



Key messages for Cheshire West and Chester

Healthy life expectancy

- People in Cheshire West and Chester can expect to spend a higher proportion of their lives in good health than the England average. However females in some of our more deprived areas could expect to spend up to 30% of their lives in poor health.

Life expectancy

- **Life expectancy for men** is slightly higher than the England average but improvement **has stalled** both locally and nationally. **Female life expectancy has reduced** and fallen slightly below the England average (82.8 years v 83.1 years).
- The stall in male life expectancy can be attributed to recent rises in liver disease, respiratory and stroke deaths. The same disease groups have seen increases for women, who have also seen a slight increase in cancer mortality, all contributing to the fall in female life expectancy.
- Women have a significantly higher life expectancy than men but life expectancy has been improving at a faster rate in men compared with women so the gender gap has narrowed.

Inequalities

- Inequalities have persisted with significantly lower life expectancy in our more deprived areas. **The inequality gap for men has reduced** but remains wider than for women (9.4 years v 8.8 years). **The inequality gap has increased for women.**
- Cancer and heart disease are the key diseases that contribute to inequalities for both men and women. Coronary heart disease (CHD) deaths make the biggest difference for men and lung cancer for women
- The inequality gap often widens due to mortality rates falling more slowly in deprived areas compared to less deprived areas. However rates have increased for a number of diseases in our more deprived areas to widen the inequality gap. These include lung cancer, liver disease and, in recent years, COPD and CHD for women.

Life expectancy and mortality rates

Life expectancy at birth is an overarching indicator of the health of a population. It is an estimate of the average number of years a new-born baby would survive if he or she experienced a particular area's age-specific mortality rates for that time period throughout his or her life. Life expectancy is perhaps a more intuitive indicator than all age, all cause, mortality (AAACM) which is a similar measure. Mortality rates are useful locally to monitor trends. Analysis of premature mortality rates (people aged under 75 years) in particular are useful in identifying key disease groups that impact on changes in life expectancy.

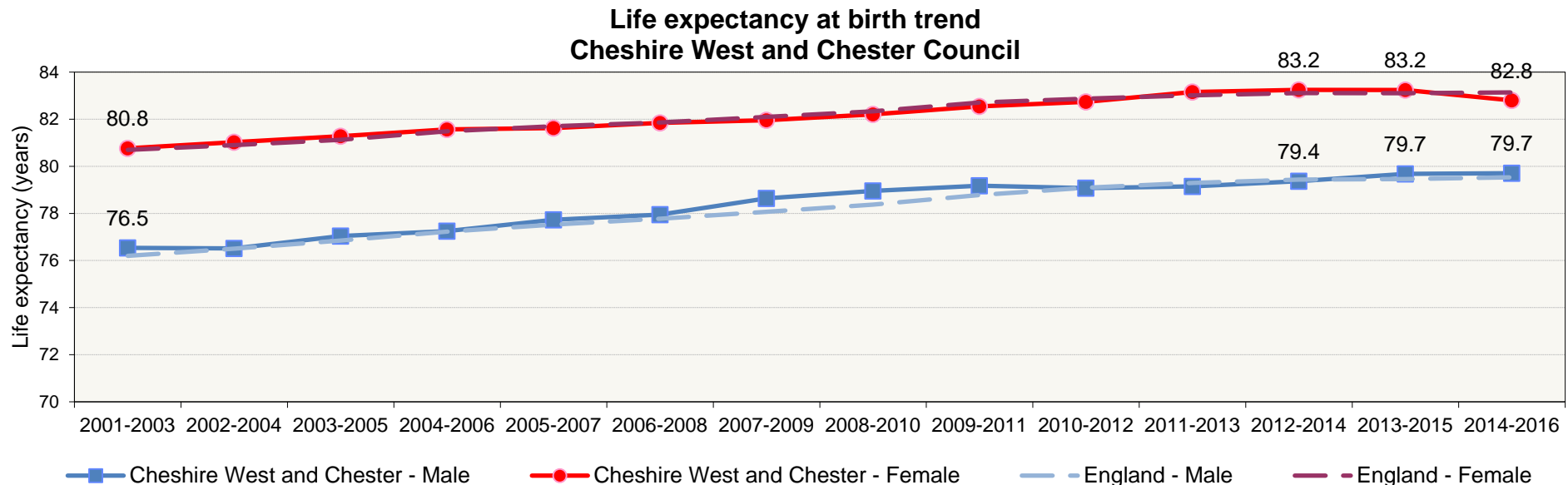
Cheshire West and Chester

For the three year period 2014-16 estimates were slightly higher than the England average for men and slightly lower for women:

Males 79.7 years (England 79.5 years)
Females 82.8 years (England 83.1 years)

Life expectancy at birth for Cheshire West and Chester (CWAC) residents follows a similar trend to England where improvement has stalled for men and reduced for women. In 2014-2016, female life expectancy in Cheshire West and Chester fell for the first time since 2001-2003.

The gender gap has narrowed: life expectancy for women in CWAC is 3.1 years higher than for men compared to a difference of 4.2 years in 2001-03.

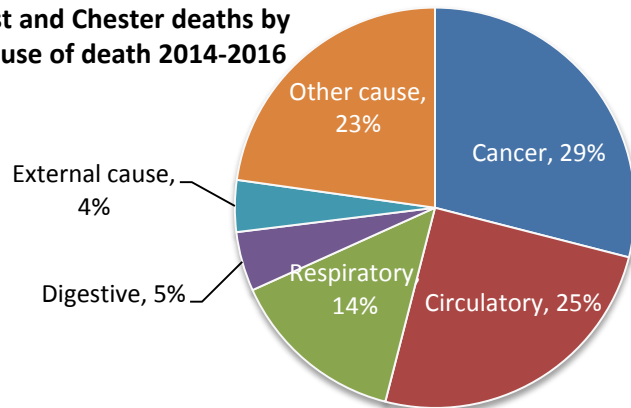


Life expectancy and mortality rates

Causes of death

There are, on average, around 3,400 deaths a year in Cheshire West and Chester. Over two thirds of deaths are caused by circulatory diseases, cancer or respiratory disease. Cancer accounted for 29% of all deaths during 2014-16. Just over 1,000 deaths are in the under 75s – a greater proportion of these early deaths are caused by cancer (43%).

Cheshire West and Chester deaths by underlying cause of death 2014-2016



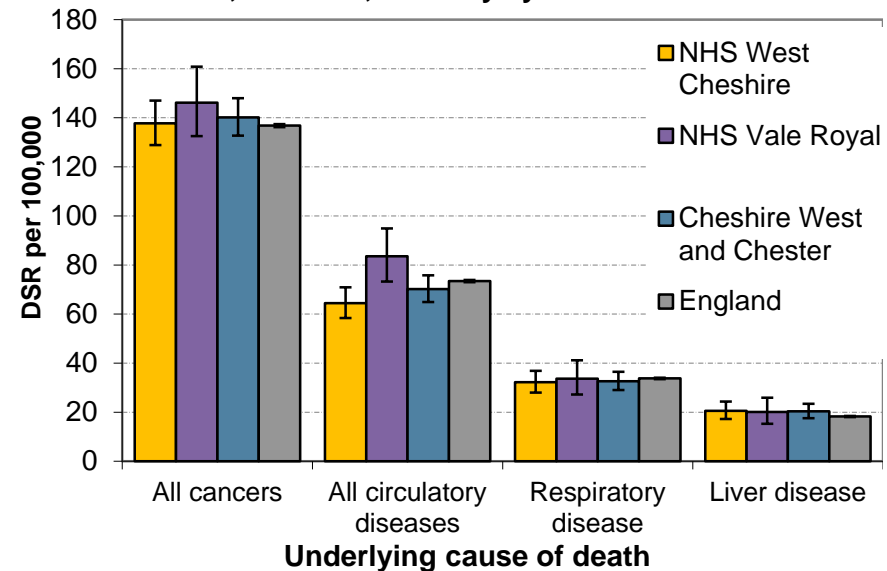
Premature mortality rates from major disease groups (cancer, circulatory diseases, respiratory disease and liver disease) are measured by Public Health England within the Public Health Outcomes Framework (PHOF). During 2014-16, Cheshire West and Chester had similar under 75 mortality rates to the England average for cancer, circulatory liver and respiratory disease. In previous years rates were significantly better than England for circulatory diseases and respiratory disease.

Rates in West Cheshire CCG reflect a similar pattern to Cheshire West and Chester but with significantly better circulatory disease rates than Vale Royal CCG and England. Vale Royal CCG had statistically similar rates to the England average for the four disease groups in the PHOF.

(note the definition of liver disease (ICD codes B15-B19, C22, I81, I85, K70-K77, T86.4) differs to the digestive grouping)

Cheshire West and Chester deaths during 2014-16	ICD10 Codes	Persons all ages		Persons aged under 75 years	
		Average Annual Deaths	% by cause	Average Annual Deaths	% by cause
All Causes		3368		1029	
Cancer	C00-C97	976	29%	443	43%
Circulatory	I00-I99	842	25%	220	21%
Respiratory	J00-J99	480	14%	102	10%
Digestive	K00-K93	162	5%	70	7%
External Cause	V01-Y98	141	4%	72	7%
Other causes		767	23%	121	12%

Cheshire West and Chester, All Persons, 2014-2016, Under 75, Mortality by cause of death



Source: ONS Mortality Files, ONS MYE, DSR uses ESP2013, PHE

Life expectancy and mortality rates

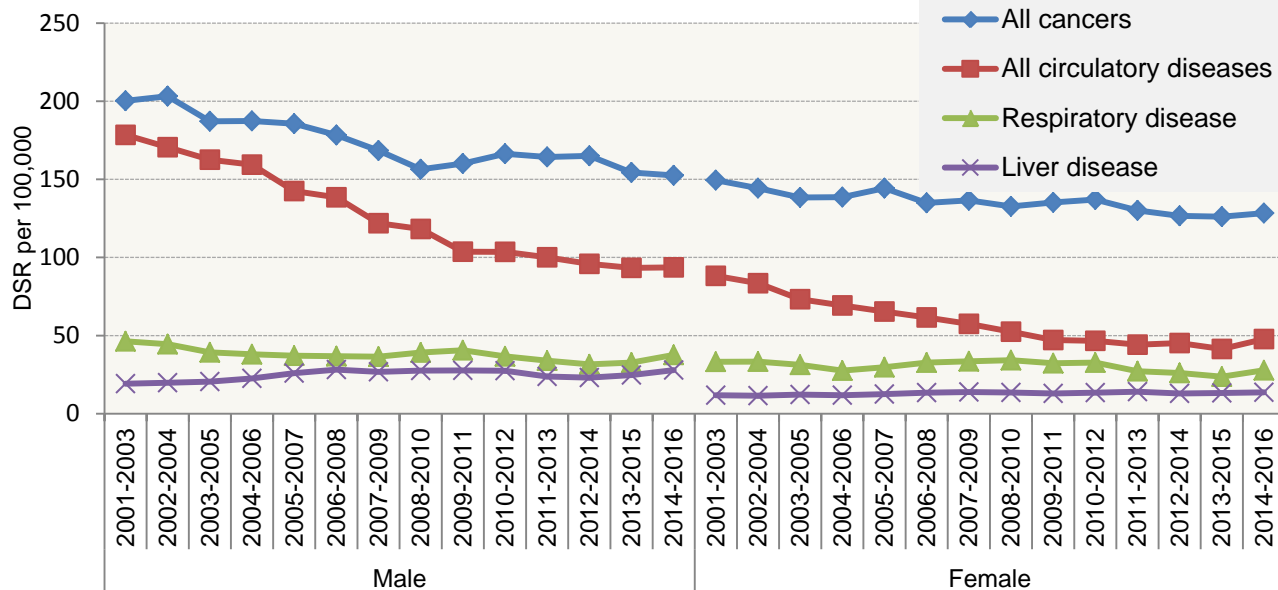
Trends in causes of death in under 75 year olds

Cheshire West and Chester age standardised death rates have fallen since 2001-03 for three of the four main disease groups highlighted by Public Health England. The biggest reduction has been in circulatory diseases for both men and women while early deaths from liver disease have increased.

