

4.3 What people are dying from

Nationally, there were nearly half a million deaths registered in 2013, with 84% among people over 65 years old. There are a number of leading causes of death, which vary according to age and gender.

For example, deaths in younger children are more likely to be due to congenital malformations or abnormalities, road accidents, and influenza; those aged 20 – 49 are more likely to die from suicide and undetermined injury, accidental poisoning or road accidents.

In middle age, heart disease, lung cancer, breast cancer, and liver disease are the leading causes of death. Those over 65 years are more likely to die from diseases of the heart, lung cancer and lower respiratory diseases, whilst most deaths among those aged over 80 years are from heart disease, dementia, Alzheimer’s disease and cerebrovascular disease.

4.3.1 All age all cause mortality

In Newcastle, the directly age-standardised rate (DSR) of mortality in 2013 was 1,023 per 100,000 European Standard population, which corresponds to 2,277 deaths. Figure 4.3-1 shows trends in the mortality rate between 1995 and 2013 in Newcastle compared to England and the North East. In all areas there is a steady downward trend, with mortality rates consistently higher in the North East and Newcastle compared to England, and consistently higher among males than females in Newcastle.

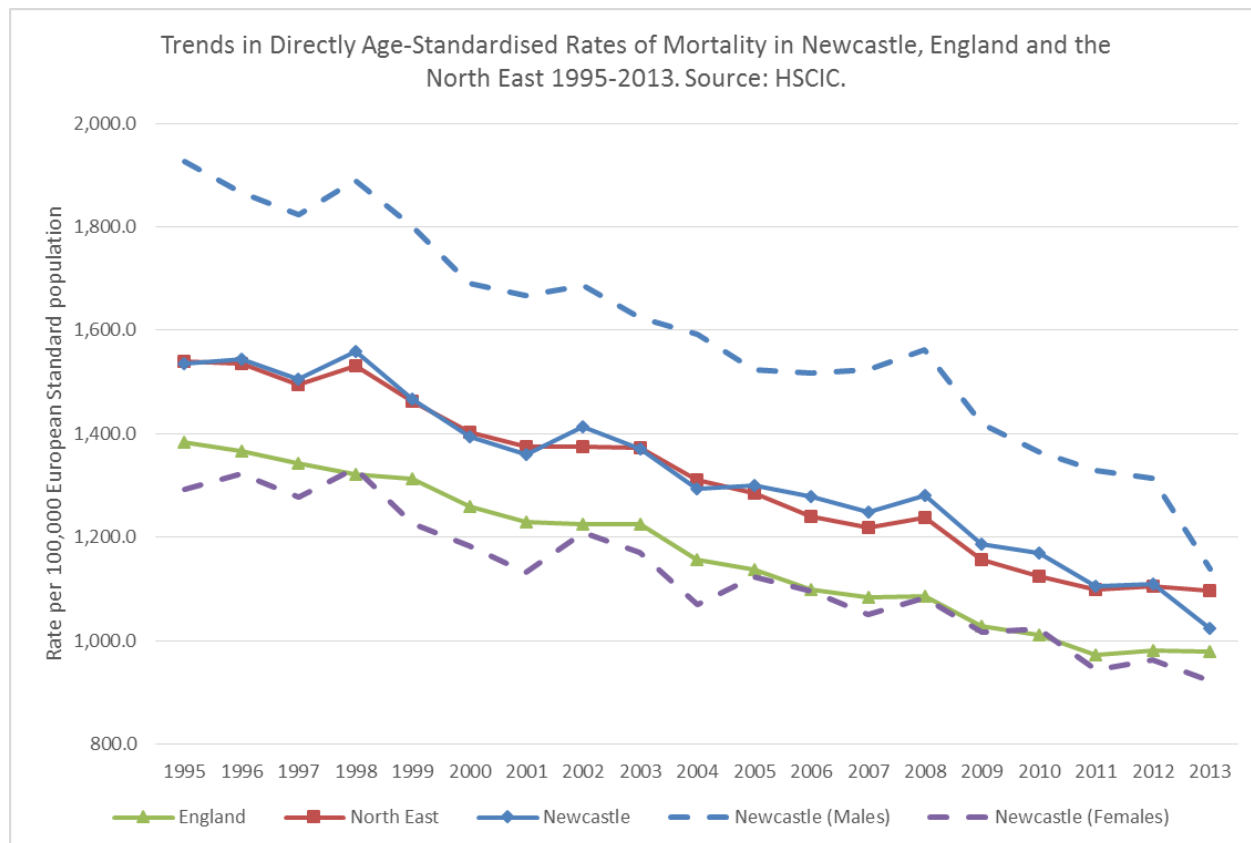


Figure 4.3-1: Trends in the directly age-standardised rate of mortality in Newcastle, England, and the North East 1995-2013. Source: Health and Social Care Information Centre.

The numbers and causes of death at different ages in Newcastle are presented in Figure 4.3-2.. While higher numbers of deaths occur at later ages, these are primarily from chronic disease such as cancers, circulatory diseases, and respiratory diseases. Avoidable deaths also occur at earlier ages. For example, deaths from accidents (shown in black) contribute to a higher proportion of deaths in younger age groups.

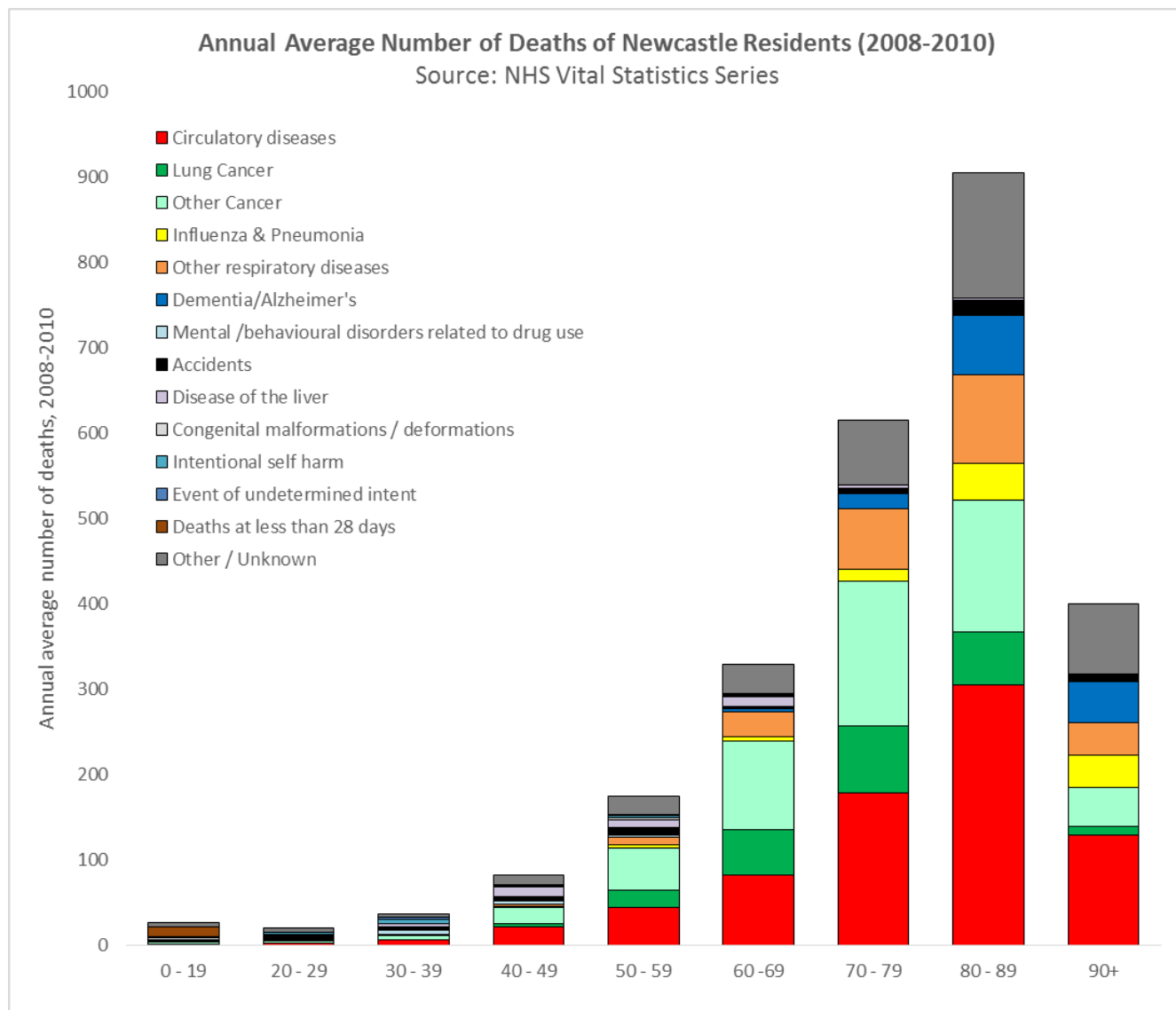


Figure 4.3-2: Numbers and causes of death at different ages in Newcastle. Source: NHS Vital Statistics Series.

