



Population Health & Healthcare Surveillance

Life Expectancy

March 2019 Update

Summary Dashboard

Indicator		Time Period	North East Value	North East Rank	National Average	Direction of Travel
Life Expectancy	Life Expectancy at Birth (years)	2015 - 17				
	1. Males		77.9	9	79.6	
	2. Females		81.6	9	83.1	
	Healthy Life Expectancy at Birth (years)	2015 - 17				
	3. Males		59.5	9	63.4	
	4. Females		60.4	9	63.8	

Compared with England Significantly Better Similar Significantly Worse

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

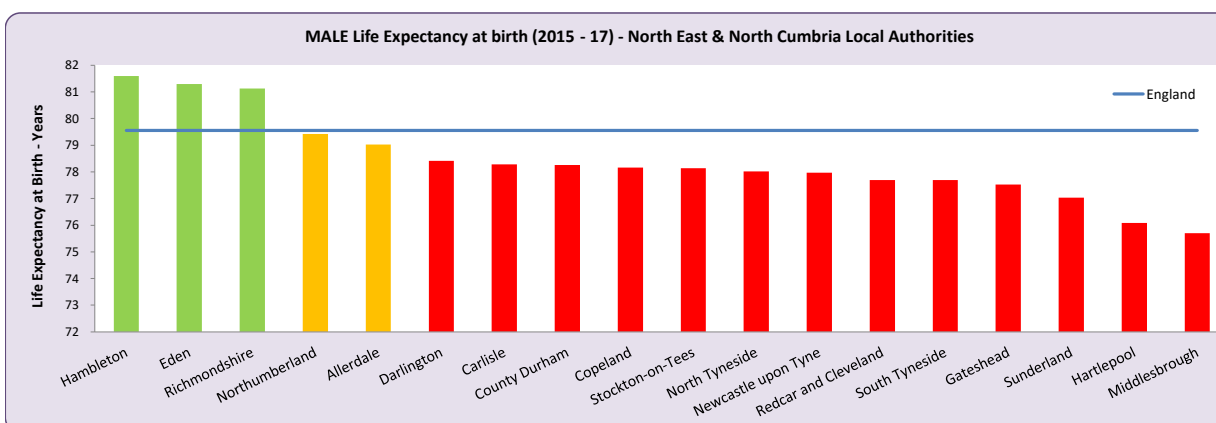
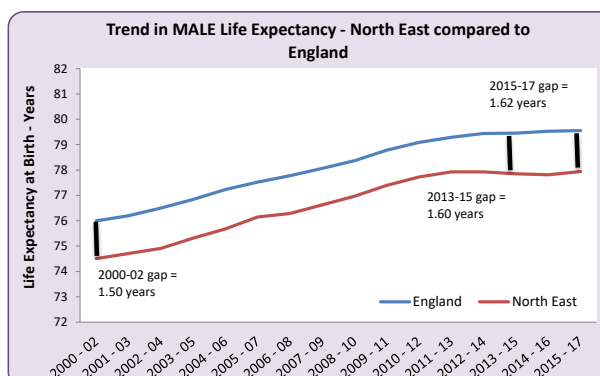
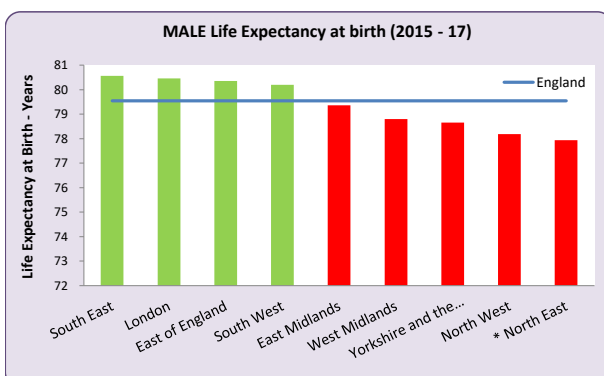
What do the detailed pages show?

The following pages contain further information for each indicator, including 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.

1. Life Expectancy at Birth - MALES (2015 - 17)

The average number of years a male would expect to live based on contemporary mortality rates.

South East	London	East of England	South West	East Midlands	West Midlands	Yorkshire and the Humber	North West	North East	England
80.6	80.5	80.4	80.2	79.4	78.8	78.7	78.2	77.9	79.6



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

Definitions / Notes

Life Expectancy at birth is an estimate of the average number of years a newborn baby would survive if he or she experienced the same age-specific mortality rates for that area and time period throughout his or her life, i.e. if they remained in the same area with the same mortality rates for the rest of their life.