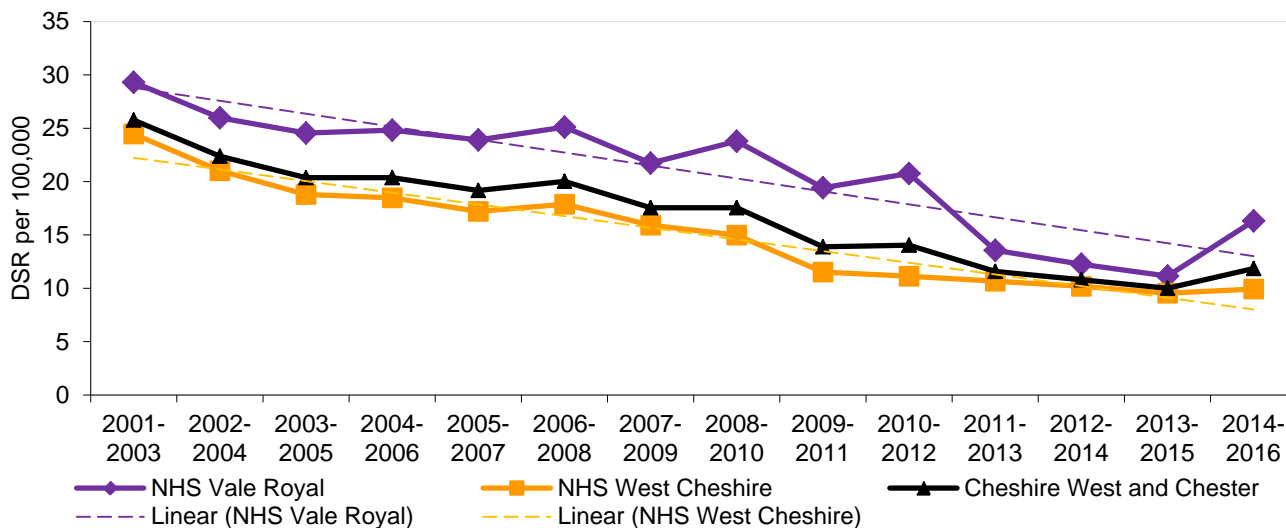
Liver disease, plus recent increases in respiratory disease and stroke mortality give an indication of diseases contributing to the stall in male life expectancy locally. The same disease groups have seen increases for women, who have also seen a slight increase in cancer mortality, all contributing to the fall in female life expectancy.

Both CCGs have shown improvement in circulatory mortality over time but there has been a recent increase in stroke deaths in both men and women aged under 75. This is particularly evident in NHS Vale Royal CCG although the numbers do not indicate a statistically significant difference between the two CCGs.

Cheshire West and Chester, under 75 mortality trend by cause of death



Cheshire West and Chester, Stroke, all persons, under 75 mortality by CCG



Source: ONS Mortality Files, ONS MYE, DSR uses ESP2013 and bridge coded deaths, PHE.

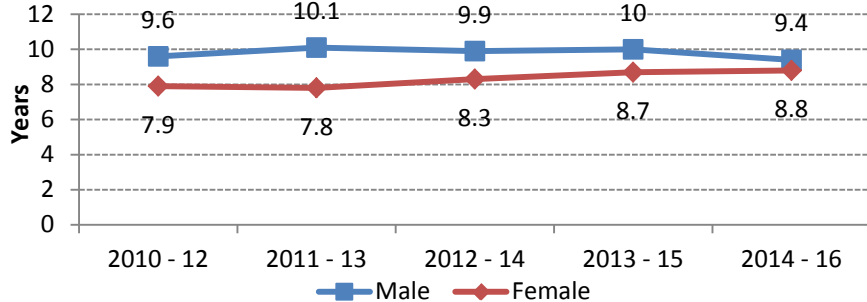
Life expectancy and mortality rates

Measurement of health inequalities

The national measurement of internal health inequality within a Local Authority is the Slope Index of Inequality (SII). The measure compares life expectancies between geographical sub areas that have been ranked by socio economic deprivation. This method calculates the internal inequality gap by calculating the life expectancy for each decile (each 10% band) of the population according to their locally ranked level of deprivation, and looks at the relationship, or inequality, across the whole population. The 2014-16 SII indicates:

Life expectancy at birth is **9.4 years lower for men** and **8.8 years lower for women** in the most deprived areas of Cheshire West and Chester than in the least deprived areas. It also means that the inequality gap is wider for men than women.

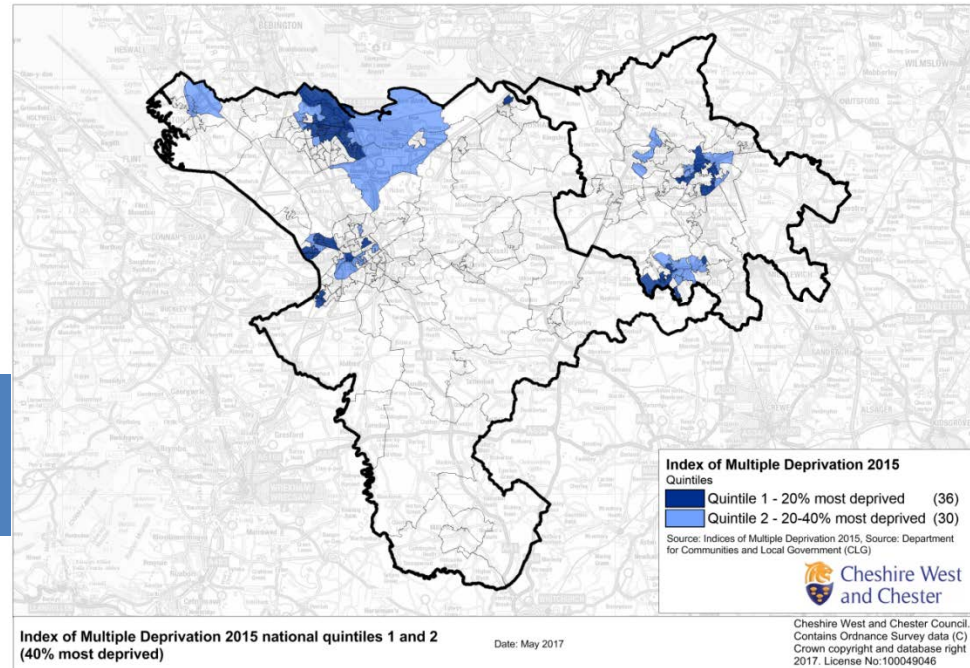
Slope index of inequality trend, males and females in Cheshire West and Chester



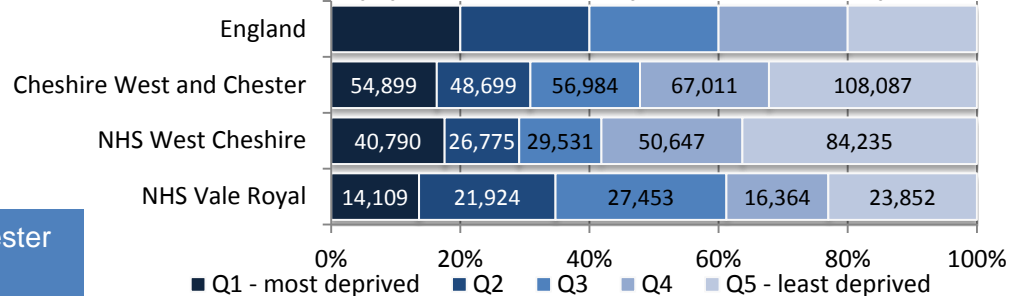
The inequality gap in life expectancy within Cheshire West and Chester has increased since 2010-12 for women and decreased for men.

Locally we have calculated the inequality gap using national rankings of the Index of Multiple Deprivation 2015 (IMD 2015) which describes the most deprived areas in Cheshire West and Chester in the context of the most deprived areas in England. Therefore national quintile 1 describes those areas of Cheshire West and Chester, or each Clinical Commissioning Group (CCG), that are amongst the 20% most deprived in England.

There is a distinct difference in health experience between those local areas that are in the nationally most deprived 40% of areas compared with the rest of the population. Around a third of our population live in these areas – these are shown in the map, and a breakdown of the population by CCG is shown in the scarf chart above.



2016 ONS resident population estimates by IMD 2015 national quintiles



Life expectancy and mortality rates

Inequality gap in Cheshire West and Chester

Locally we calculate that life expectancy at birth is significantly lower than the England average for both men and women in the more deprived areas of Cheshire West and Chester.

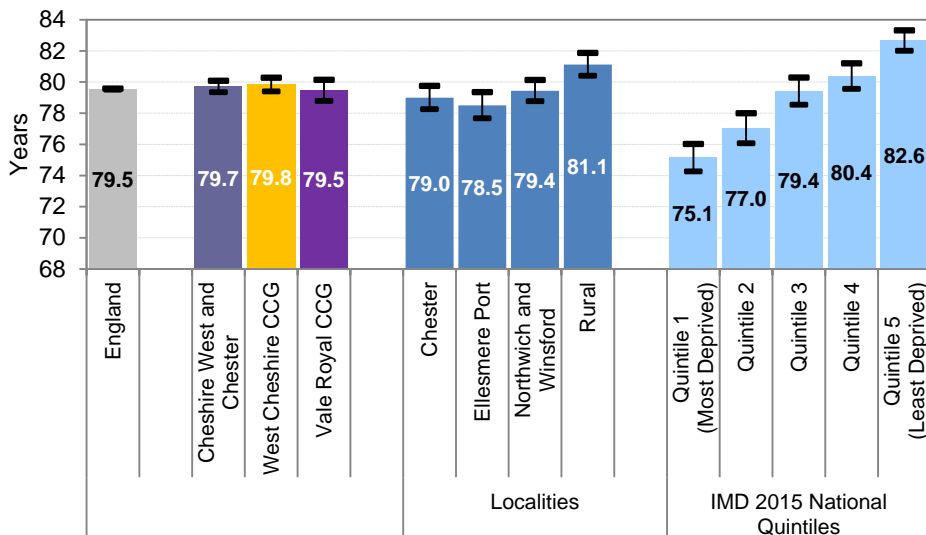
Life expectancy increases in each step in the socio economic gradient and life expectancy in the least deprived quintile is higher than other areas of Cheshire West and Chester.

Ellesmere Port locality has a significantly lower life expectancy than both Cheshire West and Chester as a whole and England. In contrast, life expectancy in Rural locality is significantly higher than any other locality in the Borough.