4.3.2 Premature Mortality

Improvements in life expectancy mean that people born today can expect to live a longer and healthier life than before. However, in England there is still a 1 in 3 chance of dying before reaching age 75. One of the primary factors affecting premature mortality is location, which highlights inequalities across the country. Newcastle ranks 127th (out of 150) for premature mortality compared to other local authorities in England, with a rate of 285 premature deaths annually per 100,000 population. This equated to 2,451 premature deaths between 2011 and

2013.¹ The main causes of premature death which contribute to the life expectancy gap are presented in Figure 4.3-3

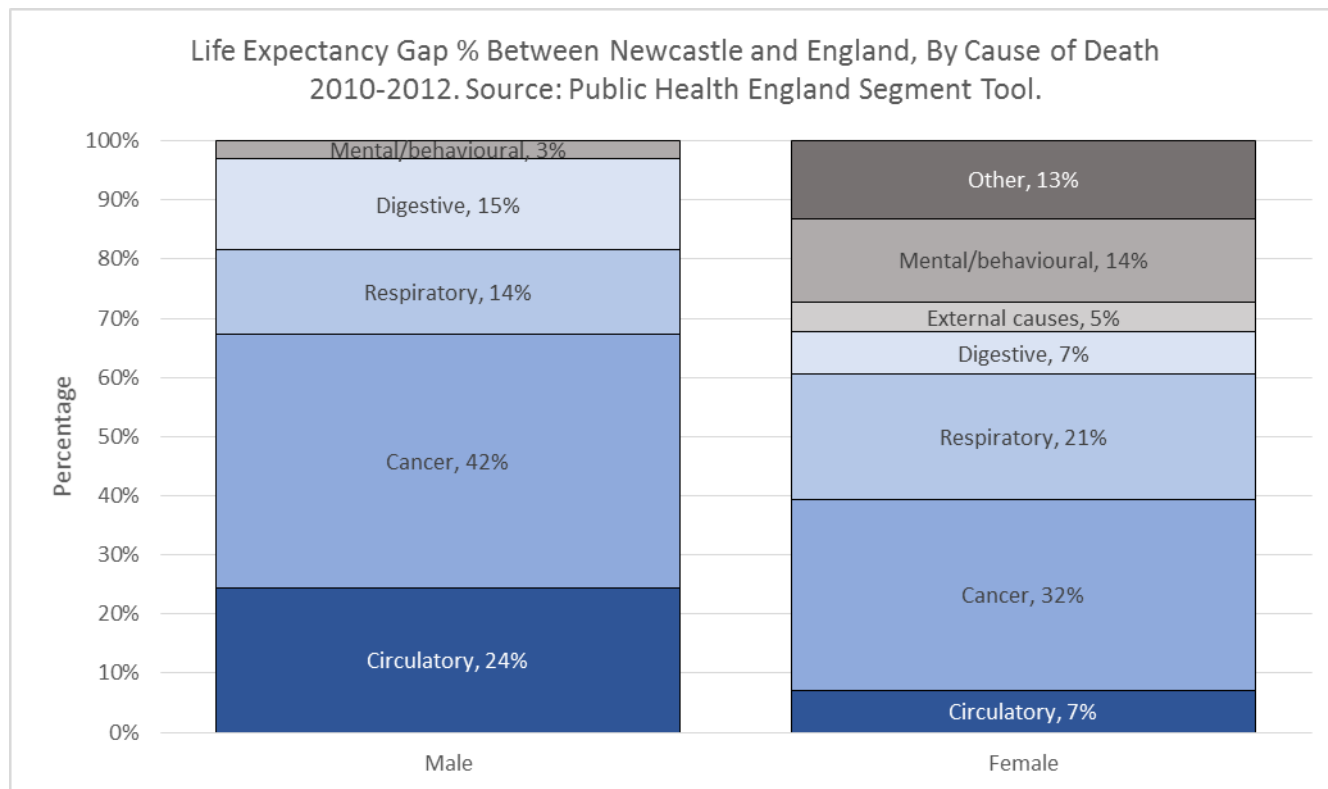


Figure 4.3-3: Breakdown of the life expectancy gap between Newcastle upon Tyne and England, by cause of death and gender, 2010-2012. Source: Public Health England. Circulatory diseases include coronary heart disease and stroke. Digestive diseases include alcohol related conditions such as chronic liver disease and cirrhosis. External causes include deaths from injury, poisoning and suicide. Other causes include infectious/parasitic diseases and mental/behavioural disorders.

4.3.2.1 Primary causes of premature mortality in men

Figure 4.3-3 presents the contribution that excess male deaths from various diseases or conditions are making to the male life expectancy gap between Newcastle and the England average.

Based on data for 2010-2012:

- Approximately 42% of the gap in male life expectancy between Newcastle and England is accounted for by premature death from cancer, notably lung cancer.
- Excess deaths from circulatory diseases (including heart disease and stroke) account for approximately 24% of the gap.
- Digestive (including liver disease) and respiratory diseases (including COPD and pneumonia) contributes 15% and 14% respectively to the gap in male life expectancy between Newcastle and England.

4.3.2.2 Primary causes of premature mortality in women

Figure 4.3-3 also presents the contribution that excess female deaths from various diseases or conditions are making to the female life expectancy gap between Newcastle and the England average.

Based on data for 2010-2012:

- Approximately 32% of the gap in female life expectancy between Newcastle and England is accounted for by premature death from cancer, most notably lung cancer.
- Excess deaths from respiratory diseases, notably COPD, account for 21% of the gap.
- Excess deaths from other causes (including infectious and parasitic disease and mental and behavioural disorders) contribute 27% to the life expectancy gap for females.
- Digestive and circulatory diseases contribute 7% and 7% respectively to the gap in female life expectancy between Newcastle and England.

4.3.2.3 Life expectancy gap between the most and least deprived quintile in Newcastle

As highlighted, socio-economic status and where you live can also play a part in contributing to the gap in life expectancy. Figure 4.3-4 presents data showing the gap in life expectancy between the most and least deprived quintiles in Newcastle.