Life expectancy is used internationally as a key summary health outcome indicator and data is commonly compared over rolling three year periods.

What is the data telling us?

These data show that average life expectancy at birth for men in the North East in 2015-17 was the lowest amongst all the regions, at 77.9 years, compared to the national average of 79.6 years, a difference of 1.6 years. Within the region there is a 5.9 year difference between the area with the highest life expectancy (Hambleton - 81.6 years) compared to the area with the lowest (Middlesbrough - 75.7 years). The national and local variation in male life expectancy can largely be explained by differences in factors such as wealth, education, housing, employment and lifestyle rather than hospital care.

Trend data show that male life expectancy had been increasing, both regionally and nationally. However, the rate of improvement nationally has slowed, and locally a plateau is observed for the most recent time periods. These trend data also show that the absolute gap between the North East and England has widened slightly, from 1.5 years in 2000-02 to 1.62 in 2015-17 due to more favourable longevity gains in other parts of the country than in the North East.

An analysis based on data for 2012-14 showed that higher mortality rates in the North East from cancer, external causes (include deaths from injury, poisoning and suicide), circulatory diseases, digestive system diseases (includes alcohol-related conditions such as chronic liver disease and cirrhosis) and respiratory diseases account for the majority of the gap between England and the region in male life expectancy.³

Between 2000-02 and 2011-13 male life expectancy in the North East increased faster than that for females and the gap is now 3.7 years, whereas in 2000-02 it was 4.8 years.

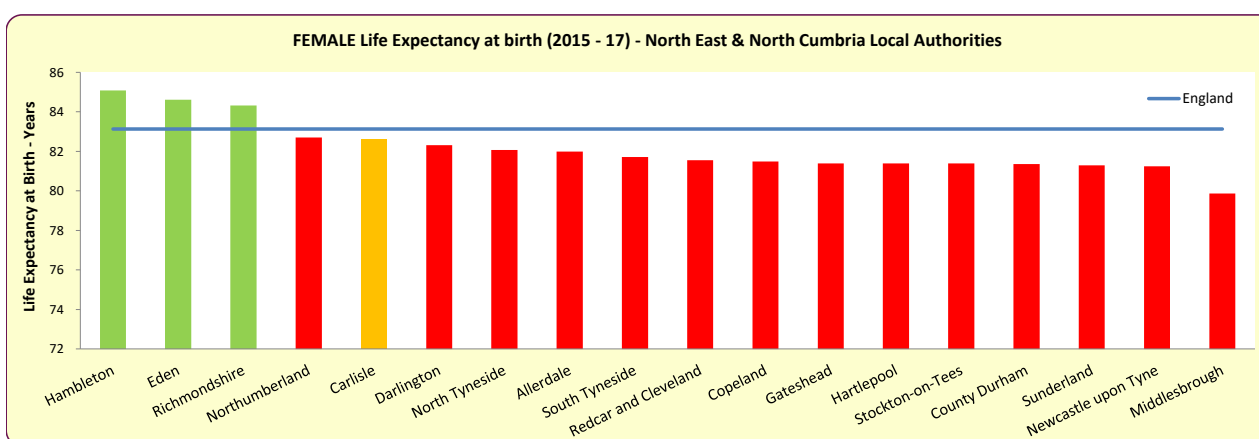
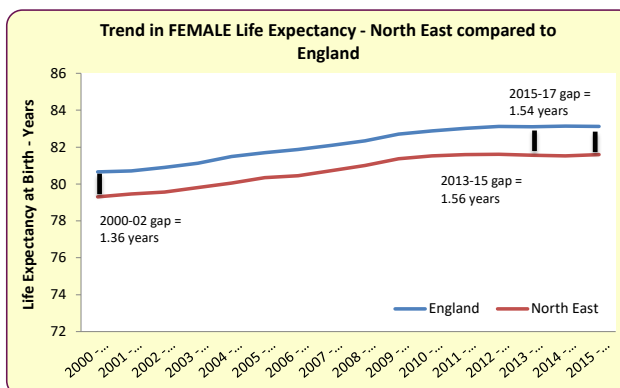
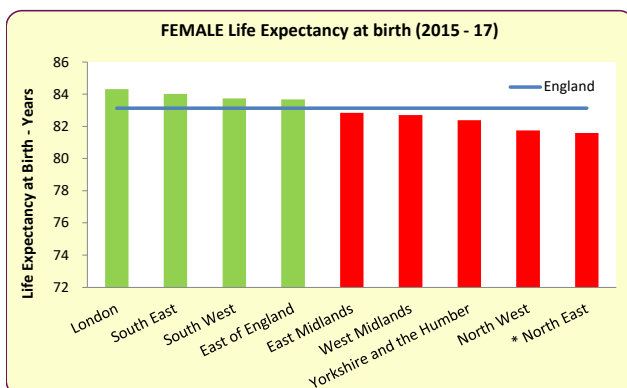
Gaps in life expectancy between different populations lie at the heart of concerns around inequalities in health. The gaps are further explored in the following pages.