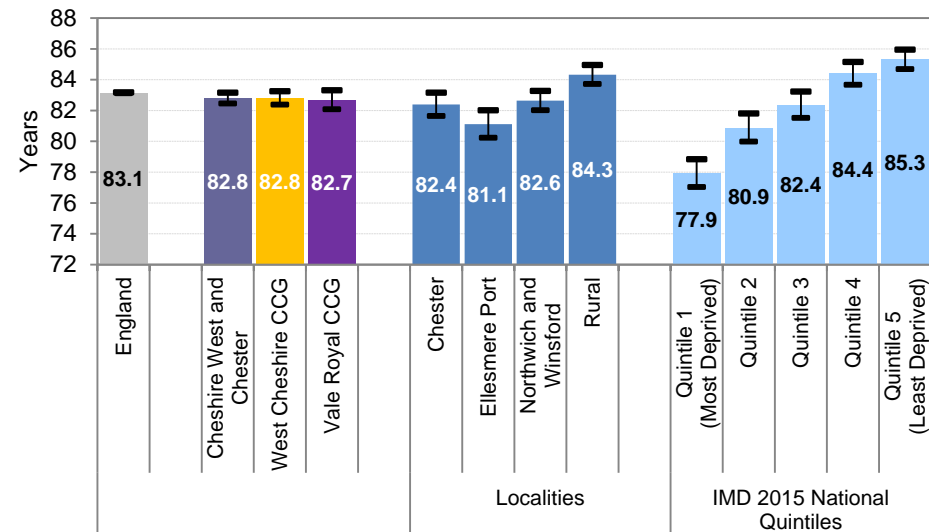
Source: ONS PCMD, ONS MYE, IMD 2015

Life expectancy at birth, 2014-2016, Cheshire West and Chester Council									
		Male				Female			
		Life expectancy at birth	Lower 95% CI	Upper 95% CI	Compared to England	Life expectancy at birth	Lower 95% CI	Upper 95% CI	Compared to England
	England	79.5	79.5	79.6		83.1	83.1	83.2	
	Cheshire West and Chester	79.7	79.3	80.1	Similar	82.8	82.4	83.2	Similar
	West Cheshire CCG	79.8	79.4	80.3	Similar	82.8	82.4	83.2	Similar
	Vale Royal CCG	79.5	78.8	80.1	Similar	82.7	82.1	83.3	Similar
Localities	Chester	79.0	78.3	79.7	Similar	82.4	81.6	83.1	Similar
	Ellesmere Port	78.5	77.7	79.3	Low	81.1	80.2	82.0	Low
	Northwich and Winsford	79.4	78.8	80.1	Similar	82.6	82.0	83.3	Similar
	Rural	81.1	80.4	81.9	High	84.3	83.7	84.9	High
IMD 2015 National Quintiles	Quintile 1 (Most Deprived)	75.1	74.3	76.0	Low	77.9	77.0	78.8	Low
	Quintile 2	77.0	76.1	78.0	Low	80.9	80.0	81.8	Low
	Quintile 3	79.4	78.5	80.3	Similar	82.4	81.5	83.2	Similar
	Quintile 4	80.4	79.6	81.2	Similar	84.4	83.7	85.1	High
	Quintile 5 (Least Deprived)	82.6	82.0	83.3	High	85.3	84.7	85.9	High

Male life expectancy at birth, 2014-2016, Cheshire West and Chester



Female life expectancy at birth, 2014-2016, Cheshire West and Chester



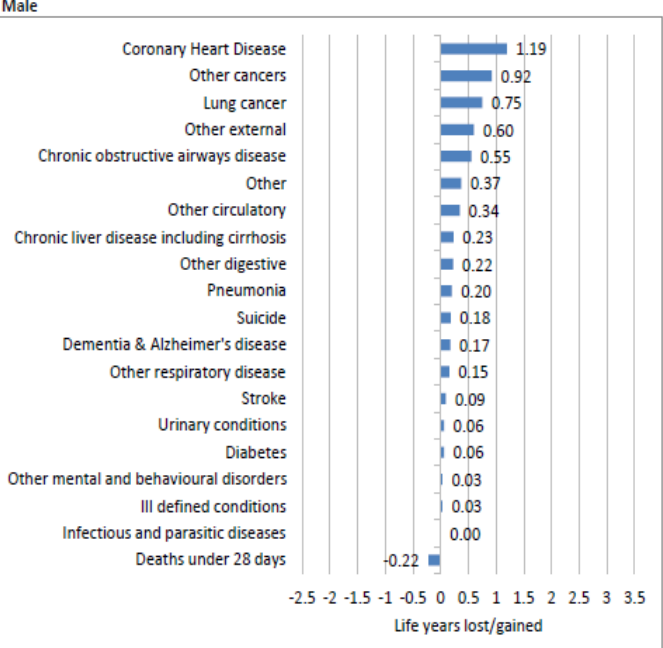
Life expectancy and mortality rates

Causes of death that contribute to the gap

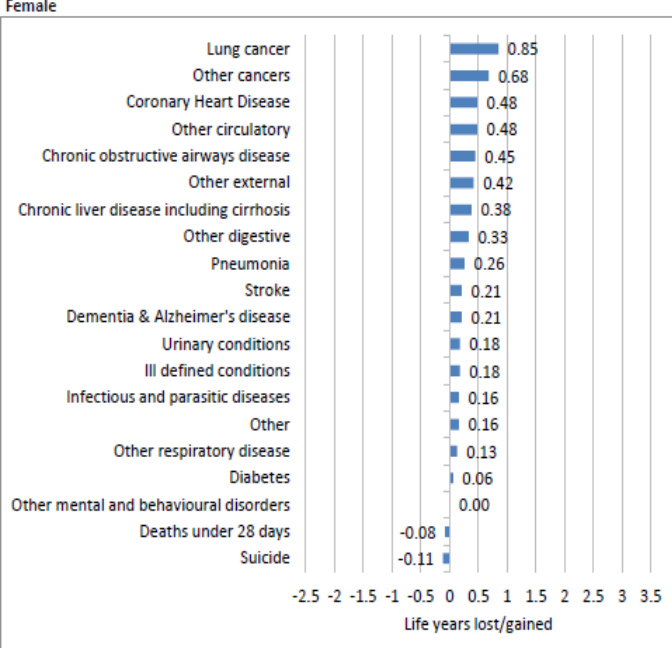
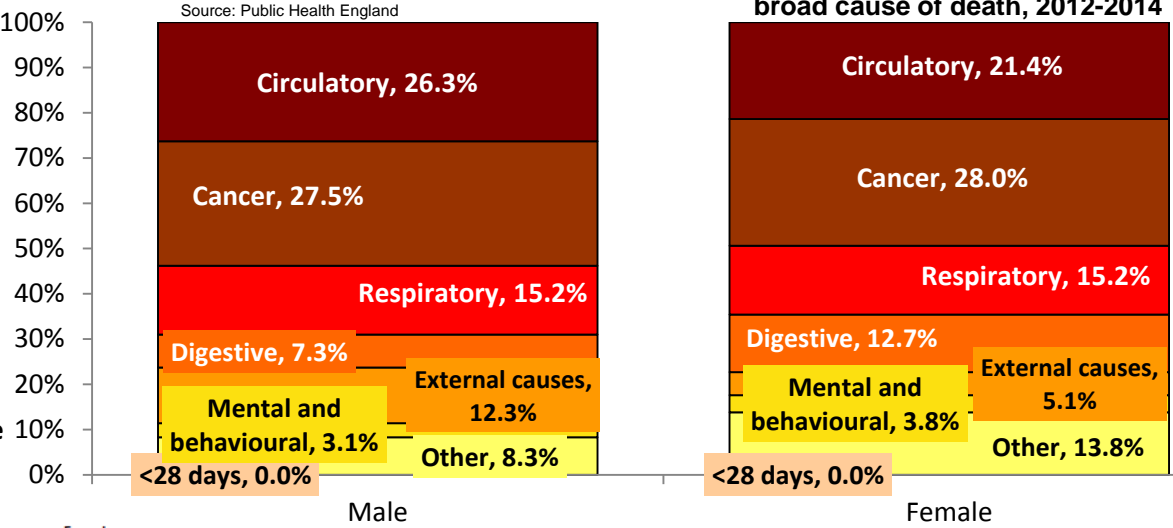
Public Health England have analysed the internal inequality gap in life expectancy within each local authority, segmenting the gap by cause of death.

Cancer and circulatory diseases account for the largest share of the inequality gap for both men and women in Cheshire West and Chester (measured as the gap between Q1 and Q5 local quintiles).

Bar chart showing life expectancy years gained or lost if Cheshire West and Chester's most deprived quintile had the same mortality rates as Cheshire West and Chester's least deprived quintile, by detailed cause of death, 2012-2014



Scarf chart showing the breakdown of the life expectancy gap between Cheshire West and Chester most deprived quintile and Cheshire West and Chester least deprived quintile, by broad cause of death, 2012-2014



More specifically, coronary heart disease (CHD) deaths make the biggest difference for men and lung cancer for women. If the most deprived quintile in CWAC had the same lung cancer mortality rates as the least deprived quintile then the data suggests that 0.75 years could be added to male life expectancy and 0.85 years added to female life expectancy.