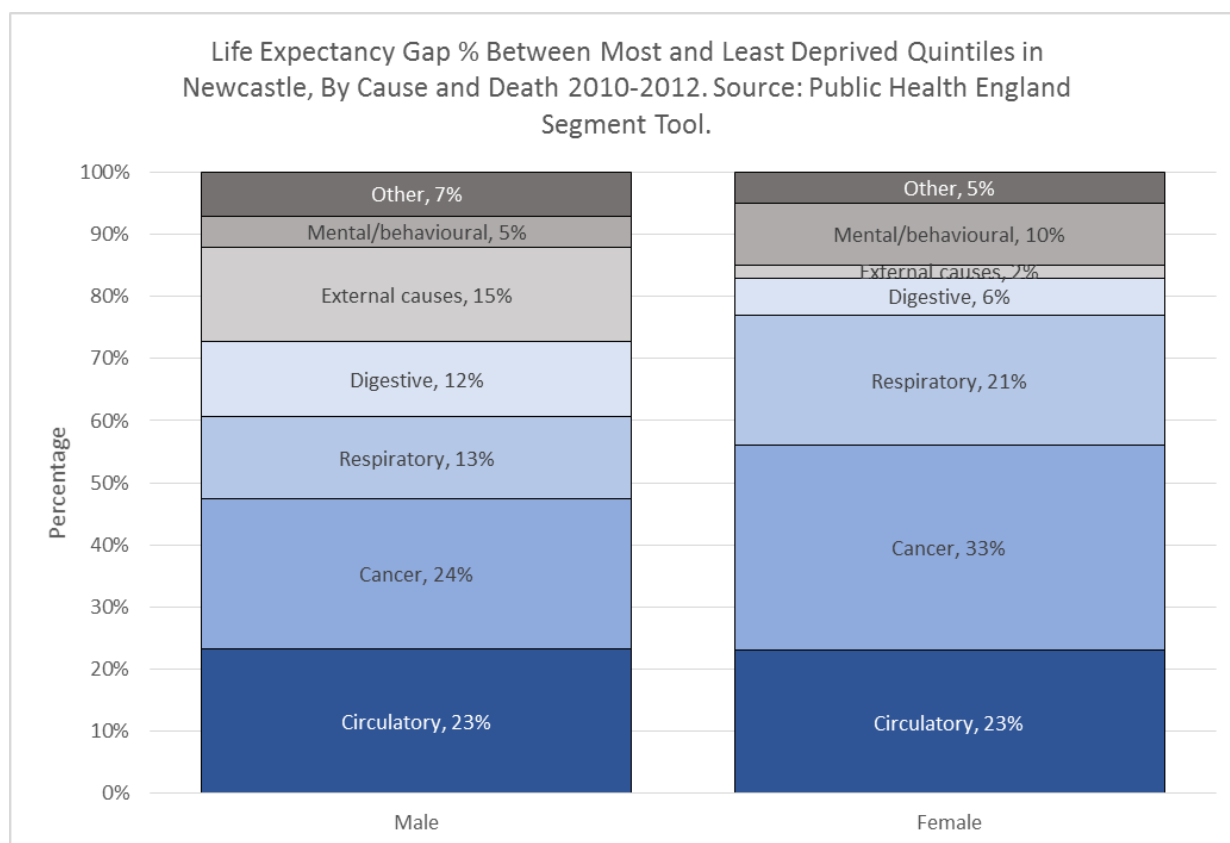


Figure 4.3-4: Breakdown of life expectancy gap between the most and least deprived quintile in Newcastle upon Tyne, by cause of death, 2010-2012. Source: Public Health England. Circulatory diseases include coronary heart disease and stroke. Digestive diseases include alcohol related conditions such as chronic liver disease and cirrhosis. External causes include deaths from injury, poisoning and suicide. Other causes include infectious/parasitic diseases and mental/behavioural disorders.

Based on 2010-2012 data:

- Circulatory diseases and cancer are the main contributor to inequalities in excess deaths. Circulatory diseases account for 23% of the gap in life expectancy for both sexes, and cancer contributes 24% for males and 33% for females to the gap between the most and least deprived quintiles.
- Excess deaths from respiratory diseases contribute 21% for females and 13% for males to the gap in life expectancy, while digestive diseases contribute to 12% for males and 6% for females.
- Deaths from external causes contribute 15% towards the gap for males compared to 2% for females between the most and least deprived areas.
- Excess deaths from other causes contribute 5% for females and 7% for males to the life expectancy gap between most and least affluent quintiles in Newcastle, while mental and behavioural disorders contribute 5% for males and 10% for females.

4.3.2.4 Mortality amenable to healthcare

A key issue in taking action to reduce inequalities in the short to medium term is the degree to which mortality is amenable to healthcare interventions – a definition which is used in routine statistics. Health care interventions include preventing disease onset as well as treating disease. The difference between amenable and non-amenable causes in their trends over time may provide evidence of the increasing (or decreasing) effectiveness of health care.

Amenable mortality in Newcastle has fallen markedly over the last two decades as highlighted in Figure 4.3-5. The absolute gap between the city and England has narrowed, but the proportional excess of amenable mortality has remained constant for persons. That is, Newcastle has improved at the same rate as England over this period.

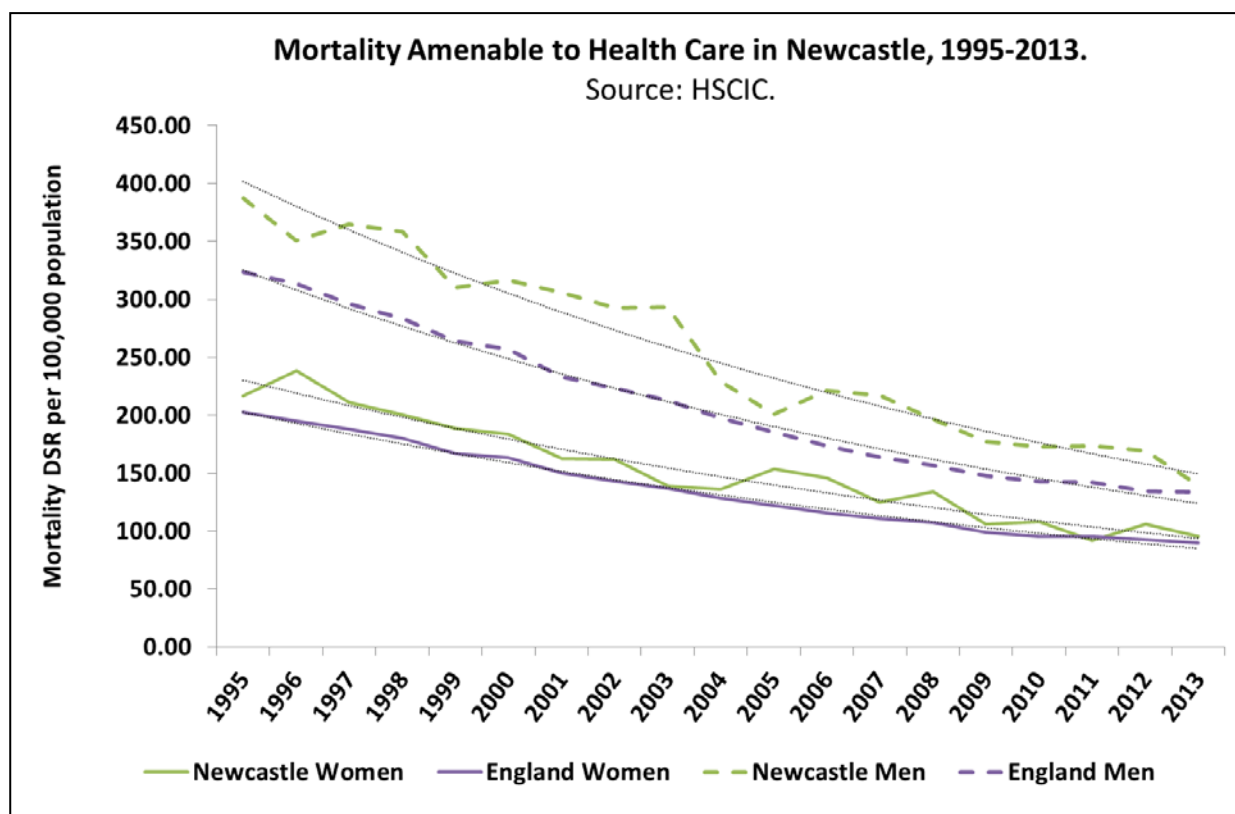


Figure 4.3-5: Mortality amenable to health care interventions, 1995-2013. Source: HSCIC National Statistics.

4.3.3 Specific causes of mortality across the life course

This section provides further information for a range of causes of death across the life course where data are available.

4.3.3.1 Infant mortality

Infant mortality is an indicator of the general health of an entire population, reflecting the relationship between causes of infant mortality determinants of health such as economic, social and environmental conditions.

Deaths occurring during the first 28 days of life (the neonatal period) in particular, are considered to reflect the health and care of both mother and new-born. Between 2011 and 2013, there were 4.1 deaths in Newcastle among infants aged less than 1 year, per 1000 live births. This is not significantly different to the England average (4.0), but higher than the North East average (3.3). Trend information presented in Figure 4.3-6 shows that there has been an overall reduction in infant mortalities in Newcastle since 2001, and that the rate of infant mortalities in Newcastle was similar in 2010-12 and 2011-13.

