











Population Health & Healthcare Surveillance

Preventable Premature Death

March 2019 Update

Summary Dashboard

Indicator		Time Period	North East Value	North East Rank	National Average	Direction of Travel
Preventable Premature Death	5. Leading Causes of Death: % of deaths with an underlying cause of:	2017				
	Dementia and Alzheimer disease		11.7%		12.8%	
	Heart diseases		10.6%		10.8%	
	Lung Cancer		7.2%		5.7%	
	Chronic lower respiratory diseases		7.2%		6.0%	
	Stroke		6.1%		6.0%	
	Total		42.9%		41.1%	
	6. Infant Mortality (deaths per 1,000 live births)	2015 - 17	3.3	3	3.9	
	7. Mortality rate from causes considered preventable (per 100,000)	2015 - 17	223.4	9	181.5	
	8. Suicide rate (per 100,000)	2015 - 17	10.8	9	9.6	
	9. Deaths from Drug Misuse	2015 - 17	7.6	9	4.3	
	10. Under 75 Mortality Rate from all Cardiovascular Diseases (per 100,000)	2015 - 17	82.9	8	72.5	
	11. Under 75 Mortality Rate from Cancer considered preventable (per 100,000)	2015 - 17	92.8	9	78.0	
	12. Under 75 mortality rate from liver disease considered preventable (per 100,000)	2015 - 17	22.2	8	16.3	
	13. Under 75 mortality rate from respiratory disease considered preventable (per 100,000)	2015 - 17	26.8	9	18.9	
	14. Mortality rate from a range of specified communicable diseases, including influenza (per 100,000)	2015 - 17	12.5	8	10.9	
	15. Mortality Rate from dementia and Alzheimer's disease (per 100,000)	2017	131.2	6	122.3	

Compared with England  Significantly Better  Similar  Significantly Worse

North East Rank amongst the 9 Regions 1 - Best 9 - Worst

What do the detailed pages show?

The following pages contain further information for each indicator, including, in the main, data comparing each region in England, trend data over time for England and the North East and the latest information at local authority level for the North East and North Cumbria. A narrative section explains the key findings from the data and also includes data sources and definitions.

5. Leading Causes of Death (2017)

% of deaths with an underlying cause of:

	North East	England
Dementia and Alzheimer disease	11.7%	12.8%
Heart diseases	10.6%	10.8%
Lung Cancer	7.2%	5.7%
Chronic lower respiratory diseases	7.2%	6.0%
Stroke	6.1%	6.0%
TOTAL	42.9%	41.1%

Age	1st	2nd	3rd	4th	5th
1 to 19 years	Suicide and injury/poisoning of undetermined intent	Land transport accidents	Accidental poisoning	Homicide and probable homicide	Epilepsy
20 to 34 years	Accidental poisoning	Suicide and injury/poisoning of undetermined intent	Land transport accidents	Epilepsy	Cirrhosis and other diseases of liver
35 to 49 years	Cirrhosis and other diseases of liver	Accidental poisoning	Suicide and injury/poisoning of undetermined intent	Heart disease	Breast Cancer
50 to 64 years	Heart disease	Lung Cancer	Cirrhosis and other diseases of liver	Chronic lower respiratory diseases	Stroke
65 to 79 years	Lung Cancer	Heart disease	Chronic lower respiratory diseases	Stroke	Dementia and Alzheimer's disease
80+ years	Dementia and Alzheimer's disease	Heart disease	Stroke	Chronic lower respiratory diseases	Influenza and pneumonia
All Ages	Dementia and Alzheimer's disease	Heart disease	Lung Cancer	Chronic lower respiratory diseases	Stroke

Data Source: NOMIS - ONS Crown Copyright Reserved [from Nomis on 12 March 2019].

<https://www.nomisweb.co.uk/query/construct/summary.asp?reset=yes&mode=construct&dataset=161&version=0&anal=1&initsetl>

Definitions / Notes

In the infographic above causes of death are ranked according to the number of deaths from each cause in the specified age group.

Infant mortality is not included in the analysis because deaths under 28 days do not record an underlying cause of death in the same way as those 28 days and over.

What is the data telling us?

In 2017 the most common cause of death in the North East was dementia and Alzheimer's disease, accounting for 11.7% of deaths. Also amongst the top five causes of death were heart disease (10.6%), lung cancer (7.2%), chronic respiratory diseases (7.2%) and stroke (6.1%). These five diseases accounted for almost 43% of all deaths in the region in 2017.

Deaths from suicide and injury/poisoning of undetermined intent, and accidents were leading causes in those under 20 years. However, the number of deaths, from any cause, in young people is small and therefore the leading causes vary from year to year.

In the 20-34 age group the leading causes are similar to those in the younger age group, with epilepsy and liver diseases also among the top five causes of death.

Liver disease was a common cause of death between the ages of 20 and 64 years.

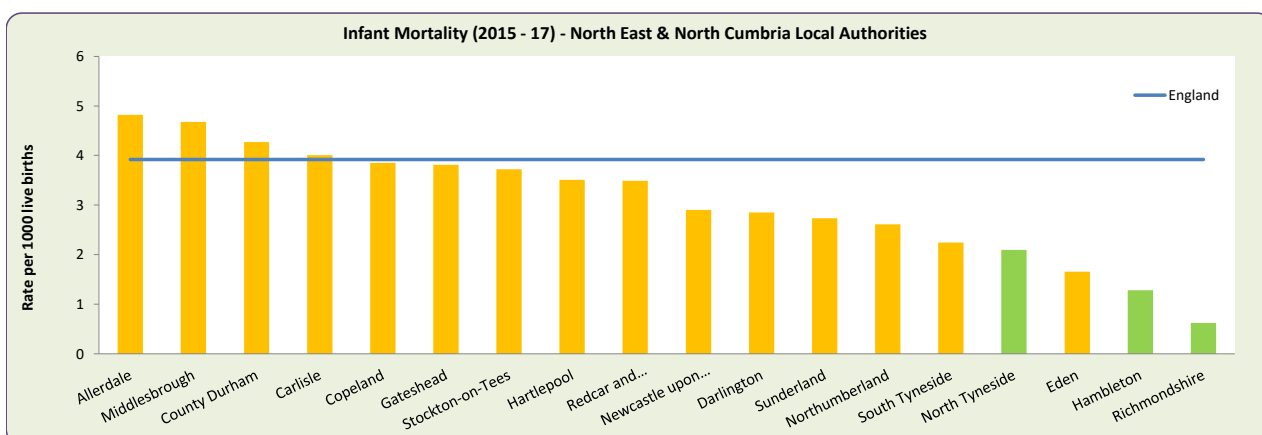
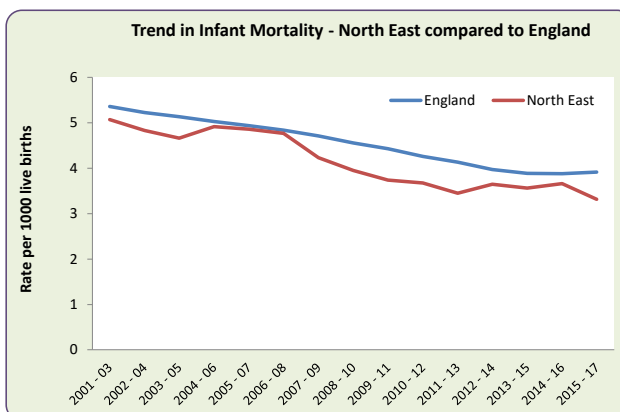
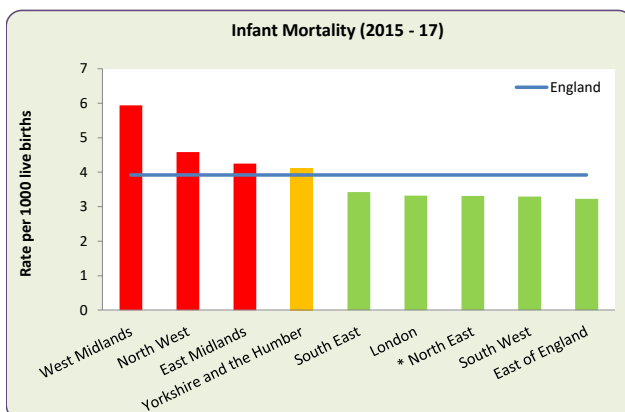
Deaths from heart disease, stroke, and respiratory disease were leading causes from age 50.