Source: PHE segment tool, May 2016

Life expectancy and mortality rates

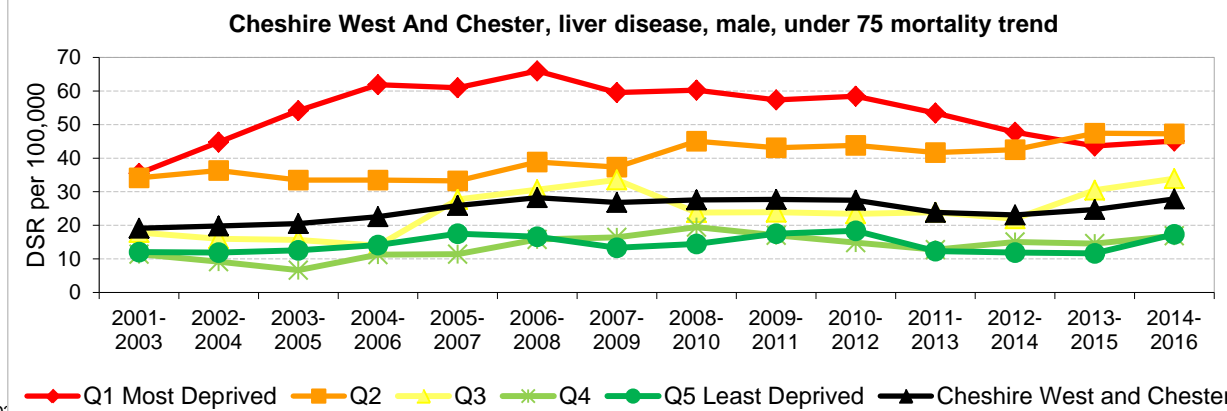
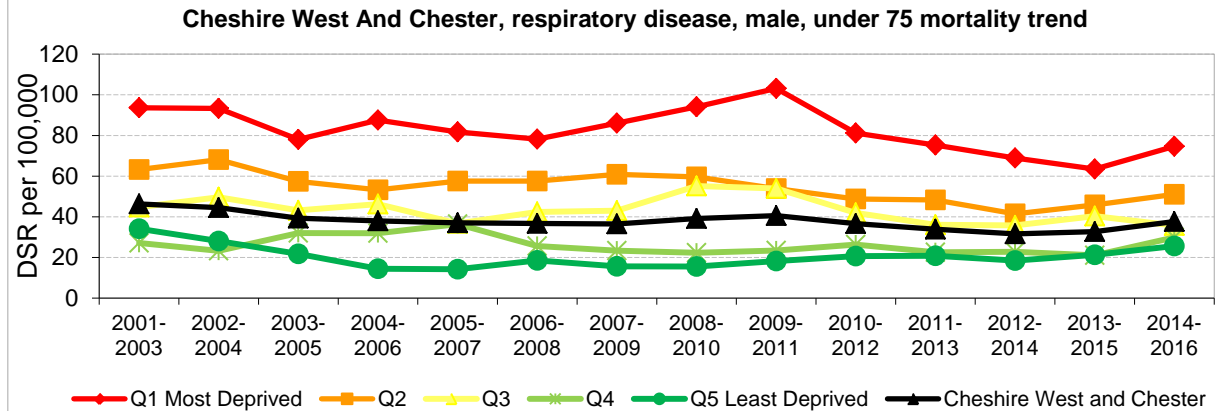
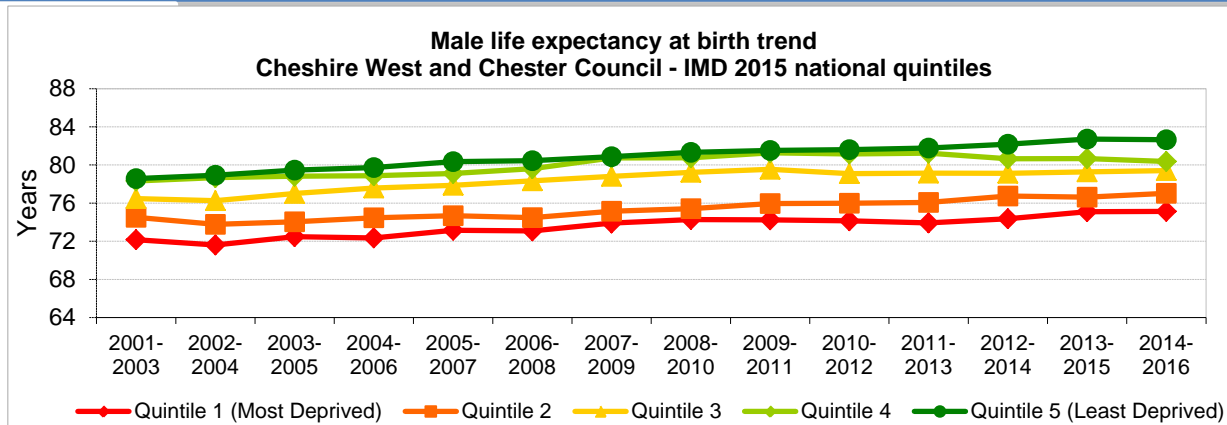
Trend in male health inequality

Male life expectancy has increased in both deprived and affluent areas but not at equal rates. For men, improvement has **not** been slowest in our **very deprived** areas but in those areas that are **slightly more** deprived than the national picture. The 2014-16 stall in male life expectancy and the reduction of the inequality gap is due to reducing life expectancy in our less deprived areas.

Key disease groups identified as contributing to the stall in male life expectancy are respiratory disease, liver disease and stroke.

Increased mortality rates across the social gradient, including in our less deprived areas, can be seen in both respiratory disease and liver disease.

In the case of liver disease, the steeper increase in less deprived areas compared to more deprived areas also contributes to the narrowing of the inequality gap.



Source: ONS PCMD, ONS MYE, IMD.

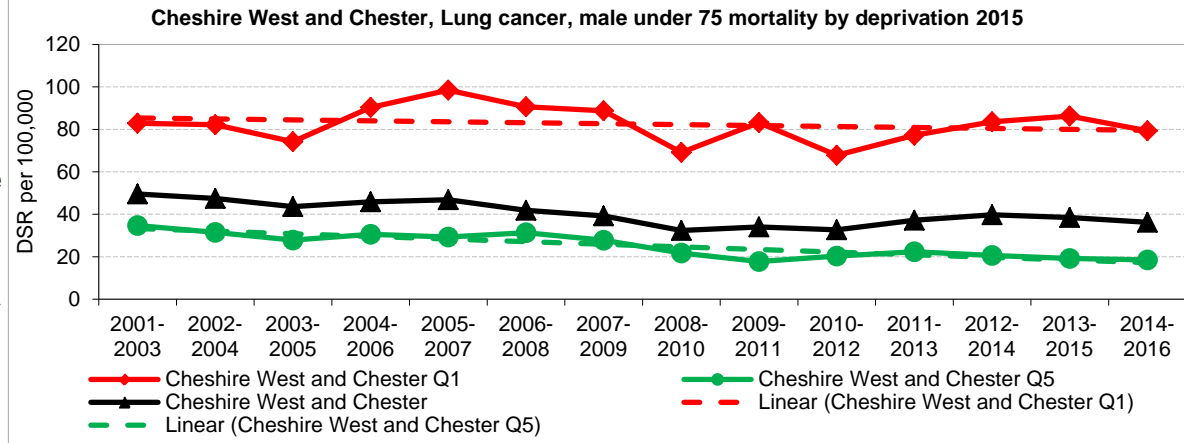
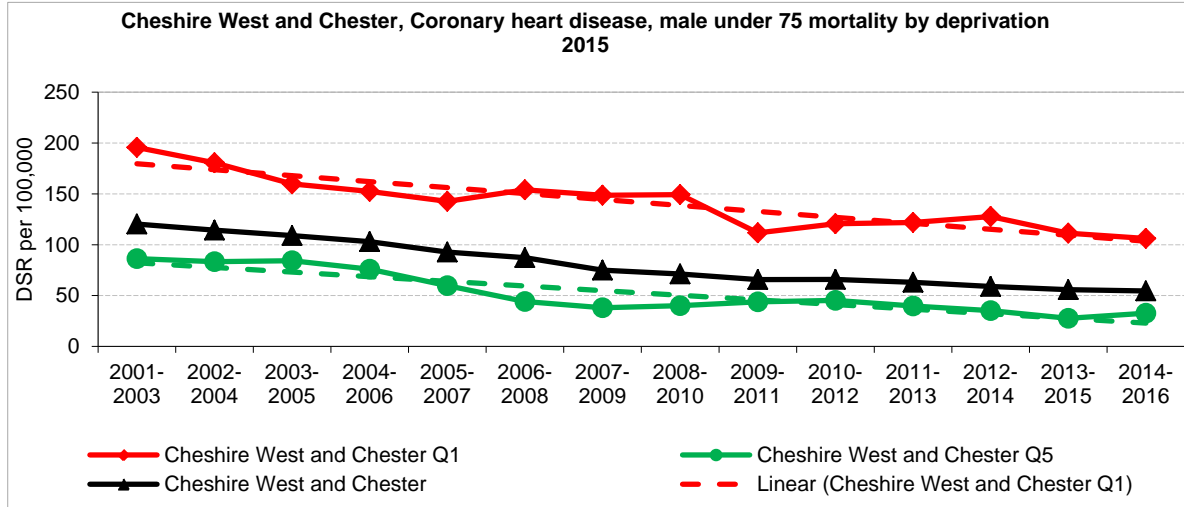
Life expectancy and mortality rates

Trend in male health inequality (continued)

The narrowing of the male inequality gap can in part be attributed to liver disease but is also largely attributable to coronary heart disease.

Coronary heart disease (CHD) has the biggest impact on male inequality. Mortality rates from CHD have reduced considerably but remain significantly high in more deprived areas compared to less deprived areas of CWAC. In 2014-16, despite reductions in the absolute gap, rates were 3.3 times higher in Q1 compared to Q5. However recent under 75 mortality increases in our least deprived areas indicate this is a key contributor to the narrowing of the life expectancy inequality gap in 2014-16.

For some disease groups inequality persists. For example under 75 mortality rates for cancer have not reduced consistently across CWAC. Whilst generally cancer rates have reduced, lung cancer rates in more deprived areas have seen a minimal reduction. In contrast, rates in the least deprived areas have almost halved, widening the inequality gap.



Source: ONS PCMD, ONS MYE, IMD2015

- Key disease groups that have impacted on recent inequality changes are coronary heart disease (CHD) and liver disease with increases in mortality rates in quintile 5 and either decreases or only slight increases in quintile 1.
- Liver disease, respiratory disease and circulatory disease continue to have a longer term influence on male life expectancy with recent rising trends in mortality rates in the more deprived quintiles.

Life expectancy and mortality rates

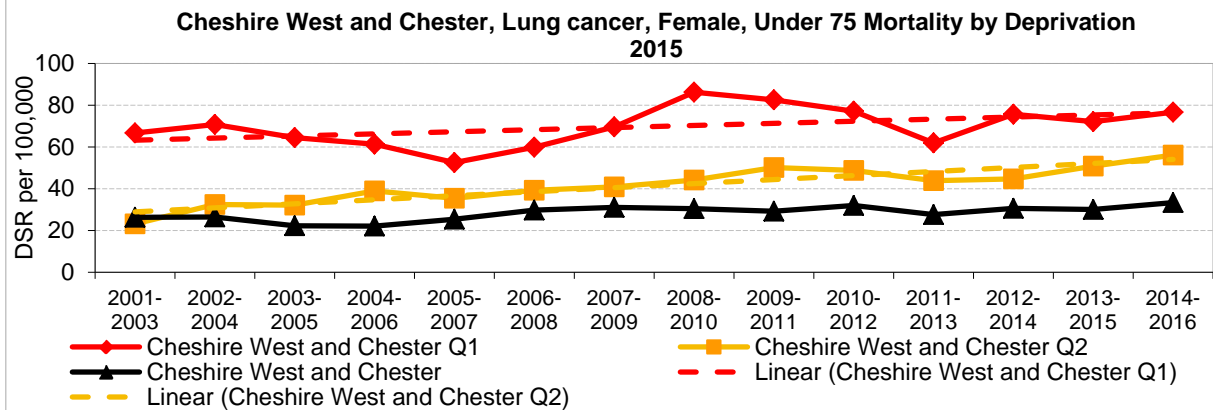
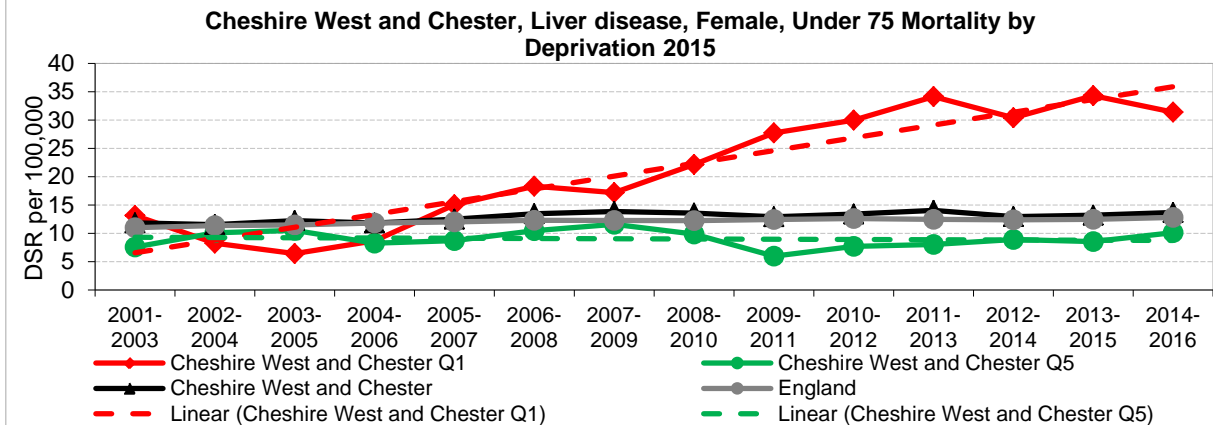
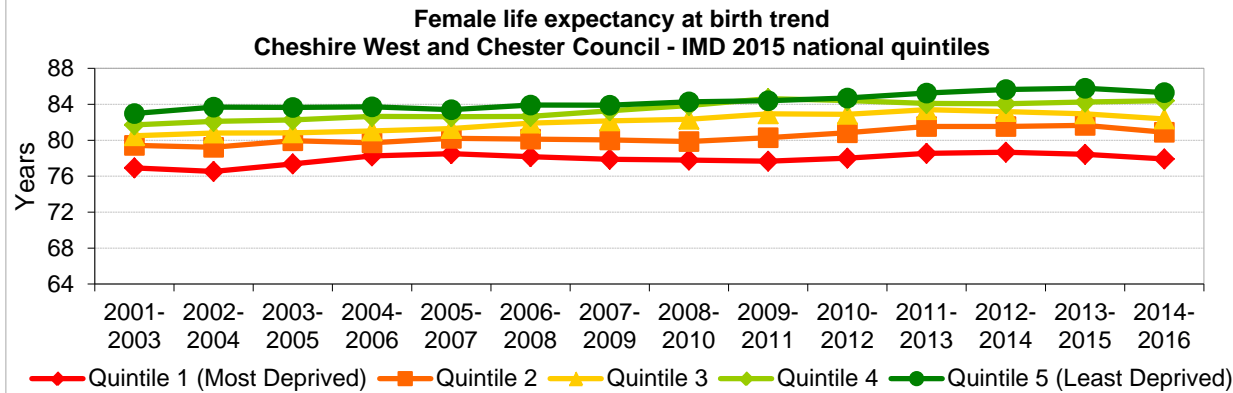
Trend in female health inequality

