol-related deaths per 100,000 population
 - In Rural Keith & Strathisla and Lossiemouth West there were no alcohol-related deaths
 - 11 of the 24 (46%) intermediate zones in Moray recorded greater than the Scottish average of 22 deaths per 100,000 population in 2014.
- There is some correlation between alcohol-related mortality and the availability of publically-accessible alcohol outlets. However, there are exceptions:
 - South Speyside and Cabrach has the highest publically accessible alcohol outlet densities in Moray (3.5 per 1,000 residents) but is in the second highest quintile for alcohol mortality
 - The intermediate zone with the highest alcohol-related mortality is Lossiemouth East and Seatown with 6 publically-accessible outlets, while the neighbouring Lossiemouth West with 4 such outlets has one of the lowest alcohol-related mortality rates in Moray.