3. Public Health England. Segment Tool, <https://fingertips.phe.org.uk/profile/segment>

2. Life Expectancy at Birth - FEMALE (2015 - 17)

The average number of years a female would expect to live based on contemporary mortality rates.

London	South East	South West	East of England	East Midlands	West Midlands	Yorkshire and the Humber	North West	North East	England
84.3	84.0	83.7	83.7	82.9	82.7	82.4	81.8	81.6	83.1



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

Definitions / Notes

Life Expectancy at birth is an estimate of the average number of years a newborn baby would survive if he or she experienced the same age-specific mortality rates for that area and time period throughout his or her life i.e. if they remained in the same area with the same mortality rates for the rest of their life.

Life expectancy is used internationally as a key summary health outcome indicator and data is commonly compared over three year rolling periods.

What is the data telling us?

These data show that average life expectancy at birth for women in the North East in 2015-17 was the lowest amongst all the regions, i.e. 81.6 years compared to the national average of 83.1 years, a difference of 1.5 years. Within the region there is a 5.2 year difference between the area with the highest life expectancy (Hambleton - 85.1 years) compared to the area with the lowest (Middlesbrough - 79.9 years). The national and local variation in female life expectancy can largely be explained by differences in factors such as wealth, education, housing, employment and lifestyle rather than hospital care.

Trend data show that improvements in female life expectancy have stalled, both locally and nationally. These trend data also show that the absolute gap between the North East and England has widened slightly since 2000-02. During that period it was 1.36 years whereas data for 2015-17 shows that it has increased to 1.54 years.

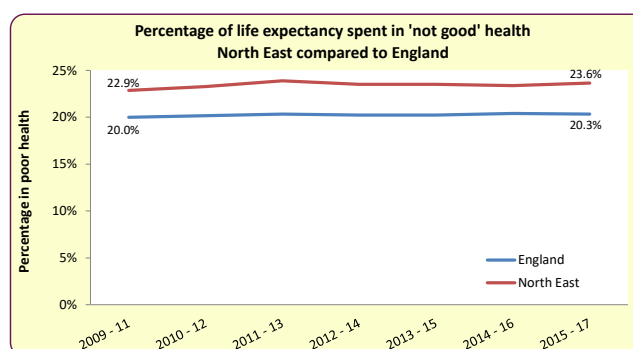
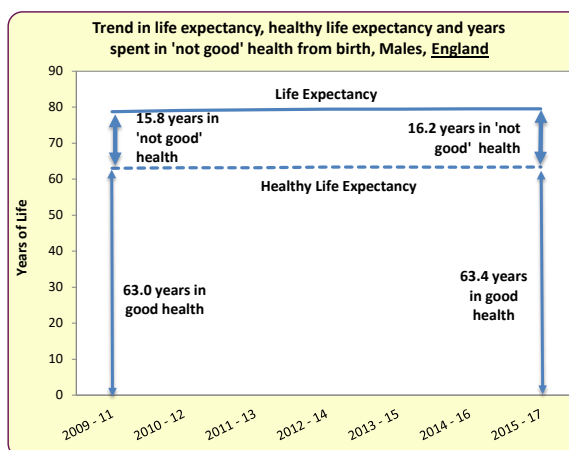
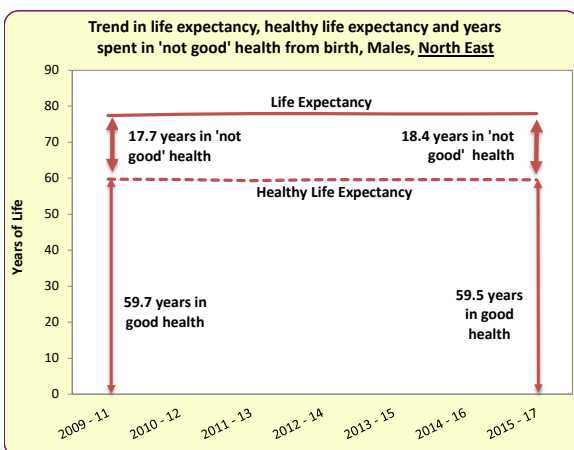
An analysis based on data for 2012-14 showed that higher mortality rates in the North East from cancer, respiratory diseases, digestive system diseases (includes alcohol-related conditions such as chronic liver disease and cirrhosis), circulatory diseases, and external causes (include deaths from injury, poisoning and suicide) account for the majority of the gap between England and the region in female life expectancy.⁴