In the 80 plus age group, the most common cause of death was dementia and Alzheimer's disease.

6. Infant Mortality (2015 - 17)

Rate of deaths in infants aged under 1 year per 1,000 live births.

West Midlands	North West	East Midlands	Yorkshire and the Humber	South East	London	North East	South West	East of England	England
5.9	4.6	4.2	4.1	3.4	3.3	3.3	3.3	3.2	3.9



Data source: Public Health Outcomes Framework Data tool. Indicator Portal (<http://www.phoutcomes.info>).

Definitions / Notes

Infant mortality is an internationally recognised indicator of the general health of an entire population. It reflects the relationship between causes of infant mortality and upstream determinants of population 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 maternal and newborn health and care. Infant deaths are infrequent events so data are compared over rolling three year periods.

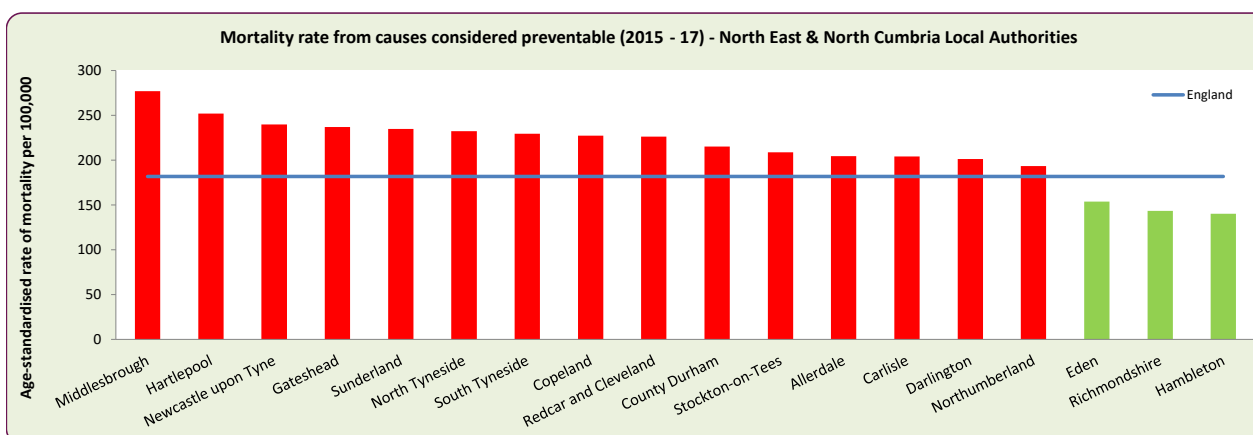
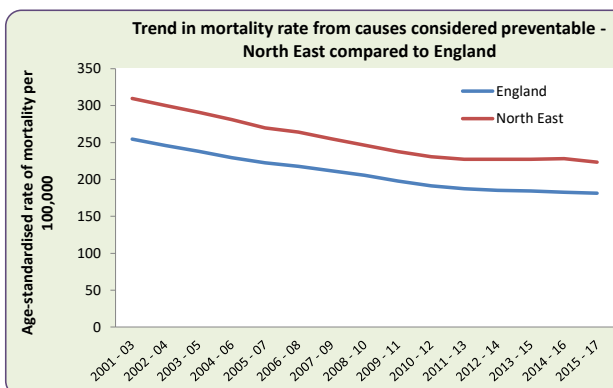
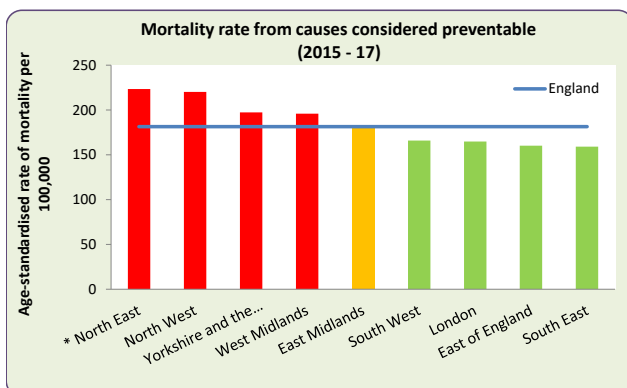
What is the data telling us?

Trends show that in general, infant mortality rates are improving over time and those in the North East region are lower than those seen nationally. In 2015-17 the Infant Mortality rate in the North East was 3.3 per 1,000 live births, while the national average was 3.9. Three Local Authority areas in the region had rates that were significantly better than the national average.

7. Mortality rate from causes considered preventable (2015 - 17)

Age-standardised rate of mortality from causes considered preventable per 100,000 population.

North East	North West	Yorkshire and the Humber	West Midlands	East Midlands	South West	London	East of England	South East	England
223.4	220.4	197.2	195.8	182.8	166.0	164.7	160.2	159.2	181.5



Data source: Public Health Outcomes Framework Data tool. Indicator Portal (<http://www.phoutcomes.info>).