Since 2001-03, female life expectancy in CWAC has increased but more slowly in more deprived areas, widening the inequality gap. The recent reduction in female life expectancy is not consistent within Cheshire West and Chester. Between 2013-15 and 2014-16 female life expectancy has fallen in all but one of the national quintiles. Only quintile 4 has continued to show an increasing trend.

Early deaths in women have reduced for many conditions and the inequality gap has usually widened due to rates falling more slowly in more deprived areas compared to less deprived areas. For some conditions however, early deaths have increased. Death rates from liver disease have been rising for women in CWAC as a whole but this is being driven by increases in our most deprived areas. The under 75 death rate in CWAC quintile 1 areas (among the 20% most deprived in England) has increased 138% between 2001-03 and 2014-16 and is now three times that of quintile 5, our least deprived areas. In the long term, liver disease continues to be an issue, however recently the gap has narrowed with a drop in death rates for quintile 1.

Similarly, lung cancer death rates have increased in our more deprived areas, particularly quintile 2, which has more than doubled since 2001-03, contributing to the widening inequality gap.

Source: ONS PCMD, ONS MYE, IMD2015



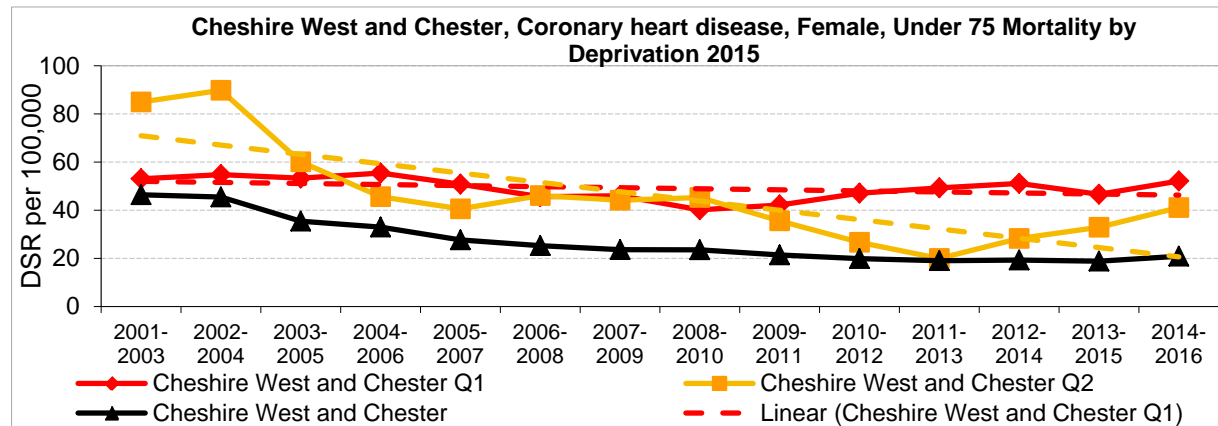
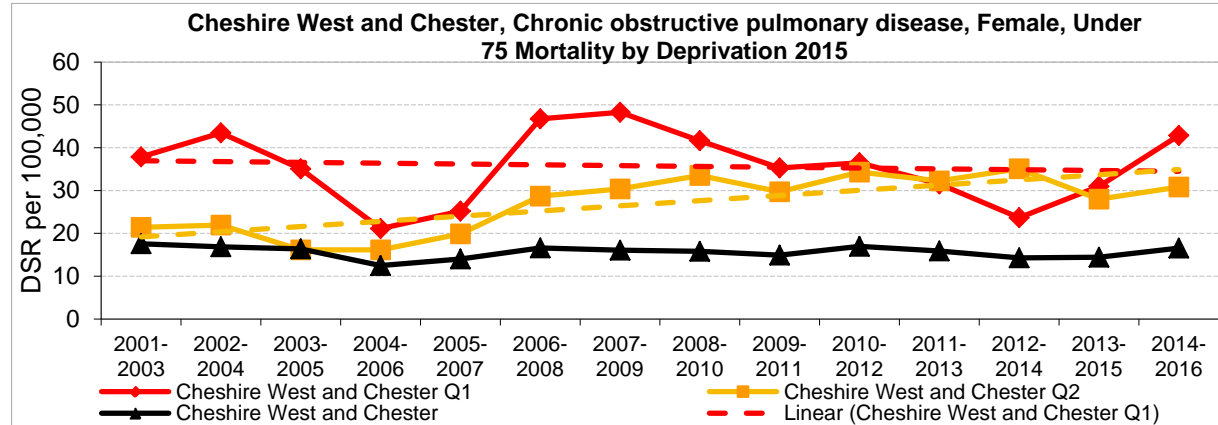
Life expectancy and mortality rates

Recent trend in female health inequality

2014-2016 has seen female life expectancy fall for the first time since 2001-2003 and the inequality gap continues to widen. Whilst liver disease and lung cancer continue to have a long term impact on female life expectancy, recent trends can also be attributed to other causes.

Deaths in under 75 females from chronic obstructive pulmonary disease (COPD) in Cheshire West and Chester have largely remained consistent since 2001-2003 at around 16 per 100,000, however there have been increases in both quintile 1 and quintile 2. Since 2012-2014 under 75 deaths in females in Cheshire West and Chester from COPD in quintile 1 have increased by 81%.

Deaths in females from coronary heart disease (CHD) have dropped since 2001-2003 across all quintiles, however in recent years there has been an increase. The increase is not isolated to the more deprived areas but since 2011-2013 death rates for females aged under 75 in quintile 2 have increased 106% for CHD.



- Key disease groups that have impacted on recent inequality changes are coronary heart disease (CHD) and chronic obstructive pulmonary disease (COPD) with increases in mortality rates in both quintile 1 and quintile 2.
- Liver disease and lung cancer continue to have a longer term influence on female life expectancy with rising trends in mortality rates in the more deprived quintiles since 2001-2003, even though recent data (particularly in Liver disease) shows a narrowing of the gap.

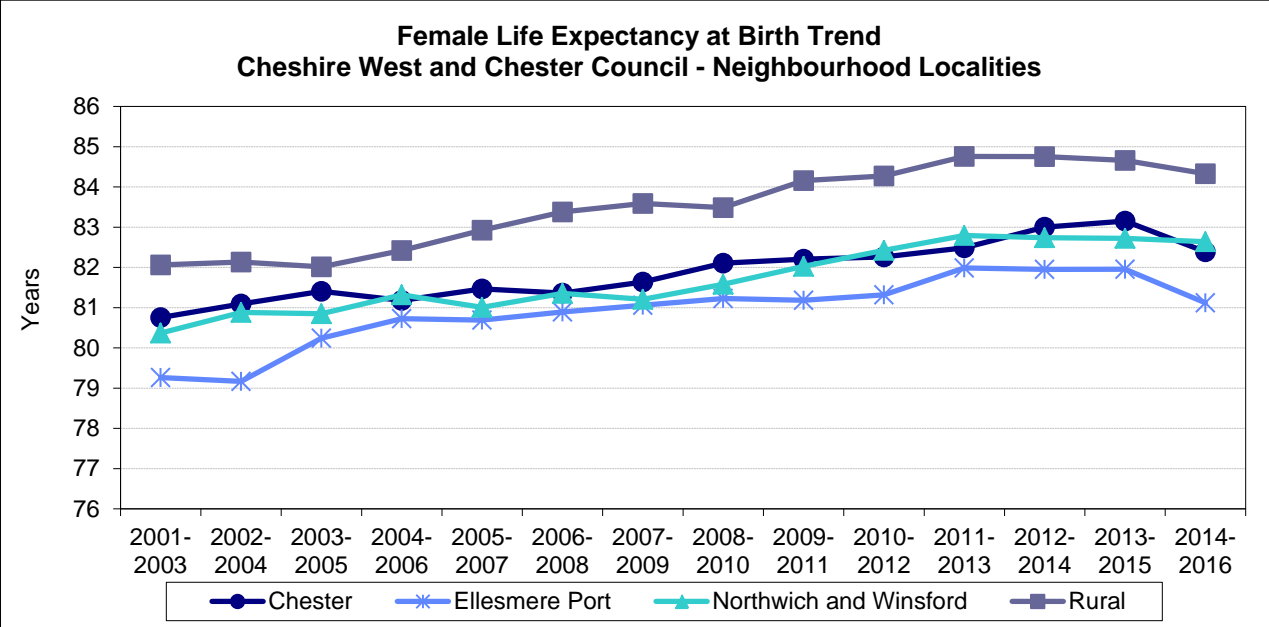
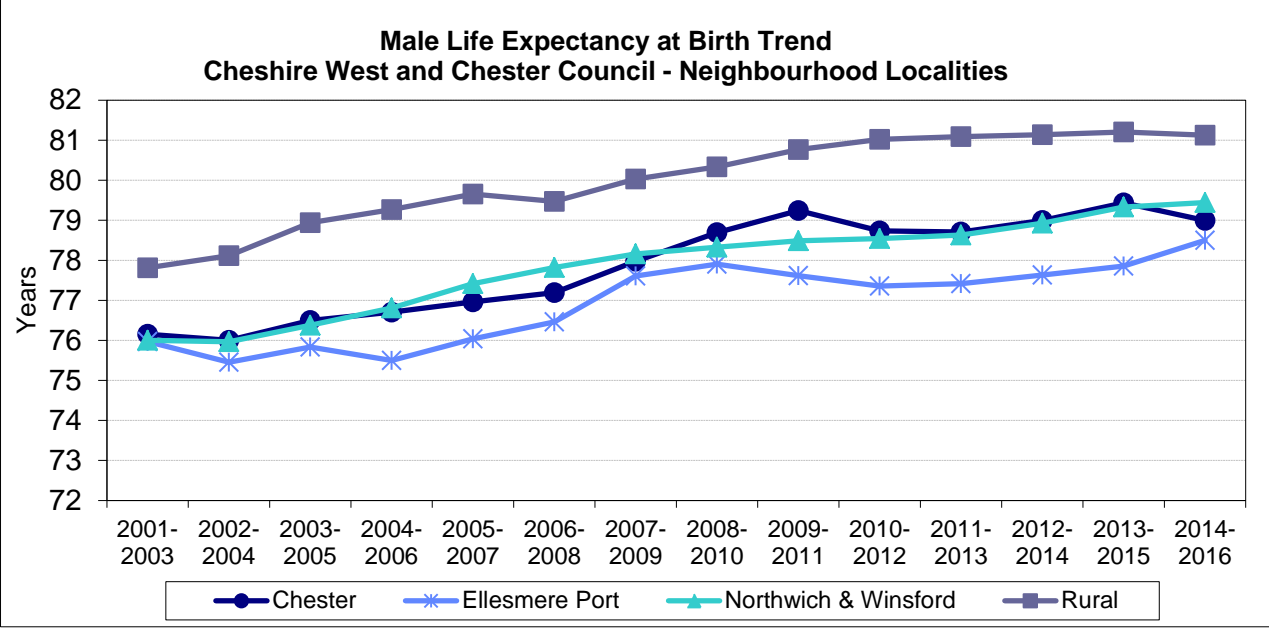
Life expectancy and mortality rates