4. Public Health England. Segment Tool, <https://fingertips.phe.org.uk/profile/segment>

3. Healthy Life expectancy at birth (Males) (2015 - 17)

The average number of years a person would expect to live in good health based on contemporary mortality rates and prevalence of self-reported good health.

South East	South West	East of England	London	East Midlands	West Midlands	Yorkshire and the Humber	North West	North East	England
66.1	64.7	64.1	63.9	62.8	62.1	61.7	61.2	59.5	63.4



Data source: Public Health Outcomes Framework Data tool. Indicator Portal (<http://www.phoutcomes.info>). ©Crown copyright 2018

Definitions / Notes

While average life expectancy and healthy life expectancy are both important headline measures of the health status of the population, the healthy life expectancy measure adds a 'quality of life' dimension to estimates of life expectancy by dividing them into time spent in different states of health.

Healthy life expectancy is an estimate of the number of years lived in 'Very good' or 'Good' general health, based on how individuals perceive their general health. The prevalence of 'good' / 'not good' health is derived from responses to a question on general health in the Annual population Survey. In response to the question "How is your health in general; would you say it was..." responses "Very good" and "Good" are categorised as 'Good' health and "Fair", "Bad" or "Very bad" as 'Not Good' health.

In addition to adding a quality of life dimension to life expectancy, the number of years of life in 'Not Good' health is also important as it relates more closely to demand for health and social care services.

Due to a change in methodology, data on healthy life expectancy are only available back to 2009-11. This short time scale limits the conclusions that can be drawn about trends.

Note that although data on life expectancy is published for districts, data on healthy life expectancy are only available at county level, which for this report, affects the data that is shown for Cumbria and North Yorkshire.

What is the data telling us?

Since 2009-11 there has been no major change to healthy life expectancy, either nationally or in the North East. Although a North East male could expect, in 2015-17, to live 77.9 years, his average healthy life expectancy (based on self-reported general health) was only 59.5 years, compared to a national average of 79.6 years for life expectancy and 63.4 years for healthy life expectancy.

Since 2009-11 male life expectancy at birth in the region has increased by 6 months, whereas healthy life expectancy has fallen by just over 2 months over the same period, and therefore the number of years lived in 'not good' health has increased from 17.7 to 18.4 years.