Definitions / Notes

The basic concept of preventable mortality is that some deaths are considered preventable if, in the light of the understanding of the determinants of health at the time of death, all or most deaths from the underlying cause (subject to age limits if appropriate) could potentially be avoided by public health interventions in the broadest sense. Preventable mortality overlaps with, but is not the same as 'amenable' mortality, which includes causes of deaths which could potentially be avoided through good quality healthcare. Preventable mortality rates are helpful indicators of the effectiveness of public health and health care.

What is the data telling us?

The data indicates considerable scope for improvement and largely reflects the different public health needs in the region. For the period 2015-17, the North East region had the highest preventable mortality rate nationally, i.e. 223 per 100,000, 23% higher than the national average of 182 per 100,000.

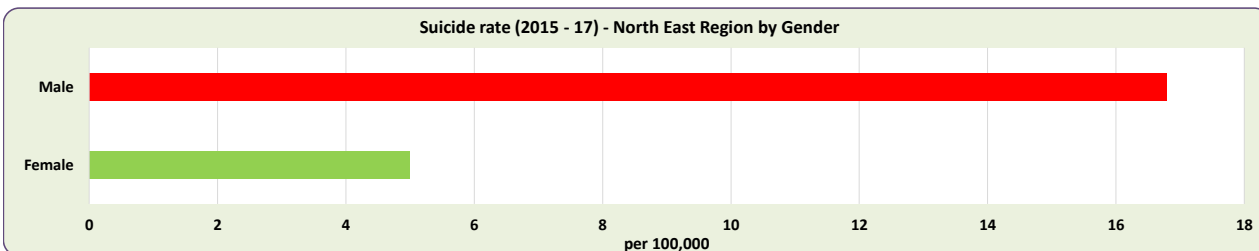
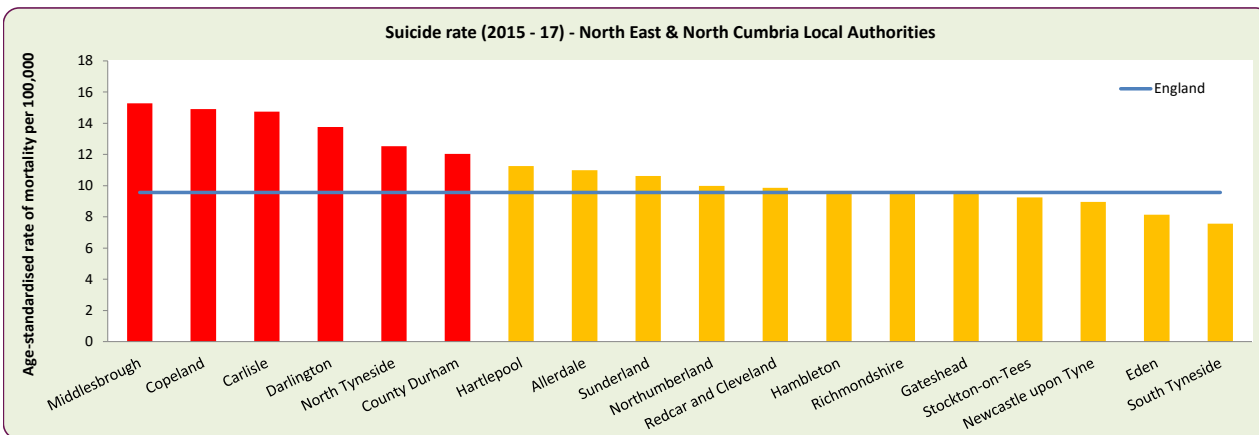
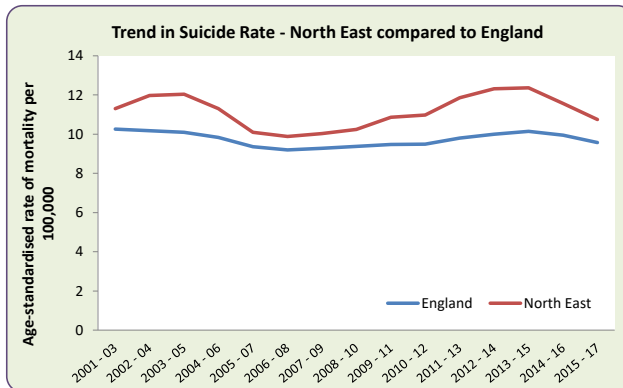
During the first decade of this century when death rates fell consistently year-on-year, the rate of improvement has largely stalled both regionally and nationally, and the relative gap between the North East region and England has not reduced.

Differences within the region are considerable. In 2015-17 the preventable mortality rate in Middlesbrough was almost double that in Hambleton, 277 compared to 140 per 100,000.

8. Suicide rate (2015 - 17)

Age-standardised mortality rate from suicide and injury of undetermined intent per 100,000 population.

North East	South West	Yorkshire and the Humber	North West	West Midlands	South East	East of England	East Midlands	London	England
10.8	10.6	10.4	10.4	9.5	9.4	9.3	8.8	8.6	9.6



Data source: Public Health Outcomes Framework Data tool. Indicator Portal (<http://www.phoutcomes.info>).

Definitions / Notes

Suicide is a significant cause of death especially in young adults, and is widely used as an indicator of mental health and health care.

What is the data telling us?

During 2015-17, the North East continued to experience the highest suicide rate of all the English regions at 10.8 per 100,000 compared with 9.6 per 100,000 nationally. The gap between the North East and England fluctuates over time, as demonstrated by the trend chart, although the region's rate has decreased in recent years. However, more data will be required before we can be certain that this is the beginning of a downward trend.