Electoral Wards and Localities

Since 2001-03, life expectancy has increased for both men and women in all localities but at different rates. Improvement has been slowest in Ellesmere Port for men and in Chester for women.

Rural locality has consistently experienced higher estimates of life expectancy than other areas of Cheshire West and Chester for both men and women. Ellesmere Port has had the lowest estimates of the four locality areas and remains significantly lower for both men and women compared to England.

Life expectancy for men shows continued improvement in two localities (Ellesmere Port locality and Northwich and Winsford locality) and a slight drop in the other two (Rural locality and Chester locality). This compares to a drop in life expectancy for women across all four localities.



Source: ONS ADDE, ONS MYE, PHE ward LE

Life expectancy and mortality rates

Electoral Wards and Localities

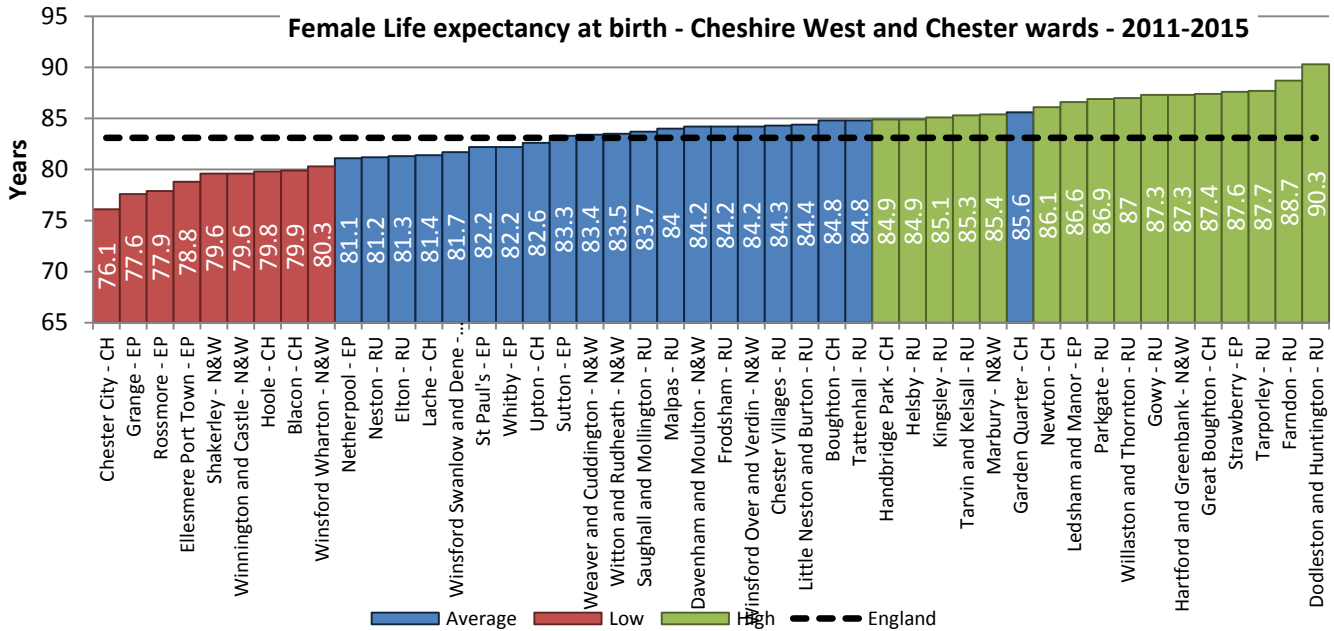
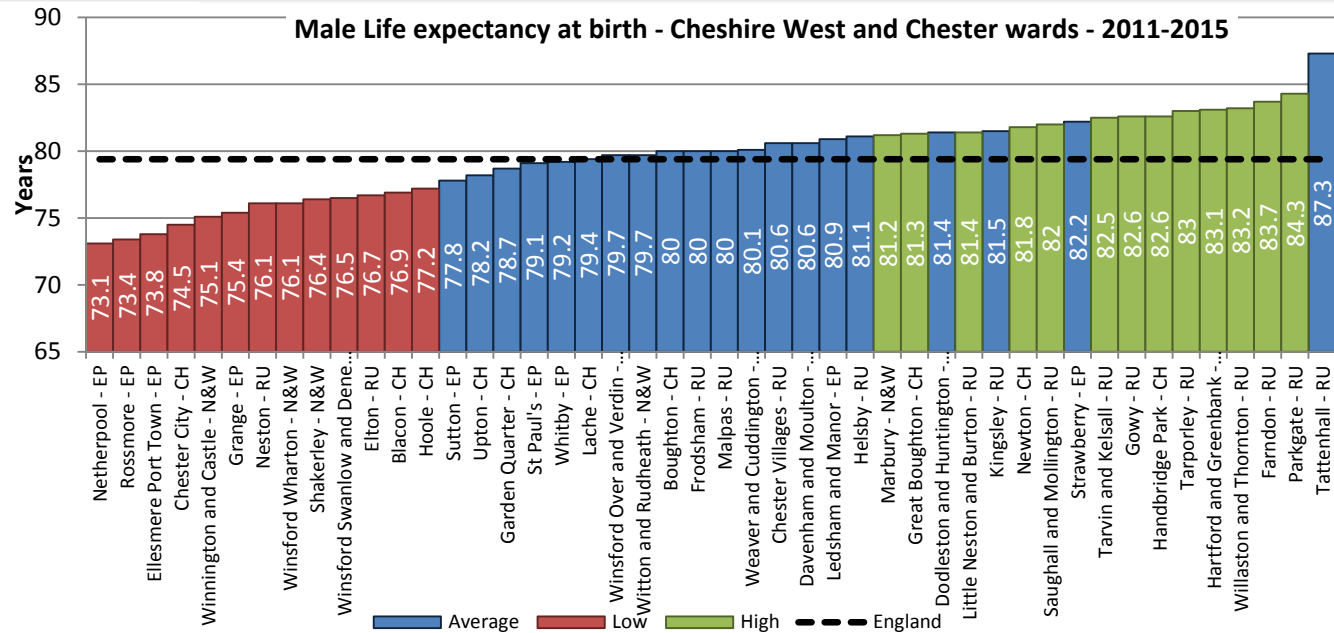
Across Cheshire West and Chester, the variation in life expectancy becomes more pronounced when viewed at a lower geographical level. Statistics do need to be treated with caution however due to the small numbers involved.

Life expectancy estimates for the period 2011-15 indicate a range of 14.2 years for men and 14.2 years for women living in different electoral wards.

The three wards in Cheshire West and Chester with the lowest male life expectancy are all in Ellesmere Port locality. Netherpool ward in Ellesmere Port locality has the lowest life expectancy for men at 73.1 years. Chester City ward in Chester locality has the lowest life expectancy for women at 76.1 years.

Of the 46 wards in Cheshire West and Chester, 13 have significantly low male life expectancy and 13 have significantly high male life expectancy compared to the England average. For female life expectancy, nine wards are significantly low and 16 significantly high compared to the England average.

Source: Public Health England



Life expectancy and mortality rates

Healthy life expectancy at birth

If life expectancy increases, it is important that these additional years are not spent in poor or disabling health states. If this is the case, it can put greater strain on health and social care resources. Therefore health expectancy estimates are used to monitor whether the “extra” years are spent in favourable health. Healthy life expectancy addresses this by adding a quality of life dimension to estimates of life expectancy. These are the estimates of the average number of years a person would live in a given health state if they experienced that age specific mortality and health status for a particular time period throughout the rest of their lives.

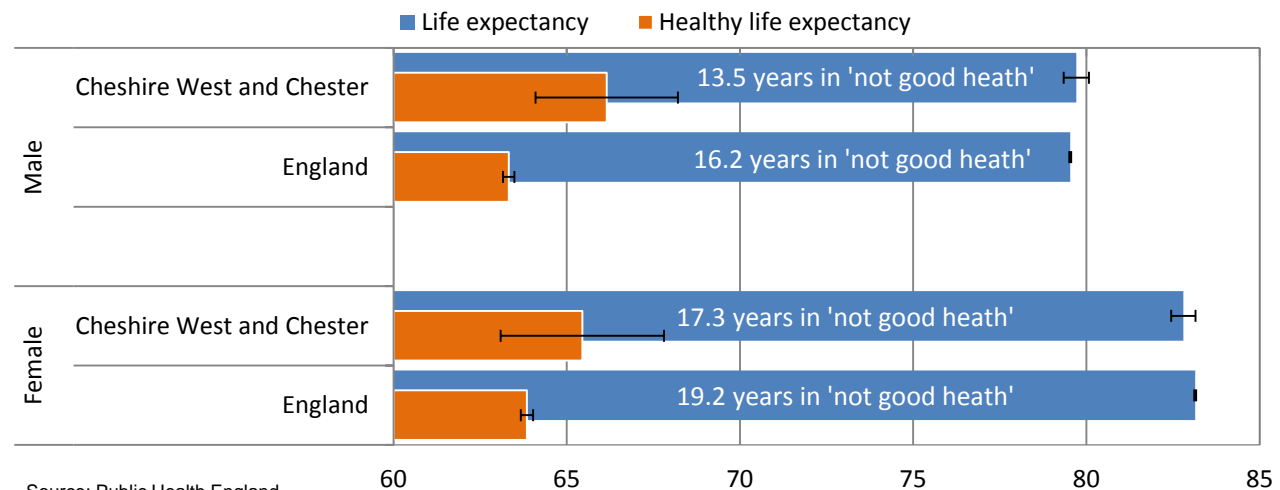
People in Cheshire West and Chester can expect to spend a higher proportion of their lives in good health than the England average and fewer years spent in poor health. In Cheshire West and men can expect to spend over 80% of their lives in good health and women nearly 80% (79%).