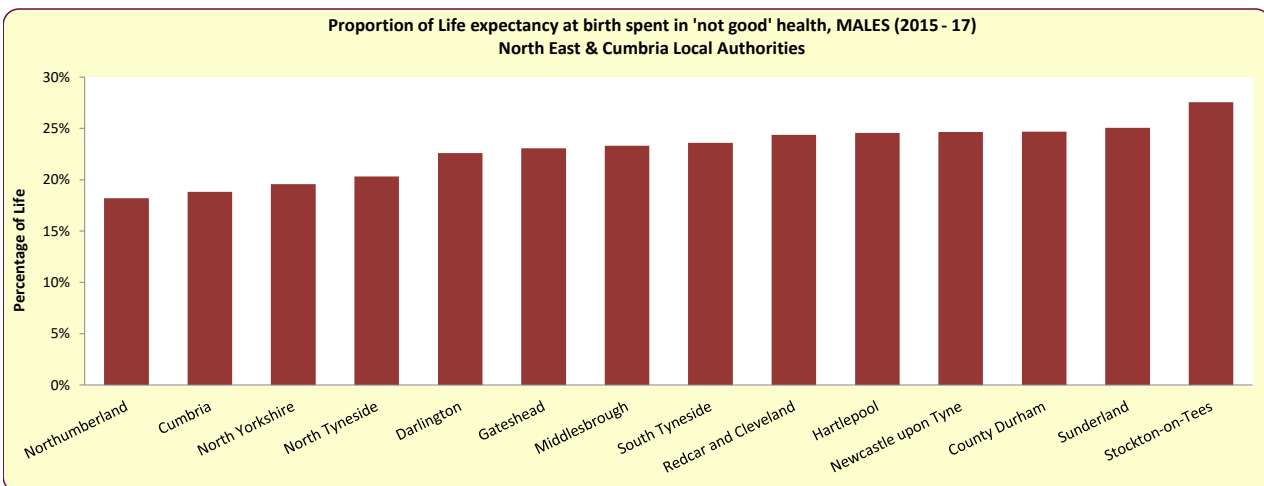
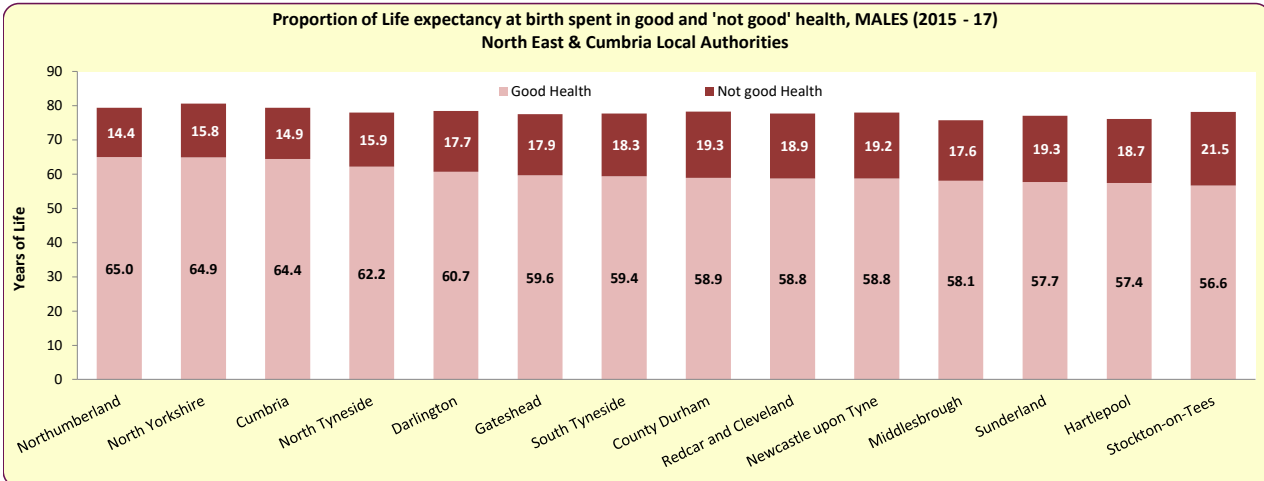
These data demonstrate that not only do males in the North East have lower life expectancy than the national average, they spend a larger proportion of their shorter lives in 'not good/poor' health. Men in the North East spend almost a quarter (23.6%) of their lives in 'not good/poor' health compared to 20.3% of those in the country as a whole, and the trend shows a deteriorating picture.

Intra regional variation is explored on the next page.

3. Healthy Life expectancy at birth (Males) (2015 - 17)

The average number of years a person would expect to live in good health based on contemporary mortality rates and prevalence of self-reported good health.

South East	South West	East of England	London	East Midlands	West Midlands	Yorkshire and the Humber	North West	North East	England
66.1	64.7	64.1	63.9	62.8	62.1	61.7	61.2	59.5	63.4



Data source: Public Health Outcomes Framework Data tool. Indicator Portal (<http://www.phoutcomes.info>).
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What is the data telling us?

Whilst the gap in male life expectancy within the North East and Cumbria was 5.9 years in 2015-17, there was an 8.4 year difference in healthy life expectancy between the area with the highest (Northumberland) healthy life expectancy and that with the lowest (Stockton-on-Tees). Men in Stockton-on-Tees spend 28% of their lives in 'not good/poor' health, whereas for men in Northumberland it is 18%.