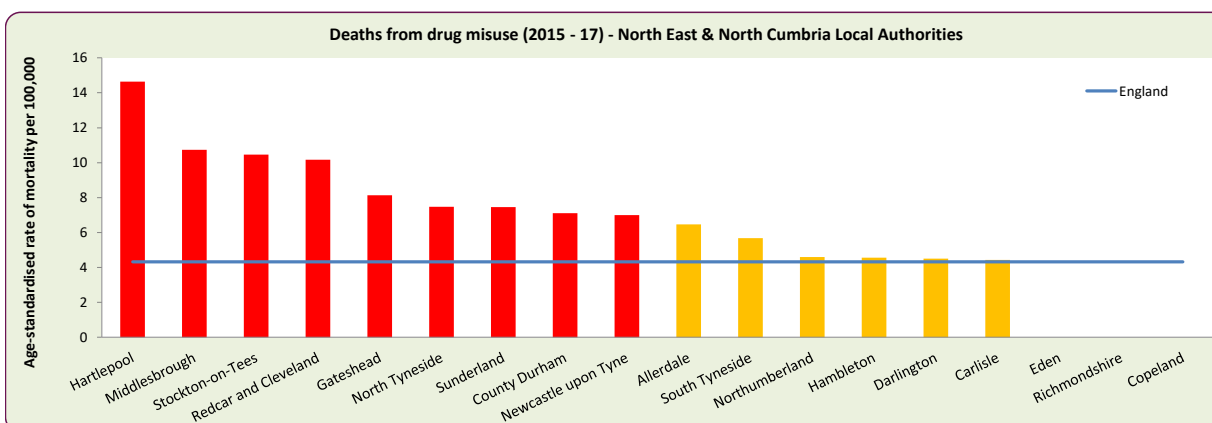
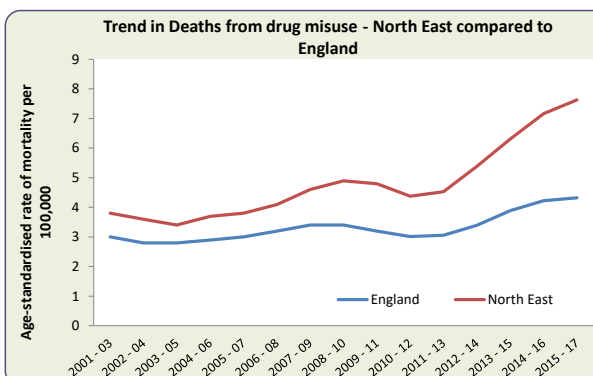
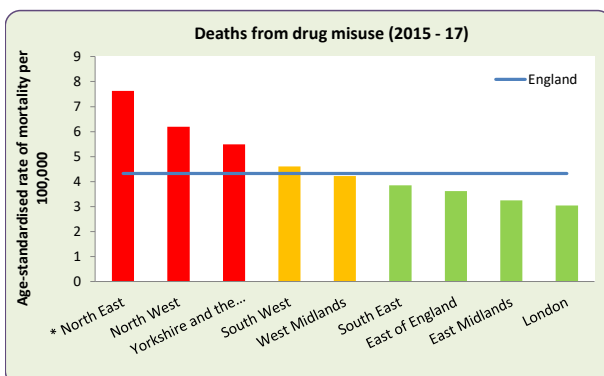
During 2015-17, wide intra-regional variation remained across Local Authority areas with suicide rates of 7.6 per 100,000 in South Tyneside but more than twice as high in Middlesbrough at 15.3 per 100,000.

Nationally and regionally there are marked gender differences with males experiencing much higher suicide rates than females. In the North East, in the 2015-17 period, the rate for males was 16.8 per 100,000 compared to 5 per 100,000 for females.

9. Deaths from drug misuse (2015 - 17)

Age-standardised mortality rate from drug misuse per 100,000 population.

North East	North West	Yorkshire and the Humber	South West	West Midlands	South East	East of England	East Midlands	London	England
7.6	6.2	5.5	4.6	4.2	3.9	3.6	3.3	3.0	4.3



Data source: Public Health Outcomes Framework Data tool. Indicator Portal (<http://www.phoutcomes.info>).

Definitions / Notes

There were no data available for Eden, Richmondshire or Copeland. This was due to the fact that the number of deaths in each of these areas was fewer than 10, a number considered too few from which to calculate directly standardised rates reliably, and therefore the data has been suppressed.

What is the data telling us?

Drug misuse is a significant cause of premature mortality in the UK. The Global Burden of Disease Survey 2017⁹ shows that drug use disorders are now the second highest cause of death in the 15–49 age group both nationally and in the North East.

During the period 2015–17 the population in the North East region experienced mortality rates from drug misuse which were higher than any other region and significantly higher than the national rate. During this period the mortality rate in the North East was 76% higher than the national average; 7.6 per 100,000 compared with 4.3 per 100,000 nationally.

The data indicate a worsening picture for the North East, particularly since 2012–14 when rates in the North East increased considerably more than in England, and the gap continues to widen.

During 2015–17, almost half of the local authorities in the North East had rates which were significantly above the national average and there was more than a three fold difference between the area with the lowest rate (Carlisle - 4.4 per 100,000) and that with the highest (Hartlepool - 14.7 per 100,000).

A PHE report¹⁰ which explained the increase in these deaths nationally, has indicated that the factors responsible are multiple and complex. They include changes in the availability of heroin over time and an ageing cohort of 1980s and 1990s heroin users, who are now experiencing cumulative physical and mental health conditions that make them more susceptible to overdose. According to PHE the majority of these users "appear not to be engaging in drug treatment where they could be protected". PHE concludes that "Until we meet the general health and other needs of the ageing cohort, and address the factors leading to increased numbers of deaths in other risk groups, the evidence suggests that drug misuse deaths will continue to rise."

9. Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2017 (GBD 2017) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2018.

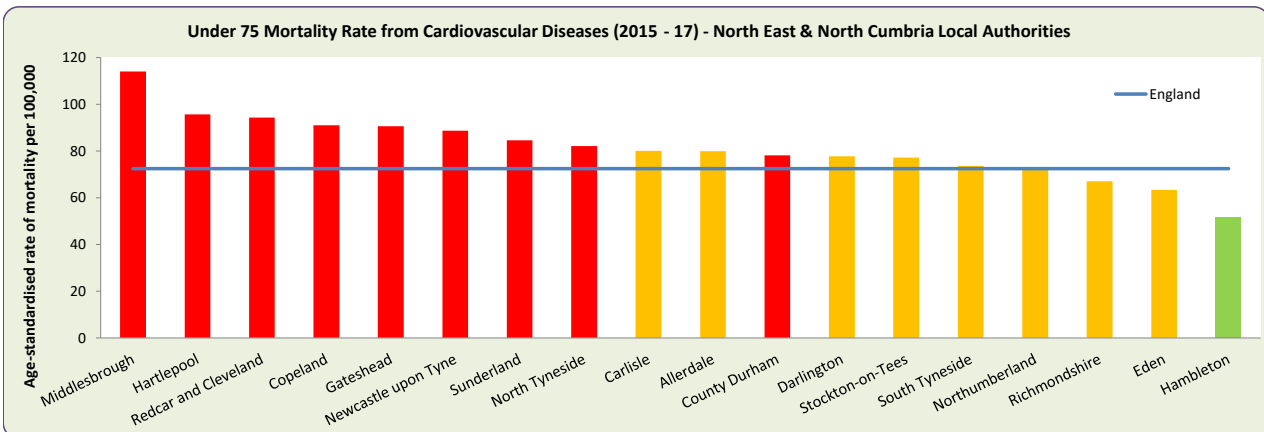
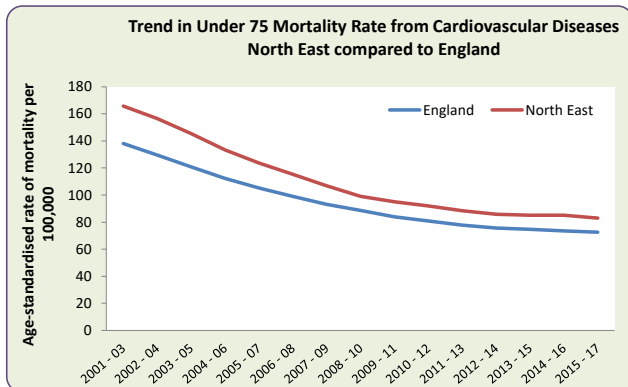
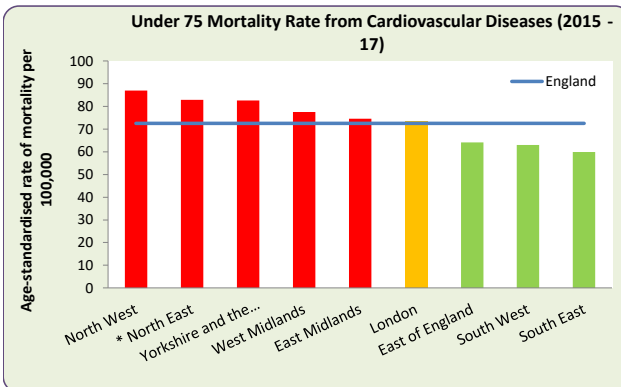
<http://ghdx.healthdata.org/gbd-results-tool>

