

## Life Expectancy

### Introduction

“Life Expectancy” and “Healthy Life Expectancy” are two important measures of the health status of a population, including ill-health and death. They show overall population health trends in a single measure (Public Health England 2021).

“Life expectancy” is a measure of estimated length of life in a population. It is the average number of years a person would be expected to live based on their age, gender, and the area in which they live.

“Healthy life expectancy” is a measure of the average number of years somebody would be expected to live in good health, rather than with a disability or in poor health. This adds a “quality of life” dimension.

Both measures are calculated on a rolling 3-year average and reported on an annual basis. Our overall aim is for a healthy life and not just a long life. If healthy life expectancy increases more rapidly than life expectancy, then not only are people living longer, but they are also living a greater proportion of their lives free from health problems. This is important not only to the quality of life of Norfolk residents but also relates closely to the demand for health and social care. Increasing healthy life expectancy also increases the possibility that people are able to continue to work later in life.

Nationally, over the last 20-years, there have been two turning points in life expectancy trends. Up until 2011 there were steady improvements in life expectancy, however this has slowed in the past decade. Then in 2020, the coronavirus pandemic led to a greater number of deaths than normal, with latest estimates showing virtually no improvement in life expectancy for females and a fall in male’s life expectancy back to levels reported for 2012 – 2014 (The King’s Fund 2021).

This briefing looks at the trends and inequalities in life expectancy. Where possible we have included information for Norfolk and Waveney, however Healthy Life Expectancy information is currently only available for Norfolk due to the way it is reported nationally.

### Headlines

- In Norfolk and Waveney male life expectancy is 79.9 and female life expectancy is 83.8 (2018-20), this is better than the England average.
- For the county of Norfolk (excluding Waveney), life expectancy is 80.0 years for males and 83.9 years for females (2018-20). This is also better than the England average and in line with the regional average for females, and slightly lower than the regional average for males.
- Improvements in life expectancy have stalled in the previous ten years, nationally and locally, and the COVID pandemic has also affected life expectancy.
- The life expectancy difference between males and females in Norfolk and Waveney has increased to 3.9 years (from 3.5 years in 2015).
- There is variation in life expectancy between communities across Norfolk and Waveney, associated with the level of affluence or deprivation in a particular area. More deprived areas in Norwich, King’s Lynn, Lowestoft and Great Yarmouth have lower life expectancy compared with the Norfolk and Waveney average. Males living in the most deprived areas of Norfolk and Waveney can expect to live 9 years and 2 months less than those living in the most affluent areas and females living in the most deprived areas 7 years and 2 months less.
- Across Norfolk Healthy Life Expectancy for males is 62.9 years and for females it is 63.9 years (2018-20).
- Whilst females have a longer life expectancy than males, they spend a longer time living in poor health.

### Trends in Life Expectancy

Nationally, life expectancy has continued to improve throughout the past few decades. This has been attributed to improvements in public health, (such as childhood immunisation), medical advances in treating diseases (such as heart disease and cancer), as well as lifestyle changes, (such as a decline in smoking).

This improvement has also been observed locally in Norfolk and Waveney. Life expectancy in Norfolk and Waveney has consistently been higher than the national average for both males and females over time.

However, over the last ten years this improvement had levelled off and, most recently, a decline in life expectancy nationally and locally for both males and females (2018-20). For Norfolk and Waveney, male life expectancy fell slightly to 79.9 years and female to 83.8 years (Figure 1).