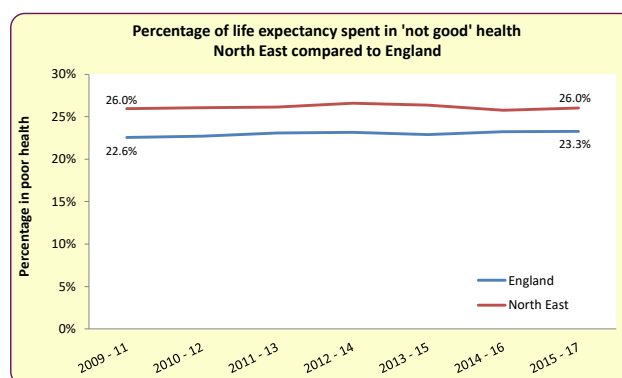
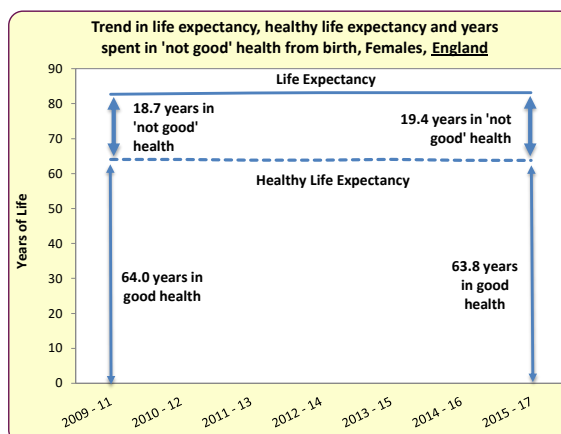
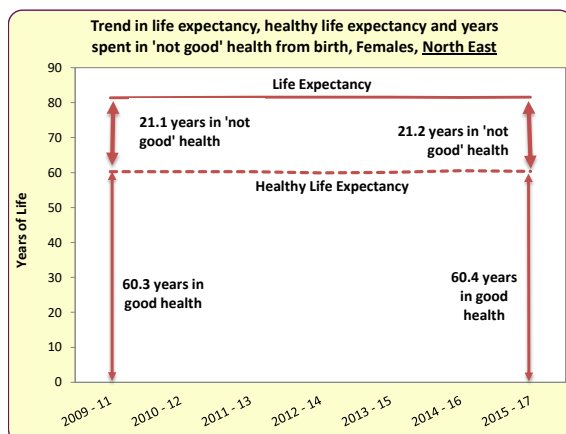
These data demonstrate that not only do men in the more deprived areas in the region have shorter lives compared to those in the more affluent areas, they spend a larger proportion of their shorter lives in 'not good/poor' health.

In the following two pages of the report similar information on healthy life expectancy in relation to women is presented, followed by a description of the impact of poor health on productivity in the region. Inequalities in health undermine not only the health of the population but also the economy, and so the impact on productivity in the north of England is described.

4. Healthy Life expectancy at birth (Females) (2015 - 17)

The average number of years a person would expect to live in good health based on contemporary mortality rates and prevalence of self-reported good health.

South East	South West	East of England	London	West Midlands	North West	East Midlands	Yorkshire and the Humber	North East	England
66.2	65.1	64.6	64.6	62.9	62.3	62.1	61.5	60.4	63.8



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

While average life expectancy and healthy life expectancy are both important headline measures of the health status of the population, the healthy life expectancy measure adds a 'quality of life' dimension to estimates of life expectancy by dividing them into time spent in different states of health.

Healthy life expectancy is an estimate of the number of years lived in 'Very good' or 'Good' general health, based on how individuals perceive their general health. The prevalence of 'good'/'not good' health is derived from responses to a question on general health in the Annual population Survey. In response to the question "How is your health in general; would you say it was..." responses "Very good" and "Good" are categorised as 'Good' health and "Fair", "Bad" or "Very bad" as 'Not Good' health.

In addition to adding a quality of life dimension to life expectancy, the number of years of life in 'Not Good' health is also important as it relates more closely to demand for health and social care services.

Due to a change in methodology, data on healthy life expectancy are only available back to 2009-11. This short time scale limits the conclusions that can be drawn about trends.

Note that although data on life expectancy is published for districts, data on healthy life expectancy are only available at county level, which for this report, affects the data that is shown for Cumbria and North Yorkshire.

What is the data telling us?

Since 2009-11 there has been no significant change to healthy life expectancy, either nationally or in the North East. Although a North East female could expect to live 81.6 years in 2015-17, her average healthy life expectancy (based on self-reported general health) was only 60.4 years, compared to a national average of 83.1 years for life expectancy and 63.8 years for healthy life expectancy.