Estimates of healthy life expectancy for 2014-16 were significantly better for men in Cheshire West and Chester and similar to England for females. Males in Cheshire West and Chester could expect 66.2 years of healthy life compared to 63.3 in England. Females could expect 65.5 years of healthy life, living in Cheshire West and Chester, compared to 63.9 for England.

Female life expectancy is higher than for men but women can expect to spend more years, and a higher proportion of their life, living in ‘not good’ health.

Healthy Life Expectancy (HLE) and Life Expectancy (LE) at birth, 2014-2016		HLE (years)	Compared to England	LE (years)	Compared to England	Proportion of life in 'Good' health (%)	Years spent in 'Not Good' health
Males	Cheshire West and Chester	66.2	better	79.7	similar	83.1%	13.5
	England	63.3		79.5		79.6%	16.2
Females	Cheshire West and Chester	65.5	similar	82.8	similar	79.1%	17.3
	England	63.9		83.1		76.9%	19.2

Healthy life expectancy (HLE) and Life expectancy (LE) at birth 2014-2016



Source: Public Health England

Life expectancy and mortality rates

Inequality in healthy life expectancy at birth

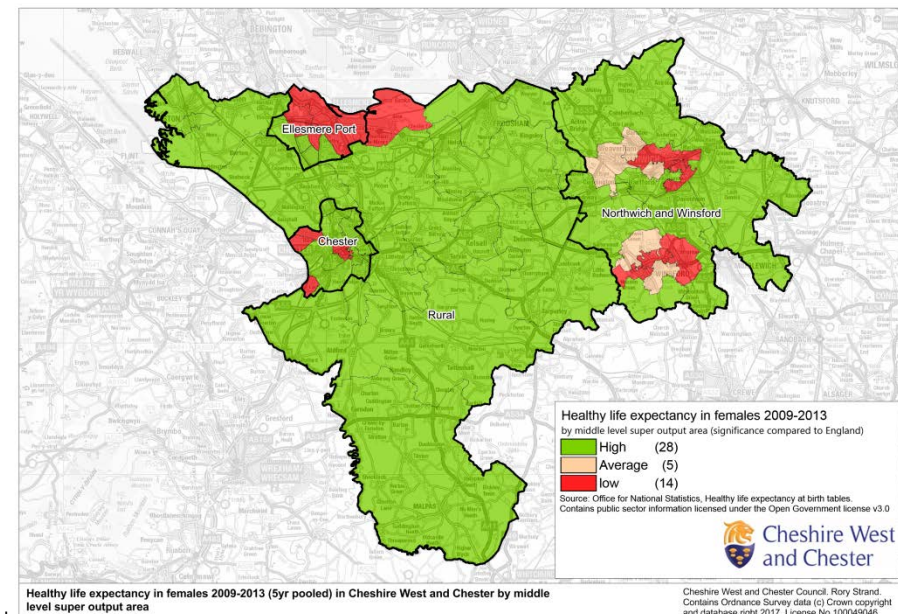
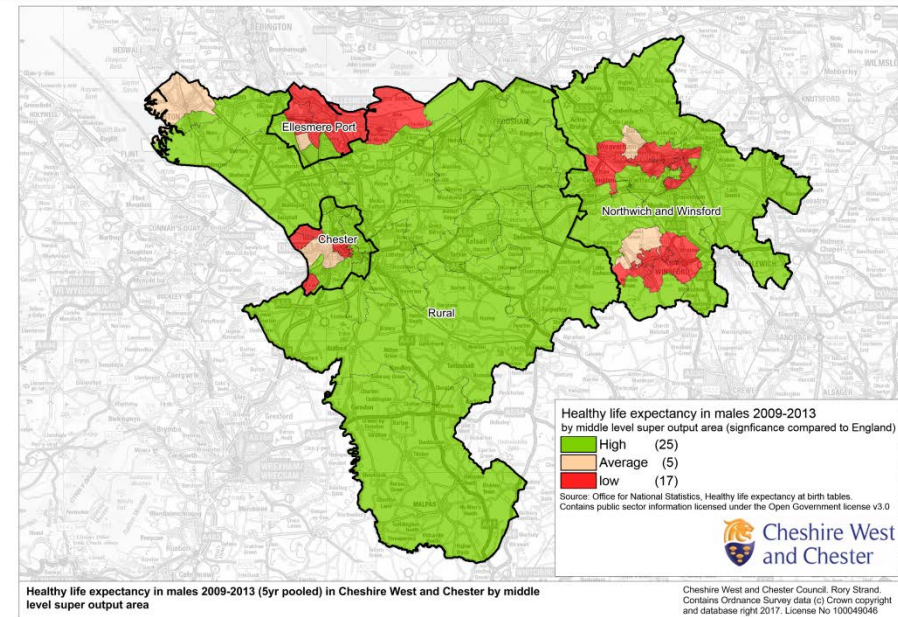
Based on data for the five year period 2009-2013, estimates of male healthy life expectancy (HLE) for middle super output areas (MSOAs) in Cheshire West and Chester range from 54.3 years to 72.1 years with a slope index of inequality of 15.8 years. There are 17 MSOAs with significantly lower HLE than England (63.5 years), including 12 MSOAs where male HLE is less than 60 years. These areas are located in the more deprived areas of Ellesmere Port, Northwich and Winsford and Chester localities.

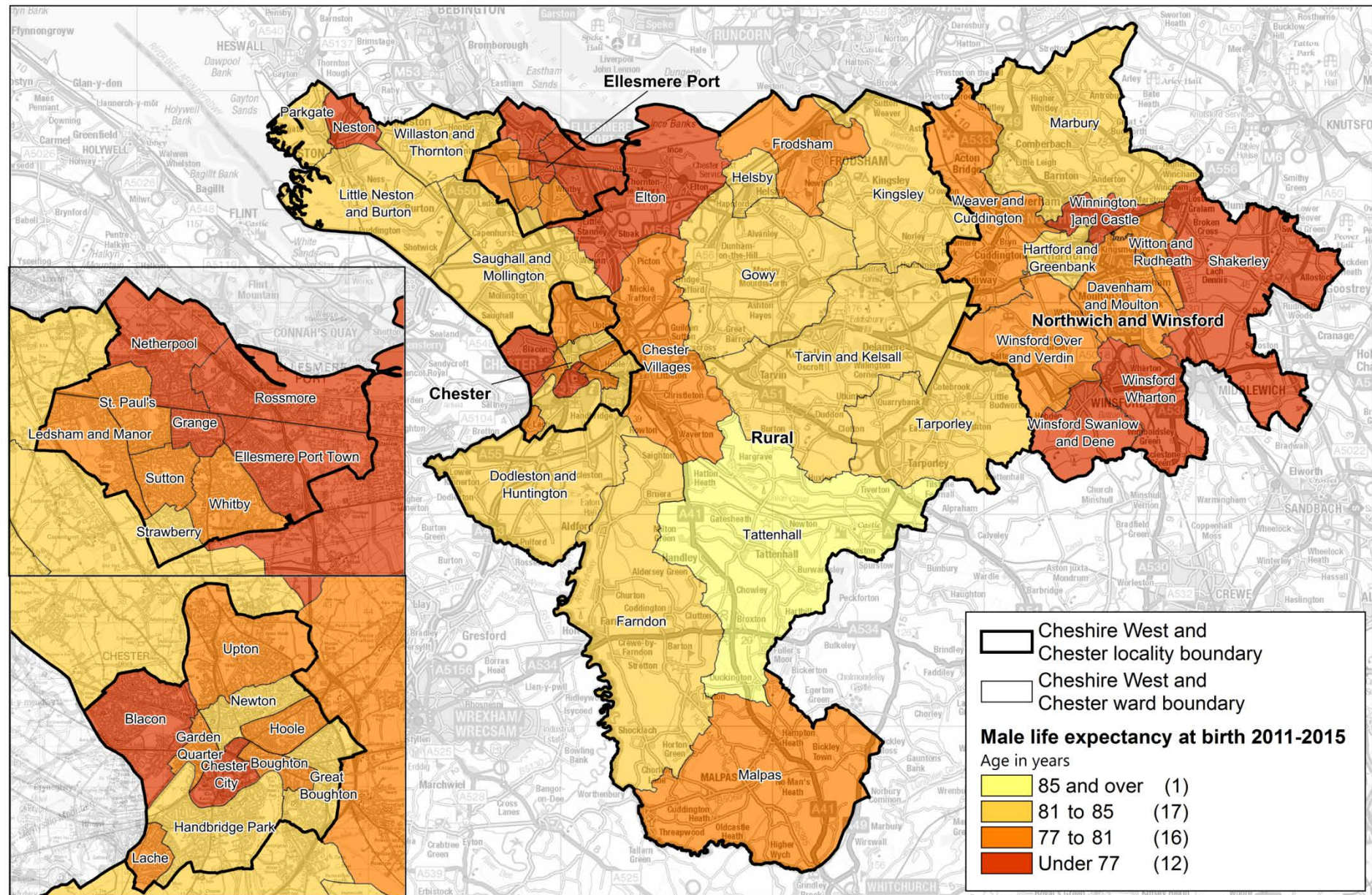
Areas with low HLE are more likely to have higher estimates of years lived in 'not good' health. Males in these same areas could expect to live between 15 and 20 years in 'not good' health (over a quarter of their lives). Estimates of years lived in 'not good' health range between 8.9 and 20.0 years across MSOAs in Cheshire West and Chester.

Estimates of female HLE are higher than for men but have similar variation. MSOA estimates range from 55.6 years to 73.4 years with a slope index of inequality of 15.2 years. There are 14 MSOAs with significantly lower HLE than England (64.8 years), including 10 MSOAs where female HLE is less than 60 years. As with men, these areas are located in the more deprived areas of Ellesmere Port, Northwich and Winsford and Chester localities.

Female estimates of years lived in 'not good' health range from 11.9 to 24.3 years across MSOAs in Cheshire West and Chester. Higher estimates of years lived in 'not good' health are often in areas with low HLE and low LE. Females in some of these same deprived areas could expect to spend up to 30% of their lives in poor health.