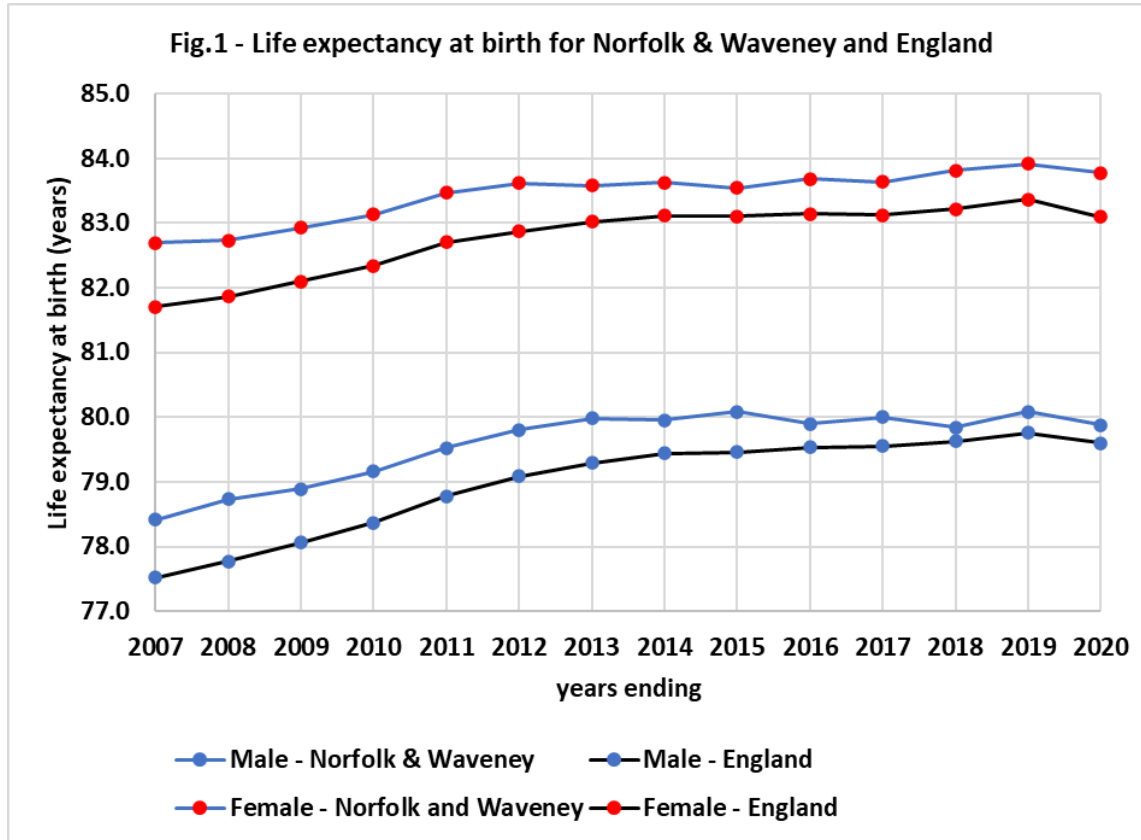


Figure 1 – Life expectancy at birth for Norfolk and Waveney and England for males and females. Flattening of the gradient shows how improvements in life expectancy have been stagnating since around 2012.

### Gender Inequality in life expectancy at birth

Females have historically had a higher life expectancy than males, with many researchers believing that there is a biological and clinical reason for this. For example, males typically have a higher incidence of cardiovascular metabolic diseases and cancer in comparison to females (Pinkhasov et al. 2010). Lifestyle choices are also likely to contribute to this life expectancy gap, for example in Norfolk in 2019, 15.6% of males were current smokers compared to 13.5% of females (Office for National Statistics 2019a).

The life expectancy gap (the difference) between males and females, in Norfolk and Waveney over the three year rolling period, 2018-20, was 3.9 years. This means that females are expected to live on average 3 years and 11 months longer than males, and this is greater than the national average. The trends in life expectancy gap in Norfolk and Waveney are very similar to the trends that have been observed nationally (Figure 2).