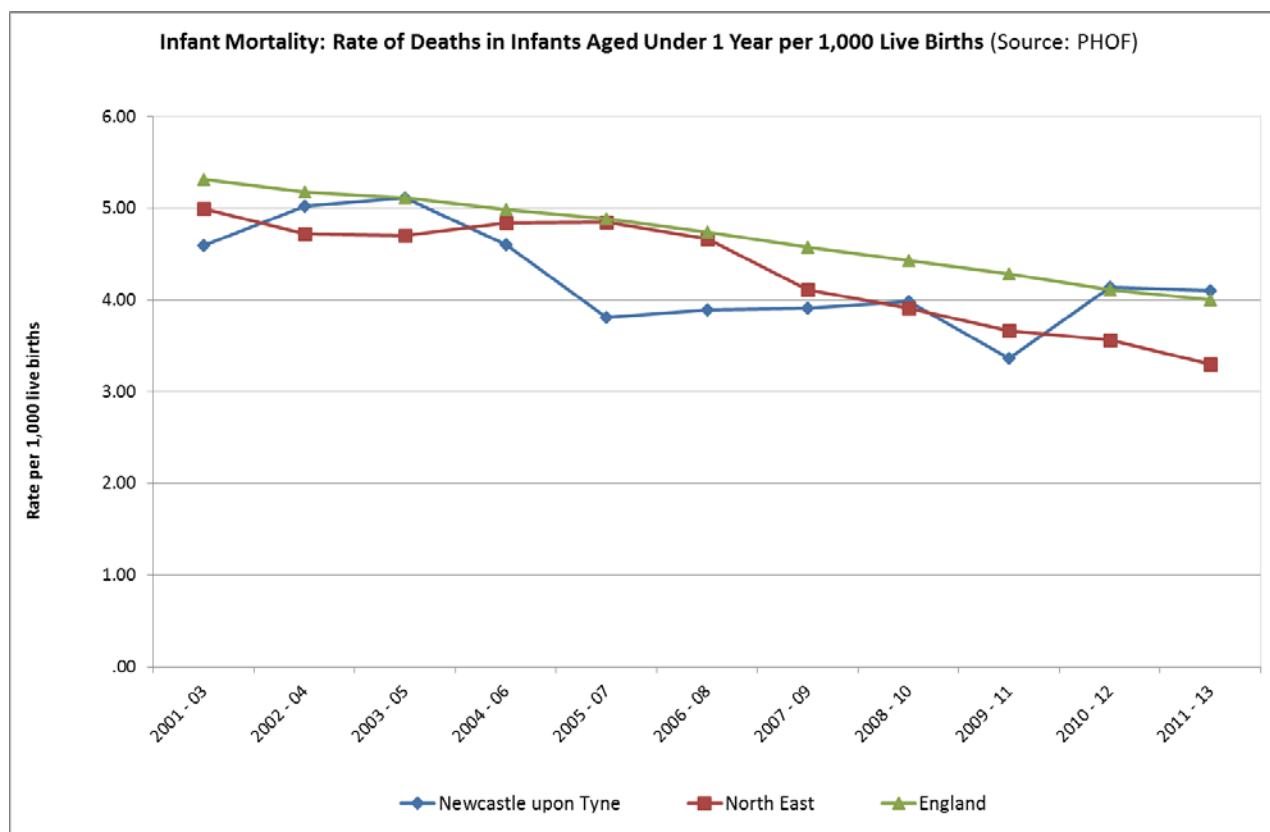


Figure 4.3-6: Infant mortality rate; deaths in infants aged under 1 year per 1000 live births. Source: Public Health England.

4.3.3.2 Accidents

Accidents are a major cause of preventable death and morbidity, particular amongst younger age groups. Key causes of mortality from accidents include road traffic accidents and falls.

In Newcastle, there were 9.4 deaths per 100,000 from accidents in 2013, which is a reduction from 14.5 per 100,000 in 1995. As shown in Figure 4.3-7, in 2013 this rate was below the North East average (14.3 per 100,000) and England average (11.1 per 100,000).

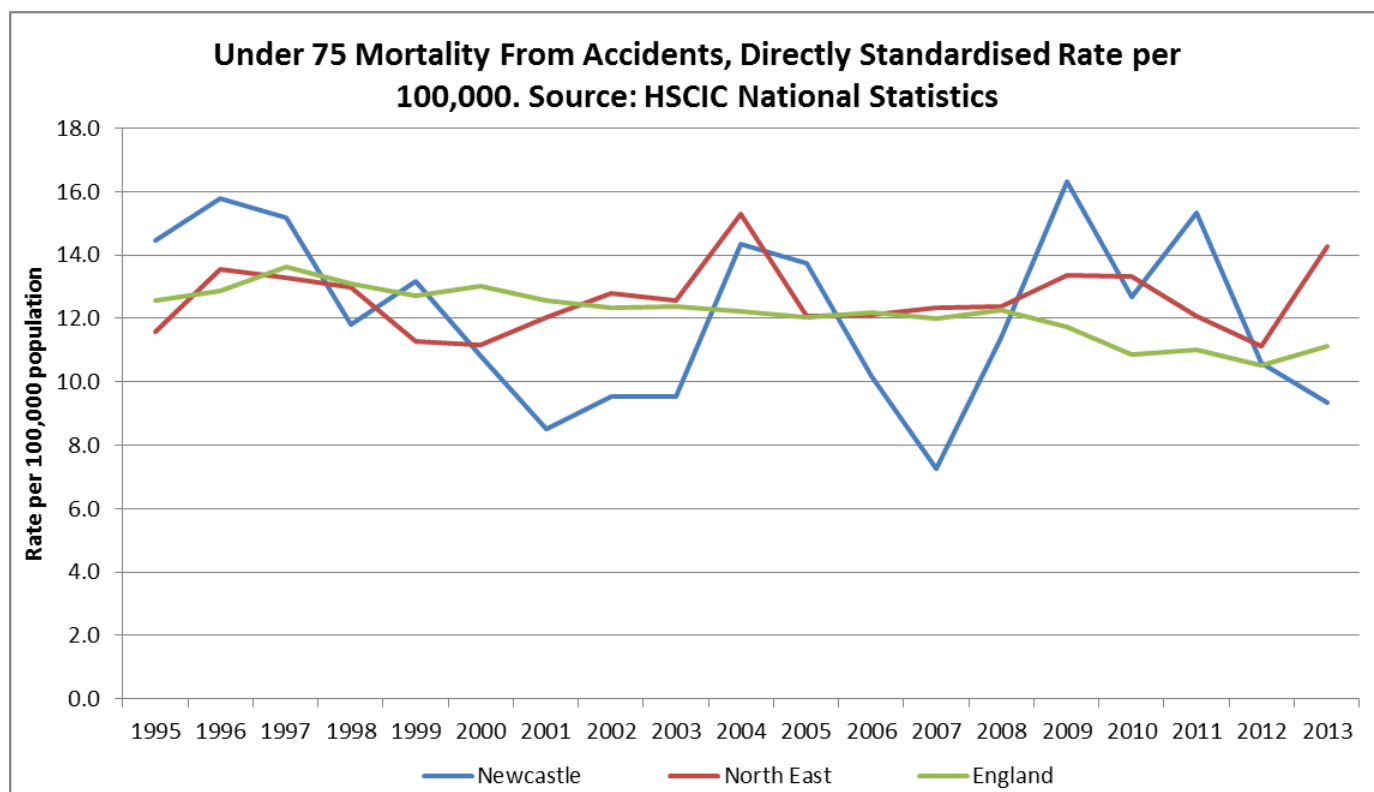


Figure 4.3-7: Under 75 mortality from accidents per 100,000, 1995-2013. Source: HSCIC National Statistics.

4.3.3.3 Suicide

Suicide is a significant cause of death in young adults, and is seen as an indicator of underlying rates of ill mental health.

In Newcastle, between 2001-03 and 2008-10 there was an overall declining trend in suicide, but this has started to increase again between 2008-10 and 2011-13. In 2011-13 (as a 3-year average), the overall suicide rate was 10.2 per 100,000 population, which is similar to the North East and England averages (Figure 4.3-8). When looking at the suicide rate by gender, there is a notably higher rate among males (16.0 per 100,000).