10. Public Health England (2016): Understanding and preventing drug-related deaths: The report of a national expert working group to investigate drug-related deaths in England. © Crown copyright 2016 <https://www.gov.uk/government/publications/preventing-drug-related-deaths>

10. Under 75 Mortality Rate from Cardiovascular Diseases (2015 - 17)

Age-standardised rate of mortality from all cardiovascular diseases (including heart disease and stroke) in persons less than 75 years of age per 100,000 population.

North West	North East	Yorkshire and the Humber	West Midlands	East Midlands	London	East of England	South West	South East	England
87.0	82.9	82.6	77.5	74.5	73.2	64.1	63.0	59.9	72.5



Data source: Public Health Outcomes Framework Data tool. Indicator Portal (<http://www.phoutcomes.info>).

Definitions / Notes

Cardiovascular disease (CVD) is one of the major causes of premature death (i.e. under the age of 75 years) in England. There have been huge gains over the past decades in terms of better treatment for CVD and improvements in lifestyle, but to ensure that there continues to be a reduction in the rate of premature mortality from CVD, there needs to be concerted action in both prevention and treatment.

It should be noted that in previous versions of this report the indicator used to describe CVD mortality was the "under 75 mortality rate from cardiovascular Diseases **considered preventable**". The definition of preventable mortality from CVD, which currently excludes stroke, is under review by ONS at present and likely to change in future. For this report, NEQOS therefore took the decision to replace the indicator which related to CVD mortality considered preventable, with an indicator which reports on all CVD mortality in the under 75s.

What is the data telling us?

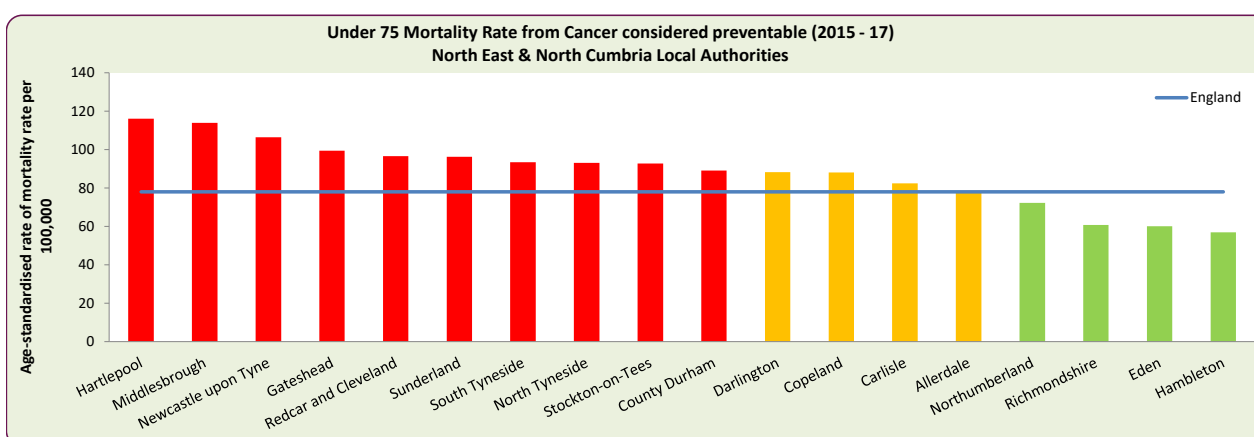
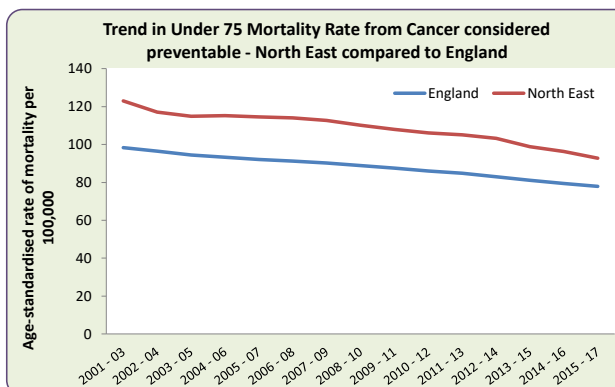
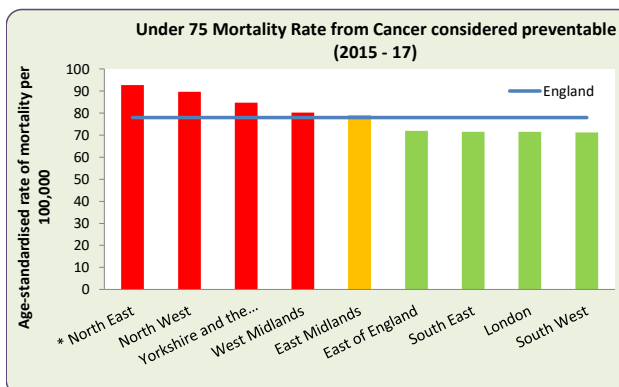
In 2015-17, the rate of premature CVD mortality in the North East region was the second highest of all the English regions and significantly higher than the national rate. However, the gap between the region and England has narrowed as the rate in the North East has fallen at a faster pace than in the country overall. Trend data for the region indicates that the mortality rate halved, from 166 per 100,000 in 2001-03 to 83 per 100,000 in 2015-17. However, the rate of decrease has slowed both regionally and nationally, and is one of the explanations for the slow down in improvements in life expectancy discussed earlier in this report.

During 2015-17, there was wide intra-regional variation in rates of premature death from CVD, with a rate as low as 51.7 per 100,000 in Hambleton compared with 114 per 100,000 in Middlesbrough.