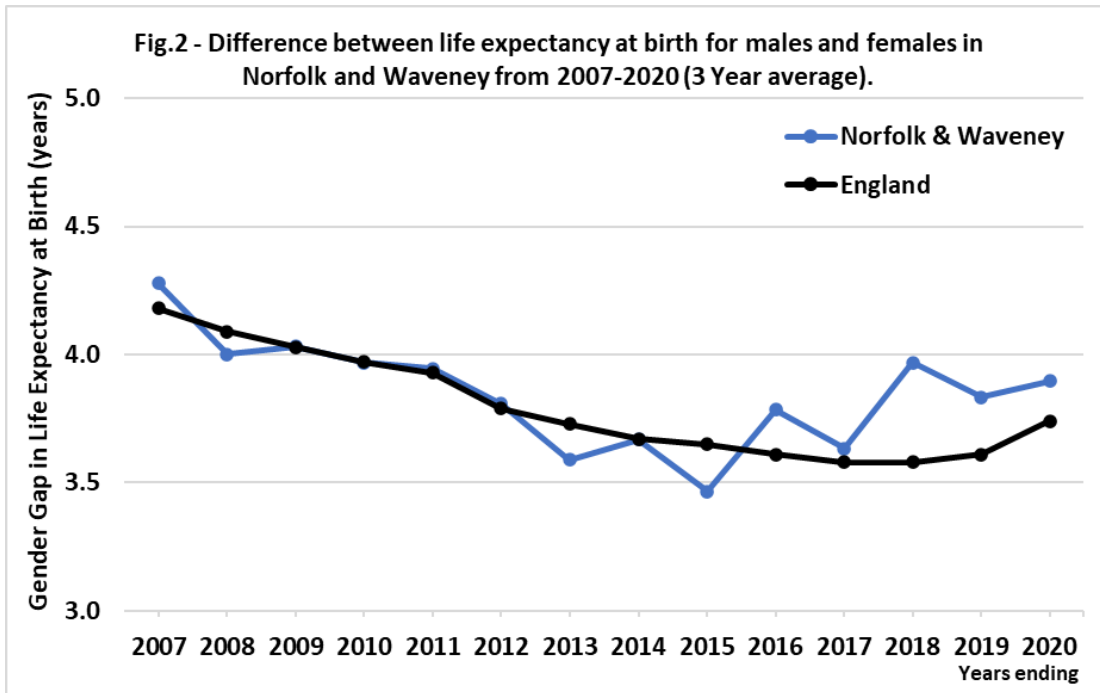


Figure 2 - Difference between male and female life expectancy at birth for Norfolk and Waveney and England, 2005-07 to 2017-20.

### Deprivation Inequality in life expectancy at birth

There is variation in life expectancy at birth between communities across Norfolk and Waveney. Females in North Lynn have the worst life expectancy in Norfolk and Waveney at 76.4, this is 12 years and 6 months shorter than a female born in Sprowston East, expected to live to 88.9 years. Similarly, males in Yarmouth Parade are expected to live to 72.4 years, which is 11 years and 6 months shorter than Wootton which has the highest life expectancy at birth at 84 years (figures 3 and 4) (Office for National Statistics NA)