These data demonstrate that not only do females in the North East have lower life expectancy than the national average, they spend a larger proportion of their shorter lives in 'not good/poor' health. Women in the North East spend over a quarter (26.0%) of their lives in 'not good/poor' health compared to 23.3% of those in the country as a whole.

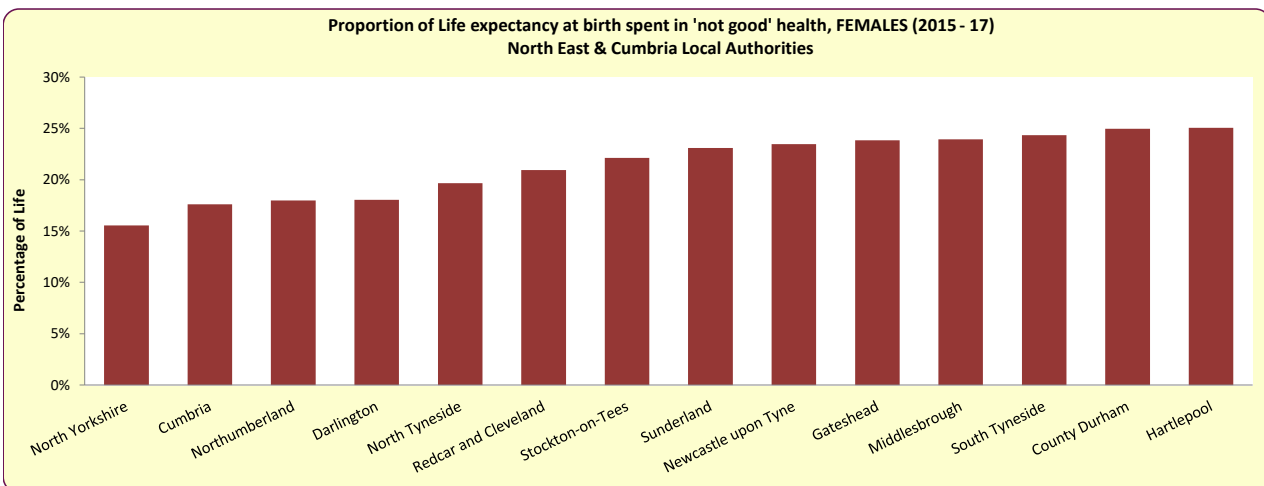
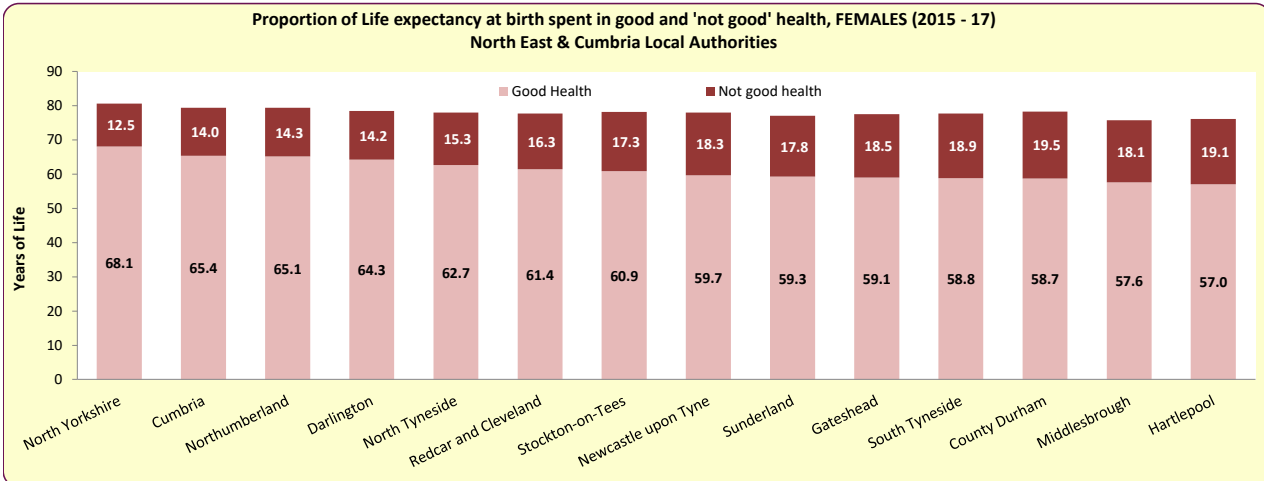
Although women in the North East live an average of 3.7 years longer than men, much of that time is spent in 'not good/poor' health – they experience only 0.9 more years of good health than men.