11. Under 75 Mortality Rate from Cancer considered preventable (2015 - 17)

Age-standardised rate of mortality considered preventable from all cancers in those aged <75 per 100,000 population.

North East	North West	Yorkshire and the Humber	West Midlands	East Midlands	East of England	South East	London	South West	England
92.8	89.7	84.7	80.2	78.9	72.0	71.6	71.6	71.2	78.0



Data source: Public Health Outcomes Framework Data tool. Indicator Portal (<http://www.phoutcomes.info>).

Definitions / Notes

The inclusion of this indicator (alongside several other indicators in the Public Health and NHS Outcomes Frameworks) reinforces the Government's commitment to reducing avoidable deaths through public health policy and interventions and sends out a clear signal that prevention of cancer is just as important as treatment.

What is the data telling us?

During the period 2015-2017 the population in the North East region suffered premature mortality rates from cancer which were higher than any other region and significantly higher than the national rate, 92.8 per 100,000 compared to 78.0 per 100,000.

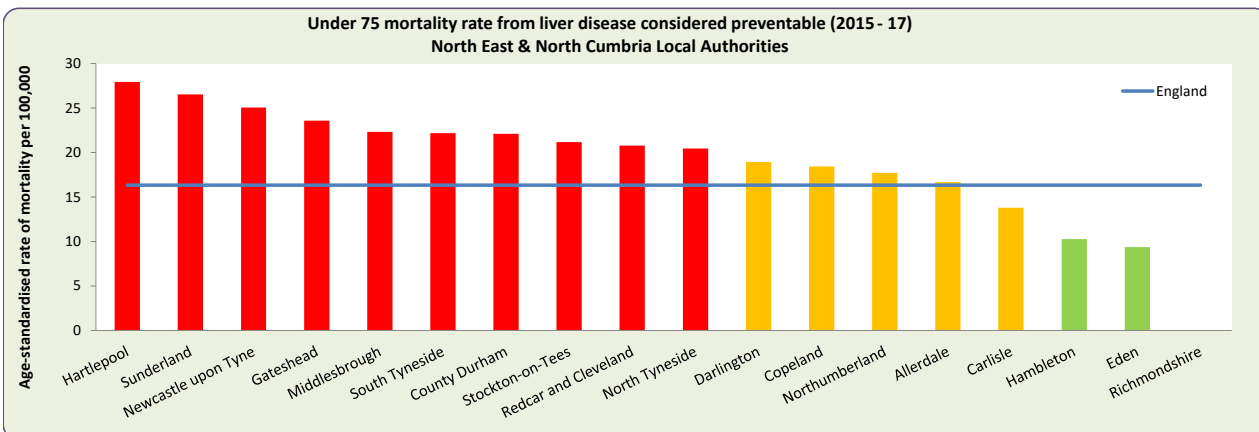
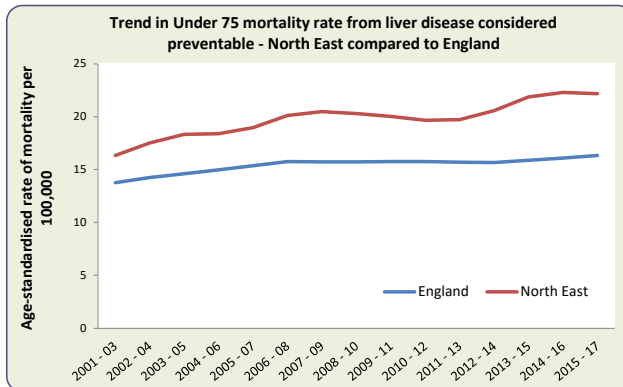
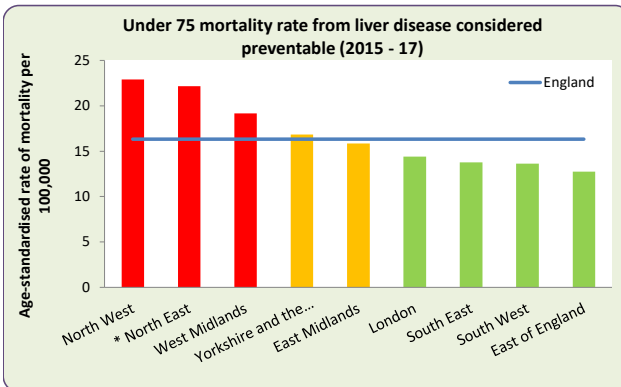
Trend data show that premature mortality from cancer continues to fall and the North East is slowly closing the gap with England. In 2001-03, the North East rate was 25% higher than the national rate and this difference has narrowed to 19% in recent years.

Within the North East region, mortality rates vary widely between Local Authorities - in 2015-17 the rate in Hartlepool was 116 per 100,000, more than double the rate for Hambleton (57 per 100,000).

12. Under 75 mortality rate from liver disease considered preventable (2015 - 17)

Age-standardised rate of mortality considered preventable from liver disease in those aged <75 per 100,000 population

North West	North East	West Midlands	Yorkshire and the Humber	East Midlands	London	South East	South West	East of England	England
22.9	22.2	19.2	16.9	15.8	14.4	13.8	13.6	12.7	16.3



Data source: Public Health Outcomes Framework Data tool. Indicator Portal (<http://www.phoutcomes.info>).

Definitions / Notes

Liver disease is one of the top causes of death in England and is strongly linked to alcohol consumption and obesity prevalence, which are both amenable to public health interventions.

There were no data available for Richmondshire Local Authority. This was due to the fact that the total number of deaths for this area was fewer than 10, a number considered too few with which to calculate directly standardised rates reliably, and therefore the data has been suppressed.

What is the data telling us?

During the period 2015-17, the North East region experienced the second highest premature mortality rates from liver disease - 22.2 per 100,000 which is significantly higher than the national rate of 16.3 per 100,000.