Source: Public Health England

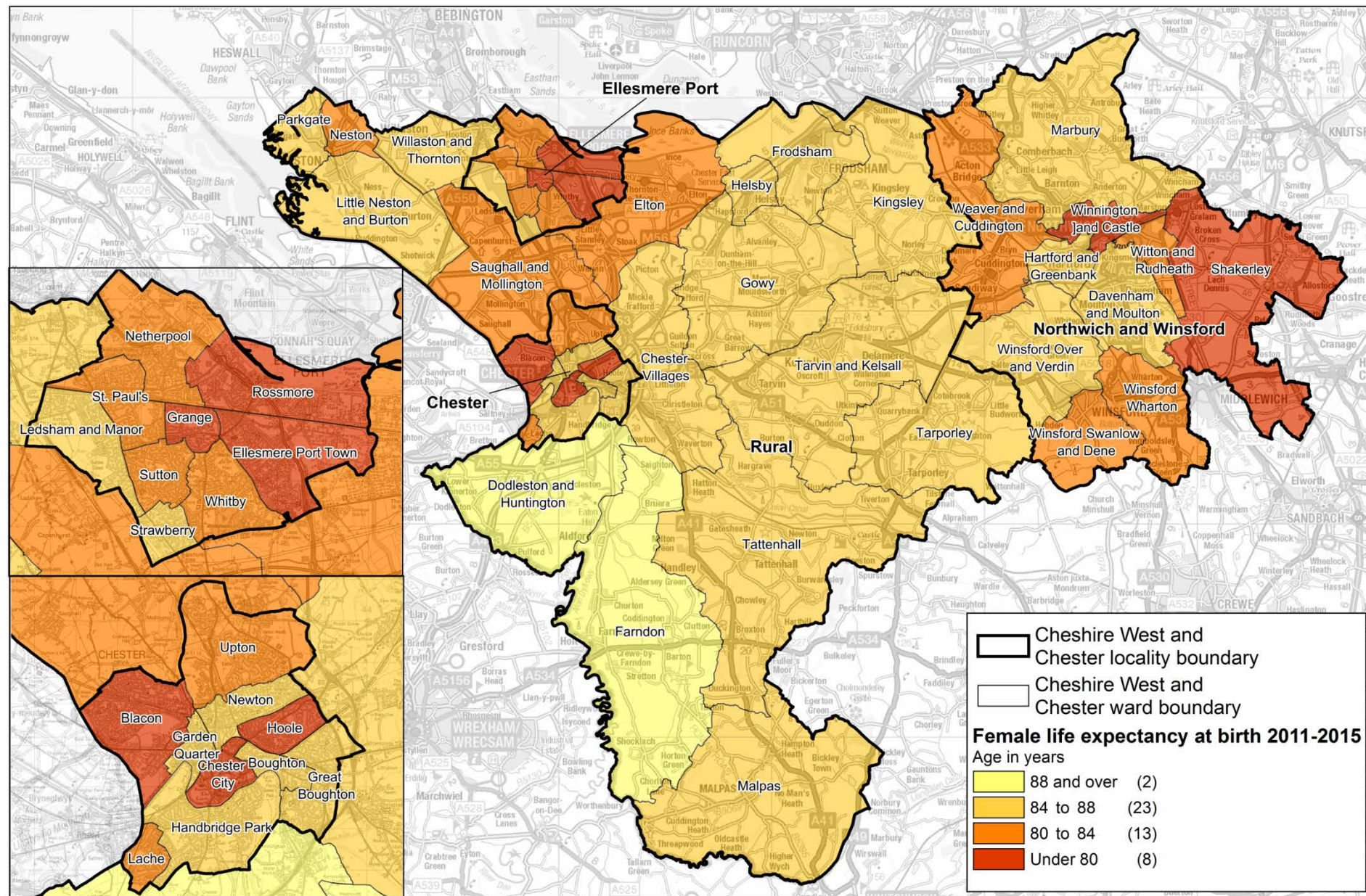




**Male life expectancy at birth in Cheshire West and Chester by ward
5 year pooled 2011-2015**

November 2017

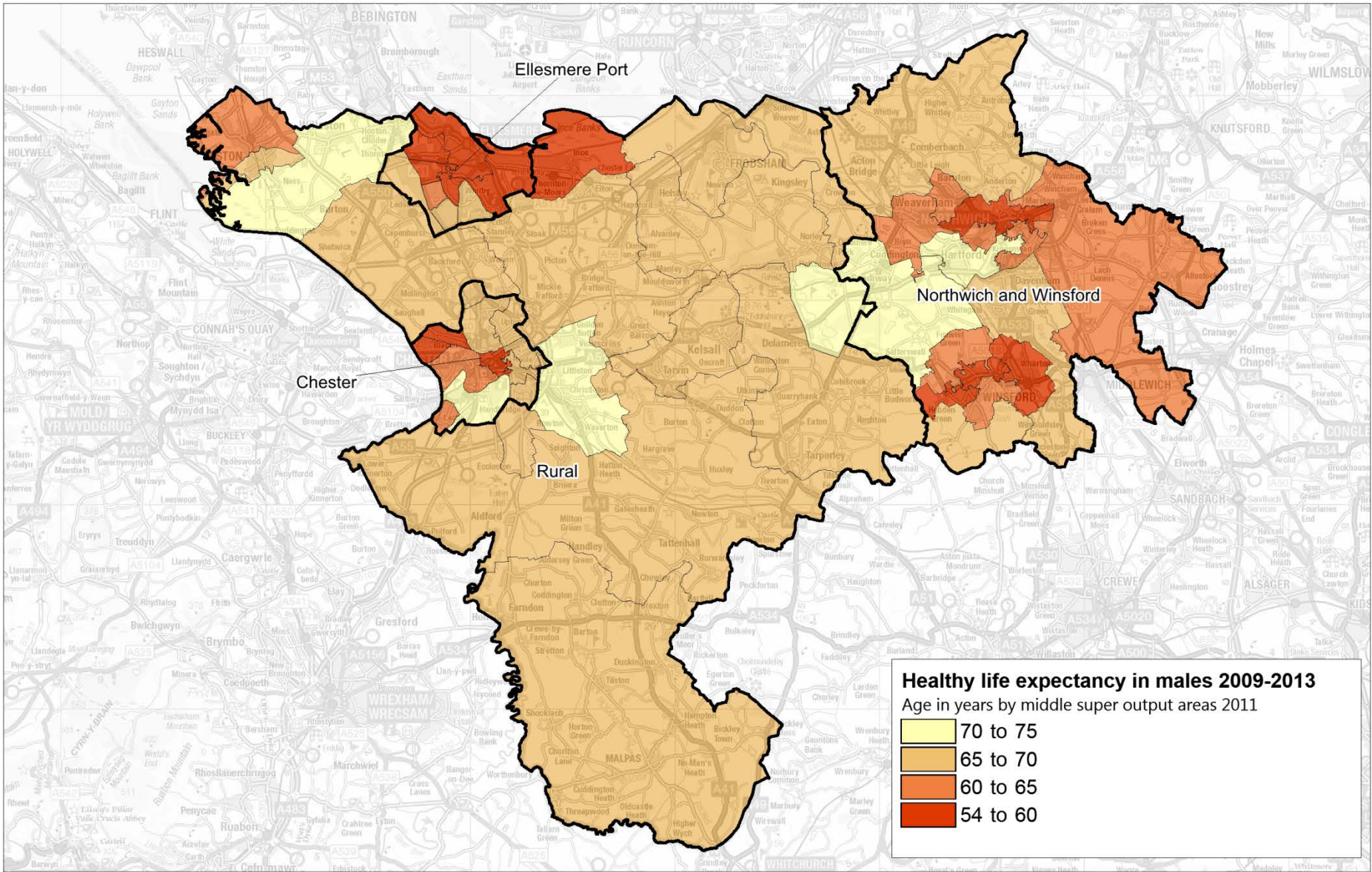
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Female life expectancy at birth in Cheshire West and Chester by ward
5 year pooled 2011-2015

November 2017

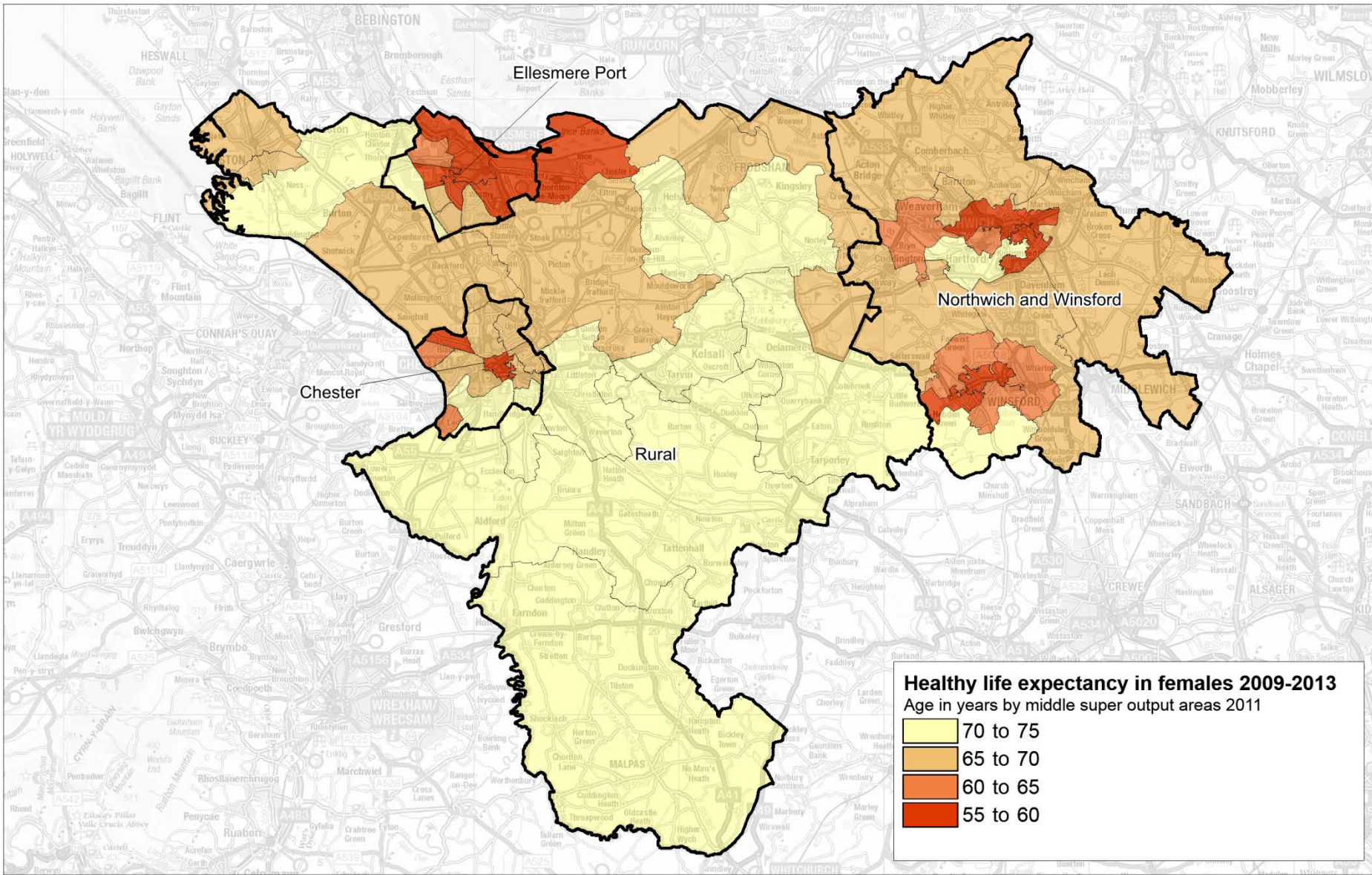
Cheshire West and Chester Council, Rory Strand.
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Healthy life expectancy in males in Cheshire West and Chester

September 2017

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Healthy life expectancy in females in Cheshire West and Chester

September 2017

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