Intra regional variation is explored on the next page.

4. Healthy Life expectancy at birth (Females) (2015 - 17)

The average number of years a person would expect to live in good health based on contemporary mortality rates and prevalence of self-reported good health.

South East	South West	East of England	London	West Midlands	North West	East Midlands	Yorkshire and the Humber	North East	England
66.2	65.1	64.6	64.6	62.9	62.3	62.1	61.5	60.4	63.8



Data source: Public Health Outcomes Framework Data tool. Indicator Portal (<http://www.phoutcomes.info>).
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What is the data telling us?

Whilst the gap in female life expectancy within the North East and Cumbria was 5.2 years in 2015-17, there is an 11.1 year difference in healthy life expectancy between the area with the highest (North Yorkshire) healthy life expectancy and that with the lowest (Hartlepool). Women in Hartlepool spend 25% of their lives in 'not good/poor' health, whereas for women in North Yorkshire it is 16%.

These data demonstrate that not only do women in the more deprived areas in the region have shorter lives compared to those in the more affluent areas, they spend a larger proportion of their shorter lives in 'not good/poor' health.

A report was commissioned by the Northern Health Science Alliance (NHSa) to understand the impact of poor health, in both men and women, on the economic performance of the region.⁵ On the following page the key findings of this report, which was released in November 2018, are summarised.

5. Bamba, C., Munford, L., Brown, H et al (2018) Health for Wealth: Building a Healthier Northern Powerhouse for UK Productivity, Northern Health Sciences Alliance, Newcastle
<http://www.thenhsa.co.uk/app/uploads/2018/11/NHSA-REPORT-FINAL.pdf>

Health for Wealth: Building a Healthier Northern Powerhouse for UK Productivity

The health inequalities between the North and the South, as described in the previous sections of this report, are important for productivity. There is a productivity gap between the Northern Powerhouse* and the rest of England of £4 per-person-per-hour.⁶ The poor productivity performance of the North has previously been explained only in terms of workforce skills or technology, investment and connectivity.⁷ A report commissioned by the Northern Health Science Alliance (NHSA) was the first exploration of whether worse health in the North also has a bearing on productivity.⁸

Labour productivity is one of the most widely used measures of economic performance of a nation or an area. It is defined as the ratio of output (such as gross value added) divided by the labour input used to create it. Productivity matters because increasing productivity is critical to increasing economic growth in the long run.

Key findings of the report were that:

- 30% of the productivity gap between the Northern Powerhouse and the rest of England can be attributed to poorer health in the North; This can be broken down into 17.1% being explained by morbidity and 12.8% being explained by premature mortality.
- If productivity in the Northern Powerhouse increased to match the UK average, it would equate to a potential £44 billion real terms gain to UK GDP.
- Average annual earnings in the Northern Powerhouse are lower than in the rest of England and economic activity rates are also lower with higher rates of unemployment, economic inactivity and worklessness.
- Increasing the NHS budget by 10% in the Northern Powerhouse will decrease economic inactivity rates by 3 percentage points.
- If they experience a spell of ill health, working people in the Northern Powerhouse are 39% more likely to lose their job compared to their counterparts in the rest of England. If they subsequently get back into work, then their wages are 66% lower than a similar individual in the rest of England.
- Increasing of the proportion of people in good health in the Northern Powerhouse by 3.5% would reduce the employment gap between the Northern Powerhouse and the rest of England by 10%.
- Improvements in health are likely to lead to greater gains in wider economic outcomes when targeted to the North of England compared to the rest of England.

* The Northern Powerhouse comprises 77 local authorities in the North East, North West, Yorkshire and Humber and the Northern Midlands.

6. Office for National Statistics (2016), Regional Productivity Levels (£) data

<https://www.ons.gov.uk/economy/grossvalueaddedgva/adhocs/005195regionalproductivitylevelsdata>

7. The Northern Powerhouse Independent Economic Review (2016).

<https://www.transportforthenorth.com/wp-content/uploads/Northern-Powerhouse-Independent-Economic-Review-Executive-Summary.pdf>

8. Bamba,C., Munford,L., Brown,H et al (2018) Health for Wealth: Building a Healthier Northern Powerhouse for UK Productivity, Northern Health Sciences Alliance, Newcastle. <http://www.thenhsa.co.uk/app/uploads/2018/11/NHSA-REPORT-FINAL.pdf>