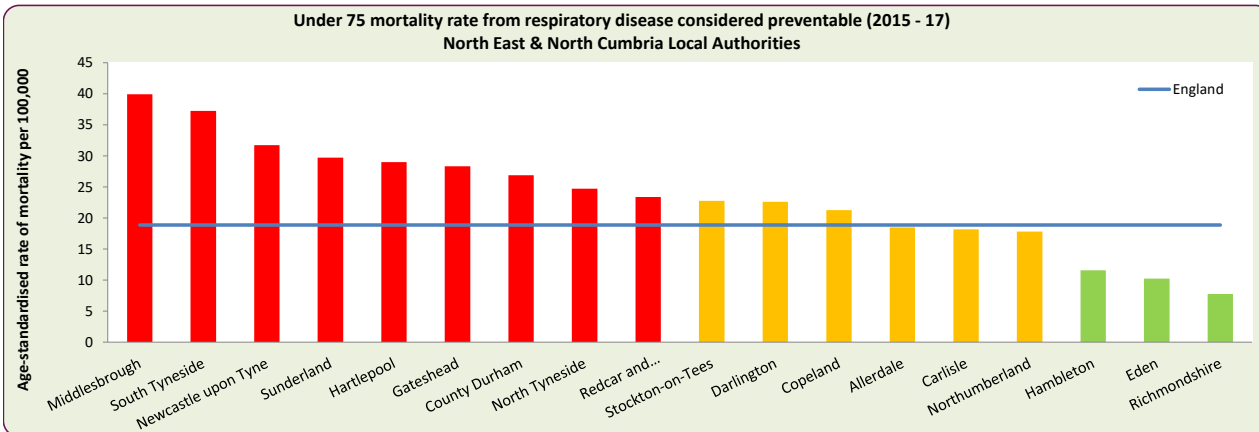
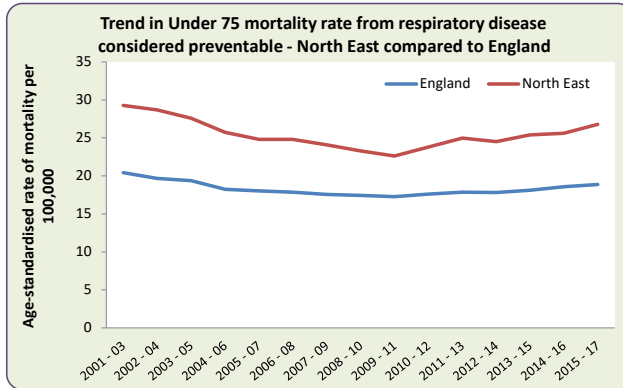
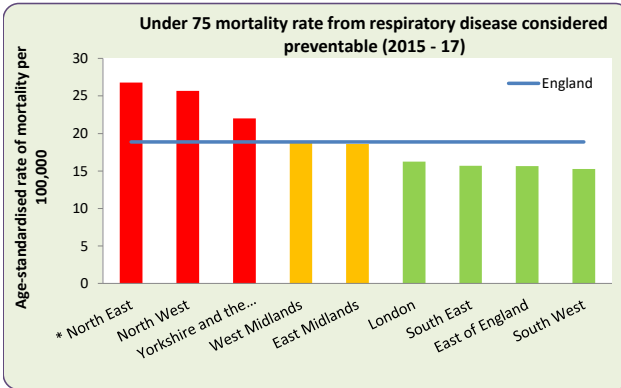
Trends show that premature mortality from liver disease is increasing regionally and nationally, and the increase is at a higher rate in the North East region than that nationally. In 2010-12 the regional value was 15.8 per 100,000 which was 25% higher than the national value. By 2015-17 the regional figure had increased to the extent that it was 36% higher than that observed nationally.

Within the region, wide variations in premature mortality from liver disease continue. During 2015-17 the area with the highest rate was Hartlepool (27.9 per 100,000) which had a rate that was almost 3 times higher than the rate for Eden (9.3 per 100,000).

13. Under 75 mortality rate from respiratory disease considered preventable (2015 - 17)

Age-standardised rate of mortality considered preventable from respiratory disease in those aged less than 75 years per 100,000 population.

North East	North West	Yorkshire and the Humber	West Midlands	East Midlands	London	South East	East of England	South West	England
26.8	25.7	22.0	19.0	18.6	16.2	15.7	15.6	15.3	18.9



Data source: Public Health Outcomes Framework Data tool. Indicator Portal (<http://www.phoutcomes.info>).

Definitions / Notes

Premature mortality from respiratory disease is a problem in the North East region and widely considered to reflect its industrial legacy (mining and ship building) as well as historic smoking rates.

What is the data telling us?

The data indicate a worsening picture for the North East region which, for 2015-17, had the highest premature mortality rates from respiratory disease of any of the English regions.

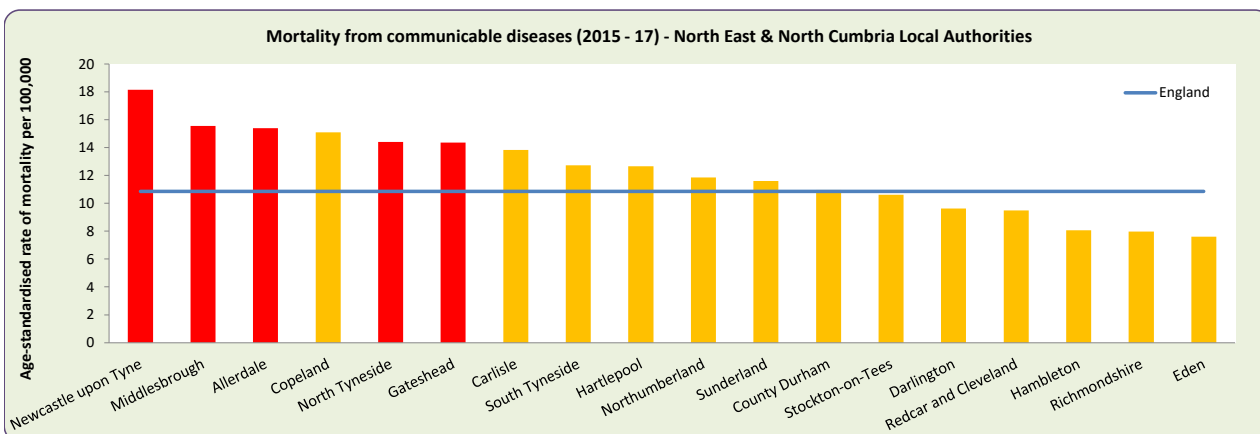
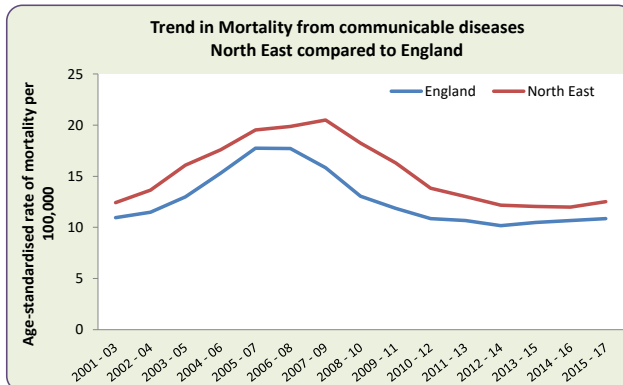
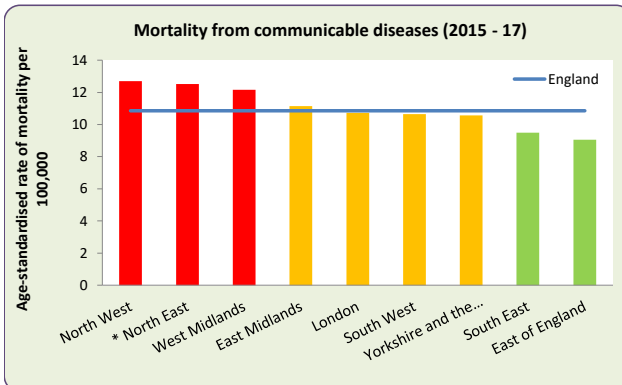
For the first ten years of this century, the gap between the North East and England had been reducing, as the rate in the region fell at a faster rate than that observed nationally. However, for about the past six years, the gap has been widening. In 2009-11 the North East rate was 31% higher than the national rate but by 2015-17 the gap had increased to 42%, similar to that observed in the first few years of this century.