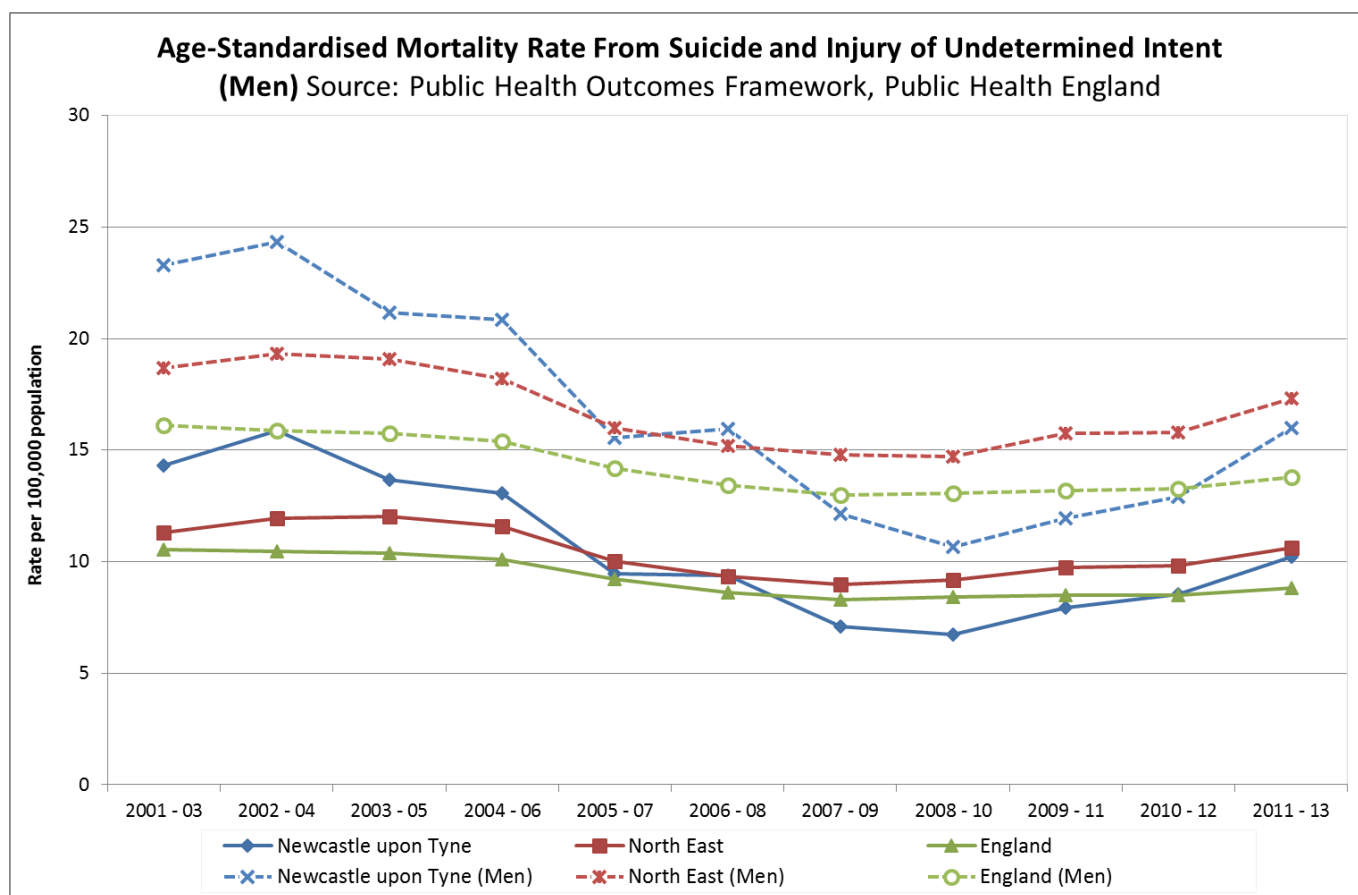


Figure 4.3-8: Age standardised mortality rate from suicide and injury of undetermined intent per 100,000 population. Source: Public Health Outcomes Framework, Public Health England.

4.3.3.4 Communicable Diseases

Prevention of the spread of communicable disease is important. There is evidence that rapid identification, treatment and prevention of spread can reduce mortality. Communicable diseases include infectious and parasitic diseases, influenza and pneumonia.

In Newcastle, mortalities from communicable disease have seen a downward trend between 2001-03 and 2011-13. In 2011-13, the rate of death from communicable diseases in Newcastle was 58.0 per 100,000 population, which is far lower than the rate in 2001/03 (100.8 per 100,000). This is in line with both the North East and England averages over the same period (Figure 4.3-9).

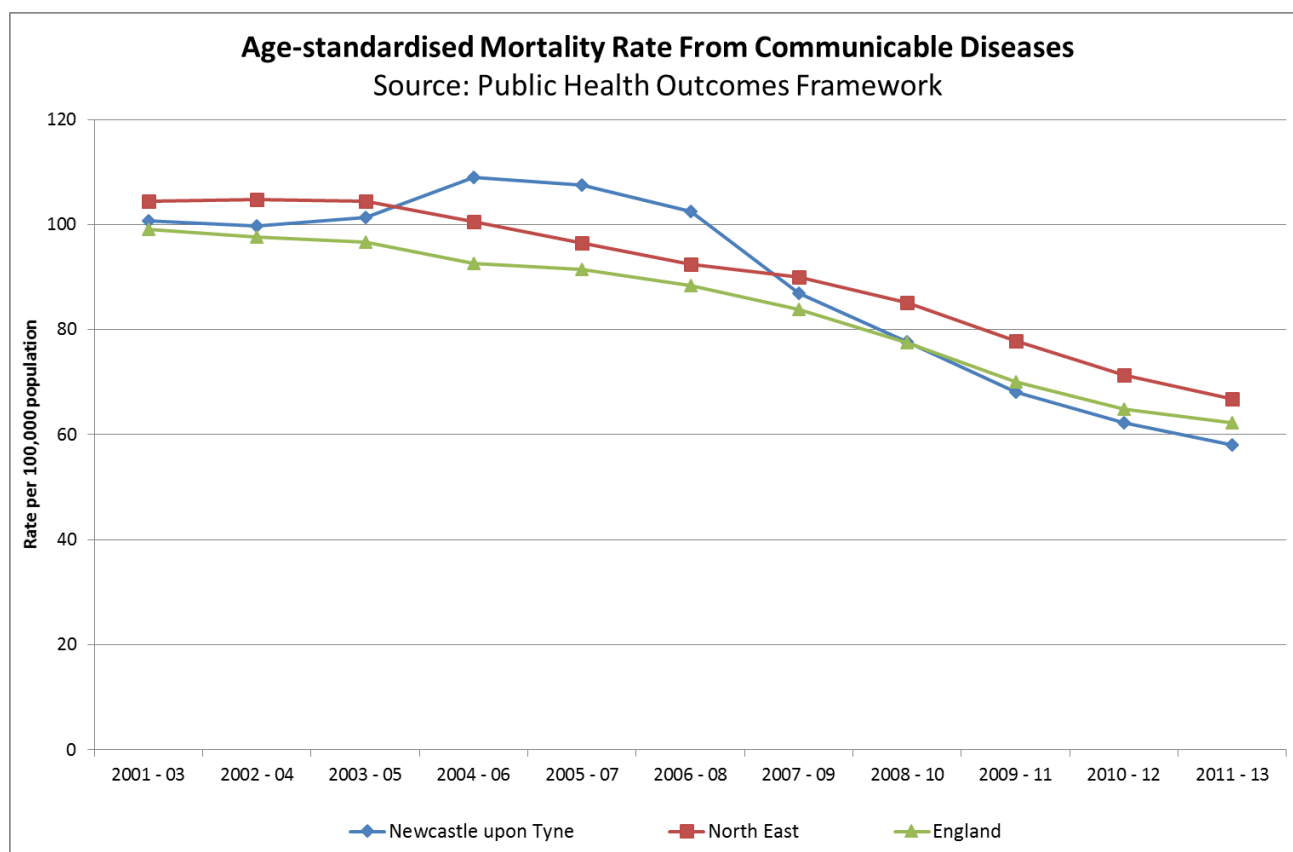


Figure 4.3-9: Age-standardised rate of mortality from communicable diseases per 100,000 population, 2001-03 – 2011-13. Source: Public Health Outcomes Framework, Public Health England.

4.3.3.5 Cancer

Cancer is the highest cause of death amongst under 75s in England, with prevention and treatment requiring concerted action to ensure this continues to reduce. Between 2011 and 2013, there were 173.6 deaths per 100,000 population from cancer recorded in Newcastle. This is a reduction from 212.4 per 100,000 in 2001-03, and more recently from 184.1 in 2010-12; but this rate is still significantly worse than those in the North East and England (169.5 and 144.4 per 100,000 respectively; see Figure 4.3-10). Around 1,400 people in Newcastle are diagnosed with cancer each year and nearly 800 die of the disease; accounting for around 30% of deaths in the area.

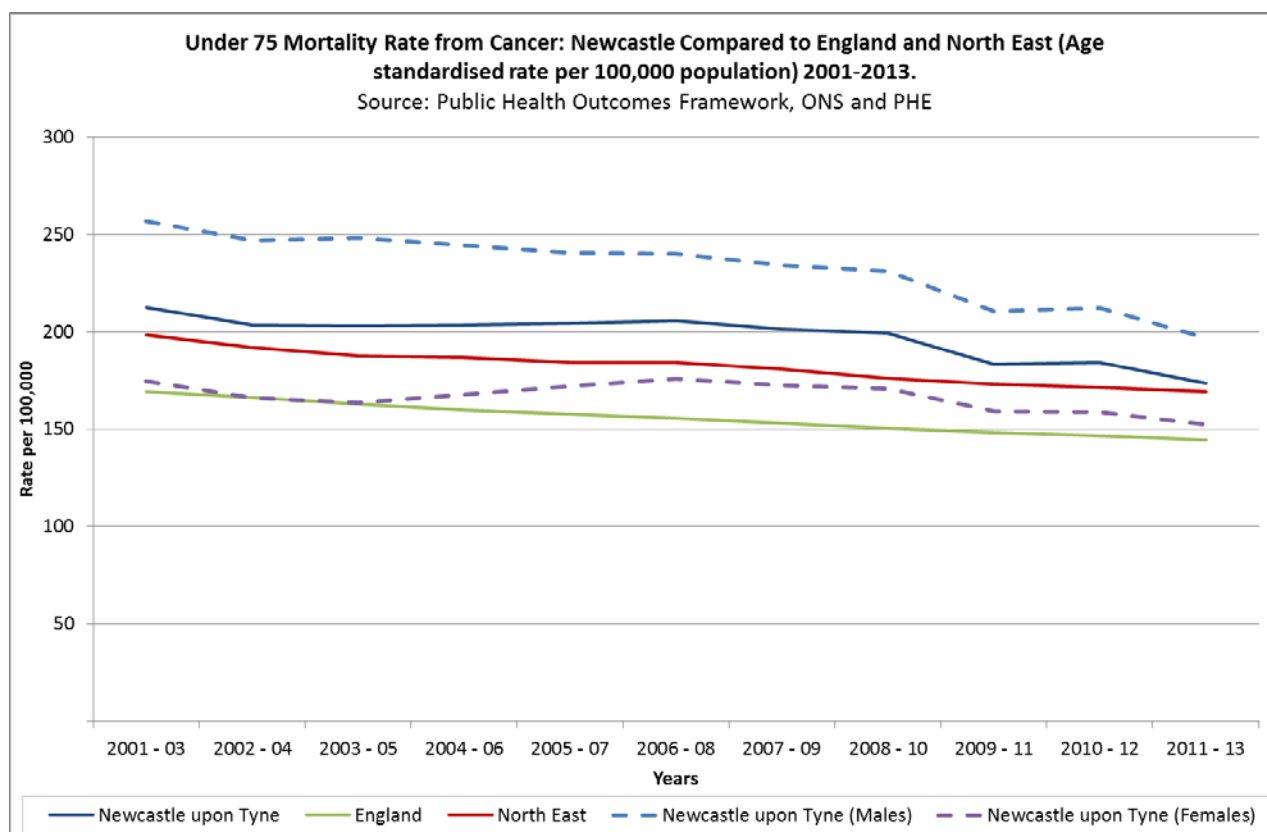


Figure 4.3-10: Under 75 mortality rate from cancer per 100,000 population, 2001/03 – 2011/13. Source: Public Health England.

There are a number of cancers that affect the mortality of the Newcastle population; however as Figure 4.3-11 shows the two main cancers are Lung Cancer and Bowel Cancer. The mortality rate for **Lung Cancer** in 2009-11 in Newcastle was 63.8 per 100,000 of the population, compared to the England rate of 39.9 per 100,000, with higher mortality rates for Males than Females. The second main cancer type impacting on the health of the Newcastle population is **Bowel Cancer**. The mortality rate for Bowel Cancer in Newcastle in 2009-11 was 16.4 per 100,000 of the population, with higher mortality in males than females.

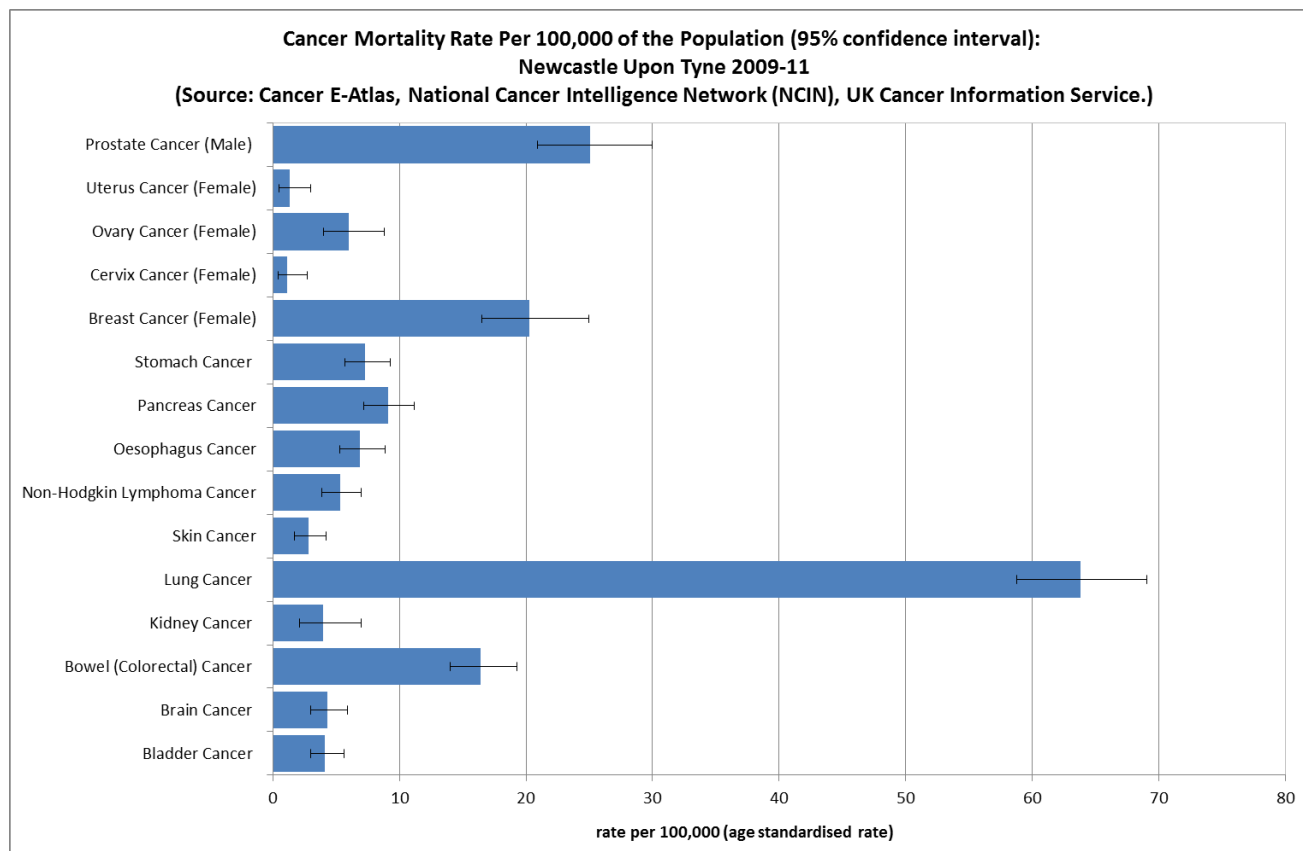


Figure 4.3-11: Cancer mortality rate per 100,000 population by type, 2009-11. Source: UK Cancer Information Service.

4.3.3.6 Cardiovascular Disease (CVD)

Whilst there have been considerable reductions in rates of CVD due to treatment and lifestyle improvements, it still remains a priority for action in terms of prevention and treatment. In Newcastle in 2011-13, the rate of mortality among people aged under 75 years from CVD was 96.9 per 100,000 population, which is a reduction from a rate of 174.4 in 2001-03. However, Newcastle is still significantly worse than both the North East and England rates (88.9 and 78.2 per 100,000 respectively – Figure 4.3-12).