During the period 2015-17, mortality rates varied considerably within the region, ranging from 7.8 per 100,000 in Richmondshire to 39.9 per 100,000 in Middlesbrough (over 5 times higher).

14. Mortality rate from a range of specified communicable diseases, including influenza (2015 - 17)

Age-standardised rate of mortality from communicable diseases per 100,000 population.

North West	North East	West Midlands	East Midlands	London	South West	Yorkshire and the Humber	South East	East of England	England
12.7	12.5	12.2	11.1	10.7	10.7	10.6	9.5	9.1	10.9



Data source: Public Health Outcomes Framework Data tool. Indicator Portal (<http://www.phoutcomes.info>).

Definitions / Notes

Preventing the incidence of communicable diseases is an important issue for Public Health. There is evidence that rapid diagnosis, treatment and prevention of spread can reduce mortality. Immunisation is an important intervention and this region has high coverage rates for immunisation.

What is the data telling us?

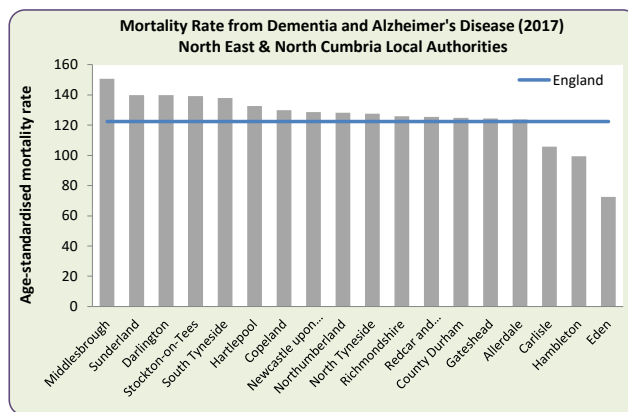
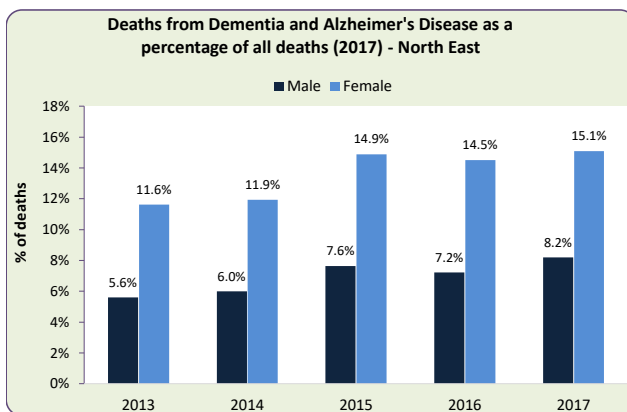
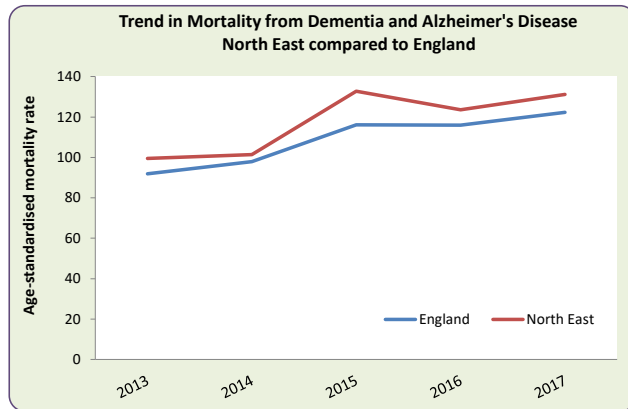
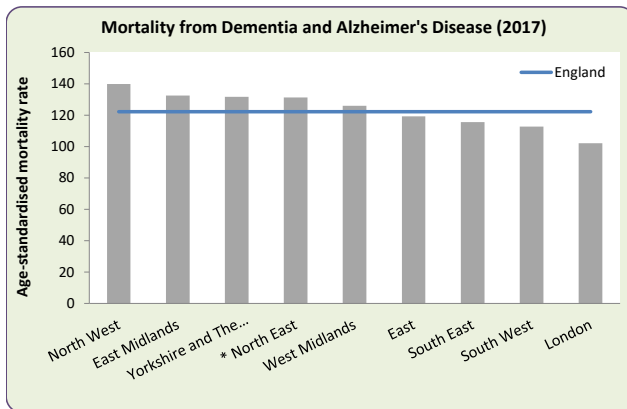
In 2015-17 the North East region had the second highest premature mortality rate from communicable diseases of all the English health regions, and 15% higher than that observed nationally - 12.5 per 100,000 compared with 10.9 per 100,000.

Trend data show a rise and then a fall in premature mortality rates from communicable diseases both nationally and regionally but with the peak sustained for a longer period in the North East compared to England. Data for the most recent time period suggests that the rate is on the increase again, both nationally and regionally.

In 2015-17 intra-regional variation in Local Authority mortality rates continued, ranging from 18.1 per 100,000 for Newcastle upon Tyne to 7.6 per 100,000 in Eden.

15. Age-standardised rate of mortality from dementia and Alzheimer's disease per 100,000 population (2017)

North West	East Midlands	Yorkshire and The Humber	North East	West Midlands	East	South East	South West	London	England
139.8	132.6	131.7	131.2	126.1	119.3	115.5	112.8	102.1	122.3



Source: NOMIS - ONS Crown Copyright Reserved [from Nomis on 12 March 2019]

<https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=161>

Definitions / Notes

ICD-10 codes used to define dementia and Alzheimer's disease are F01, F03 and G30.

What is the data telling us?

The mortality rate from dementia and Alzheimer's disease has been increasing steadily, both nationally and regionally. With people living longer and surviving other illnesses, the number of people developing dementia and Alzheimer's disease is increasing. A better understanding of dementia and improved diagnosis is also likely to have caused increased reporting of dementia on death certificates. There have also been coding changes that make dementia and Alzheimer's disease more likely to be classified, in place of other causes, as the underlying cause of death.¹¹

The trend data above also show that deaths from dementia and Alzheimer's disease, as a proportion of all deaths, have increased in both sexes over the past five years.

11. <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsregisteredinenglandandwalesseriesdr/2015#quality-and-methodology>