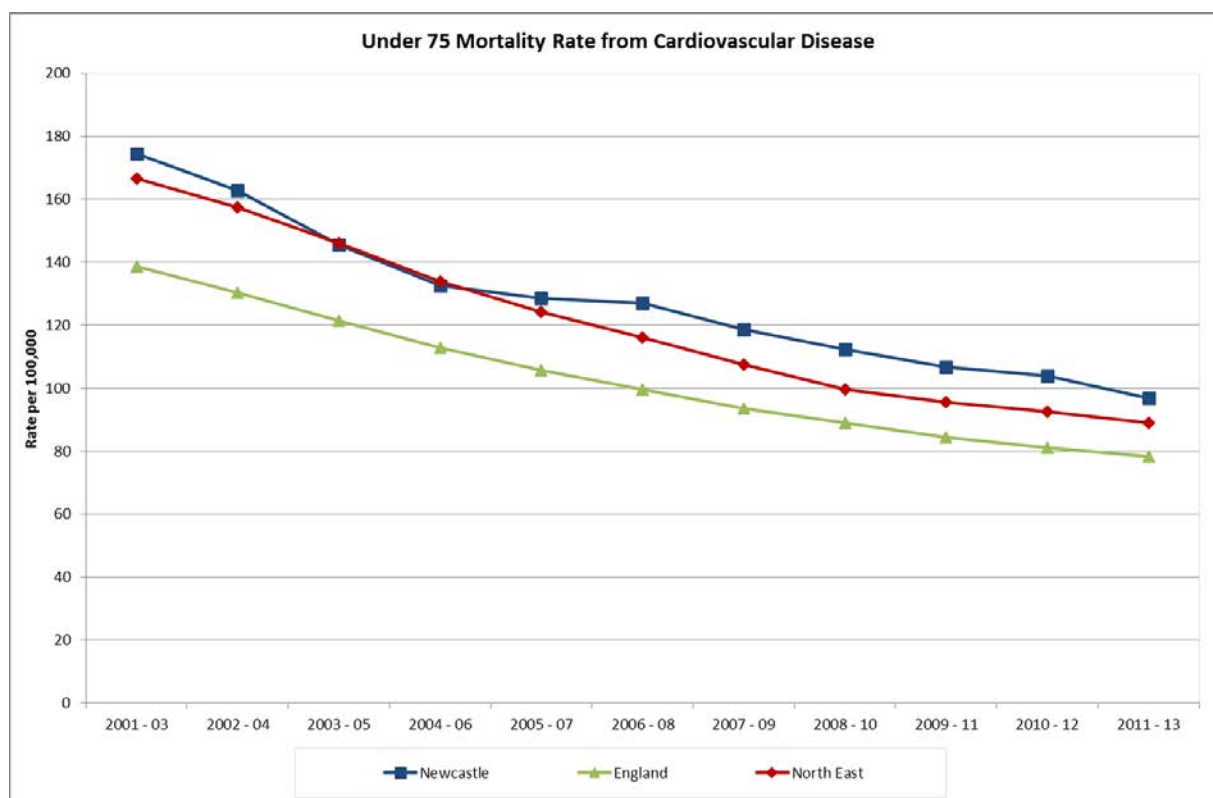


Figure 4.3-12: Under 75 mortality rate from cardiovascular disease, 2001/03 – 2011/13. Source: Public Health England.

4.3.3.7 Respiratory Disease (COPD)

Smoking is the main cause of COPD, which is one of the major forms of fatal respiratory disease. Preventing smoking and other environmental factors which can contribute to this disease can be targeted via interventions. In Newcastle, there were 43.8 deaths per 100,000 population from respiratory disease in 2011-13, which is a modest reduction from 58.9 per 100,000 in 2001-03. Nevertheless, the mortality rate in Newcastle is still significantly worse than both the North East and England rates (42.6 and 33.2 per 100,000 respectively – Figure 4.3-13).

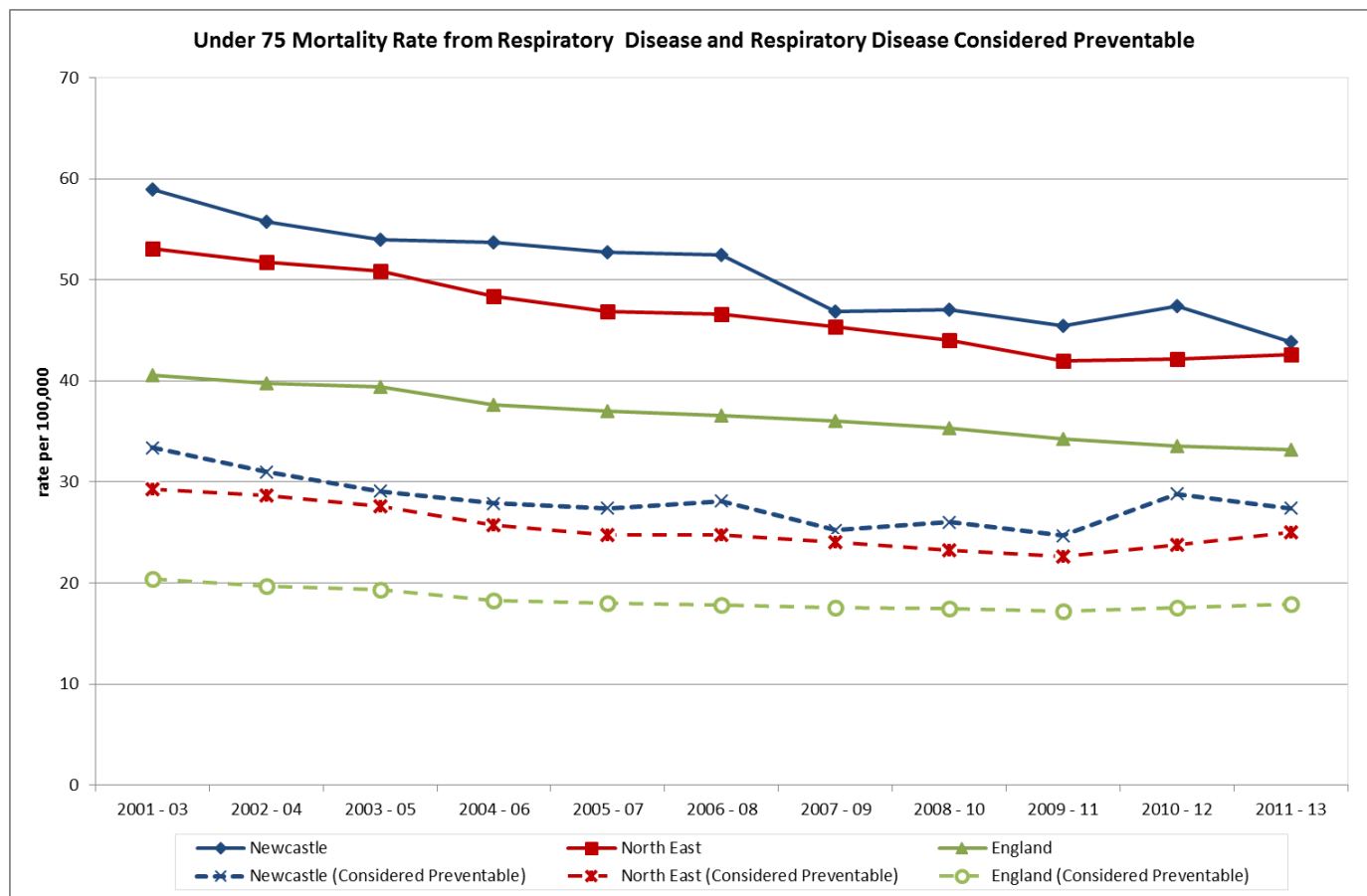


Figure 4.3-13: Under 75 mortality rate for respiratory disease and respiratory disease considered preventable, 2001/03 – 2011/13. Source: Public Health England.

4.3.3.8 Liver Disease

People are dying from liver disease at a much younger age than before. Most liver disease is preventable and strongly linked to alcohol consumption and obesity which can be targeted via interventions. In Newcastle in 2011-13, there were 24.0 deaths per 100,000 population from liver disease recorded, which is higher than the rate in 2001-03 (21.2 per 100,000), and not a significant change since 2009-11 (when it was 23.8 per 100,000). The rate of liver disease in Newcastle remains significantly worse than both the North East and England rates at 22.3 and 17.9 per 100,000 respectively (Figure 4.3-14).

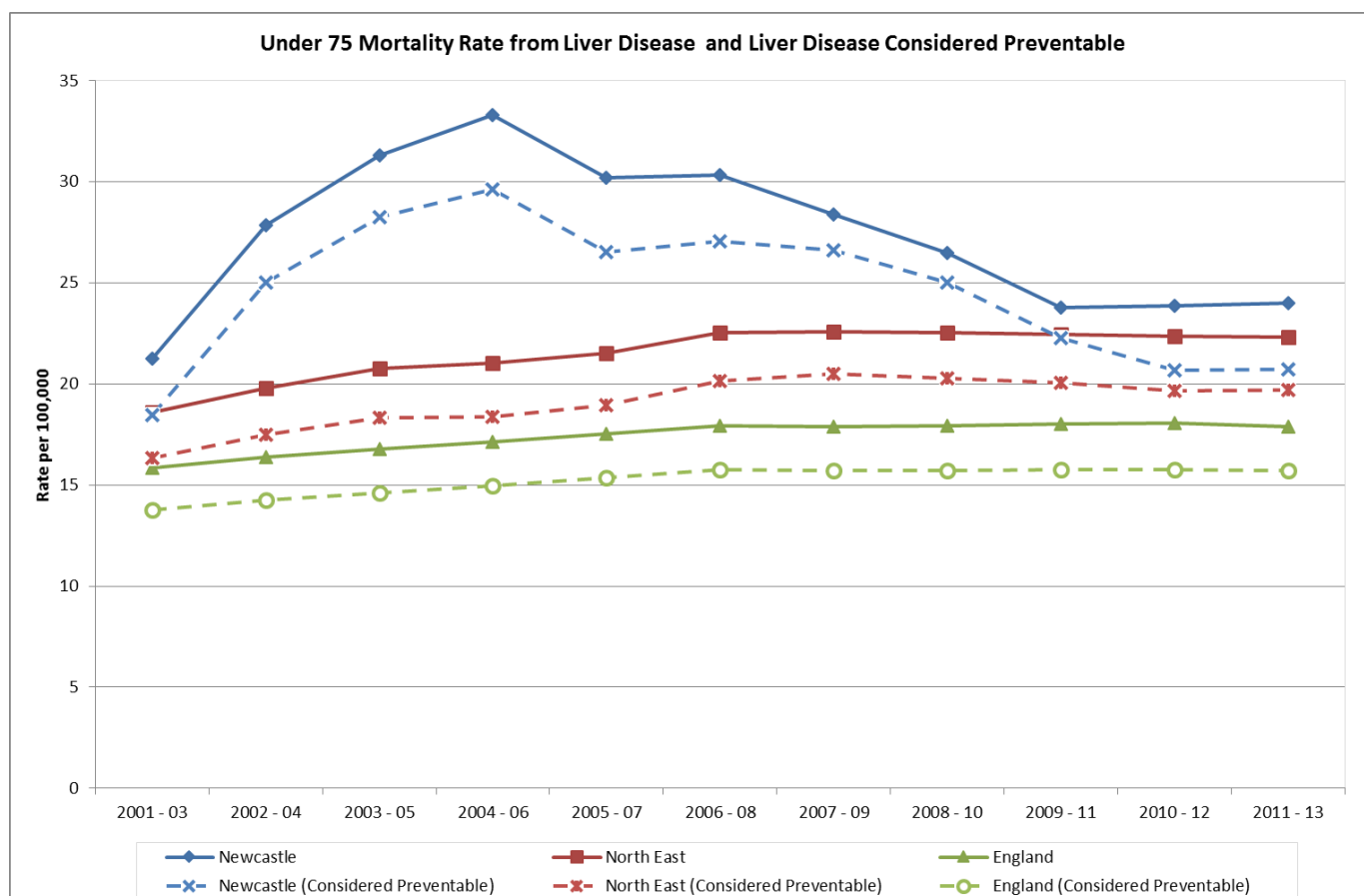


Figure 4.3-14: Under 75 mortality rate from liver disease and liver diseases considered preventable per 100,000, 2001/03 – 2011/13. Source: Public Health England.

4.3.3.9 Excess Winter Deaths

The number of excess winter deaths depends on the temperature and the level of disease in the population, alongside other factors such as how well equipped people are. Most excess winter deaths are due to circulatory and respiratory diseases, and the majority occur in later life. Research shows that mortality increases more in England and Wales compared to other European countries with colder climates, suggesting that more deaths could be preventable.

The Excess Winter Deaths Index shows the excess of deaths in winter compared with non-winter months. The three year rolling average (2010-2013) presented in Figure 4.3-15 shows that in Newcastle there were 15.9% excess deaths in winter, which is similar to the England average. For those over 85 years old, this is 24.5%, which is also similar to the England average.

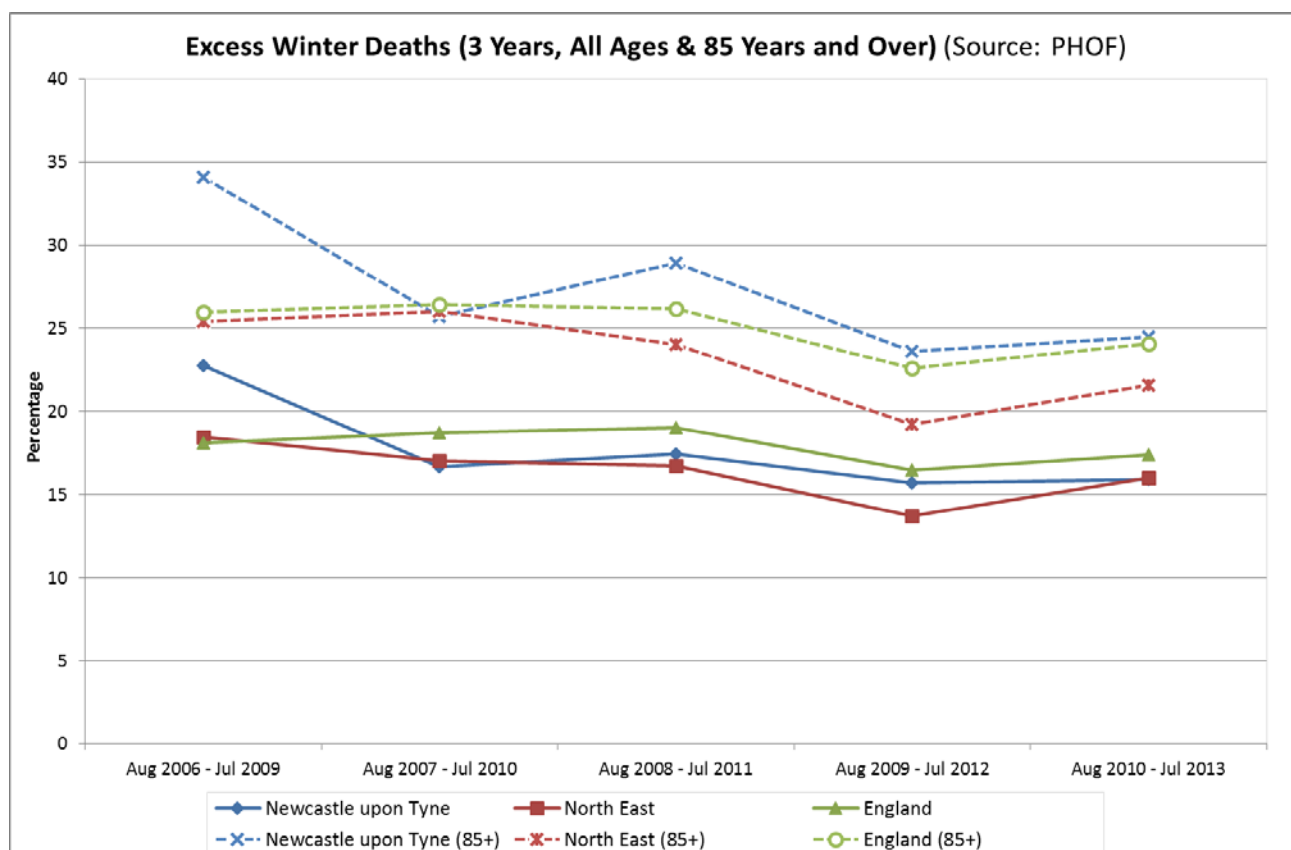


Figure 4.3-15: Excess Winter Deaths Index (%), 3 year rolling average, all ages and 85 years and over, 2006-09 – 2010-13. Source: Public Health England.

References and Sources

¹ PHE Longer Lives, 2013