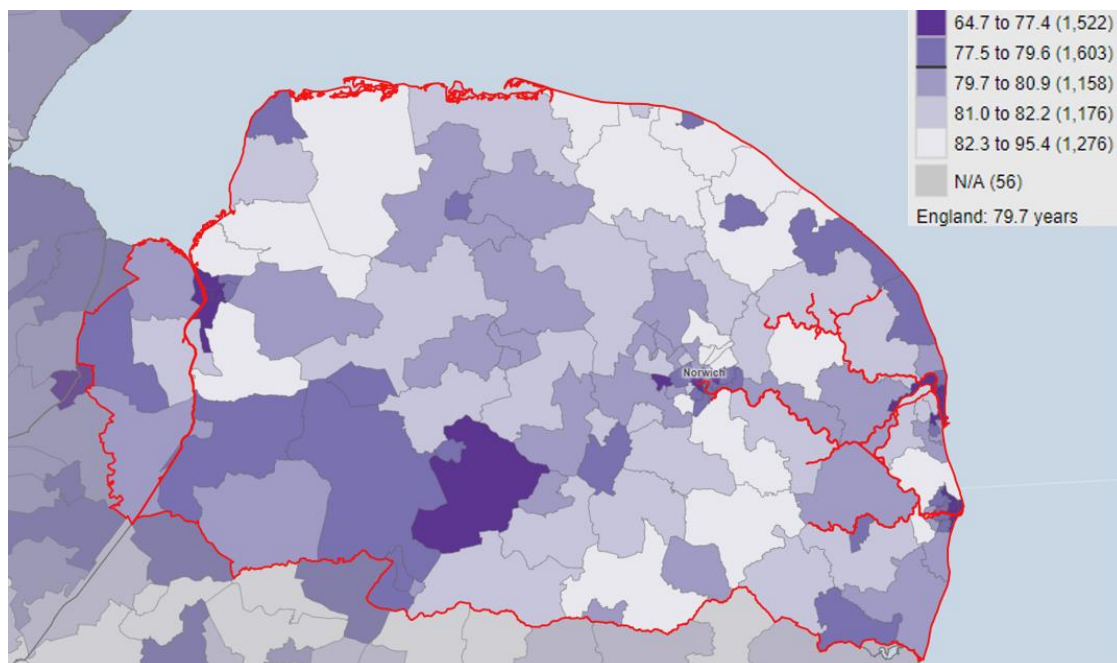
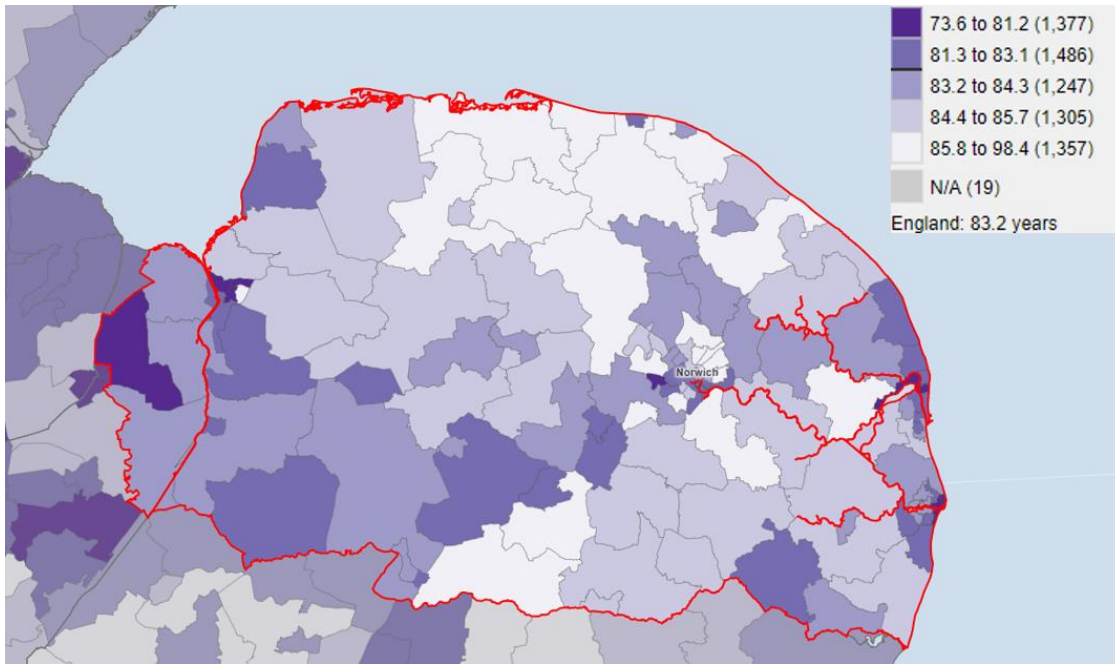


Figure 3 – Male life expectancy at birth for Norfolk and Waveney, 2015-19. Darker areas show worse life expectancy.

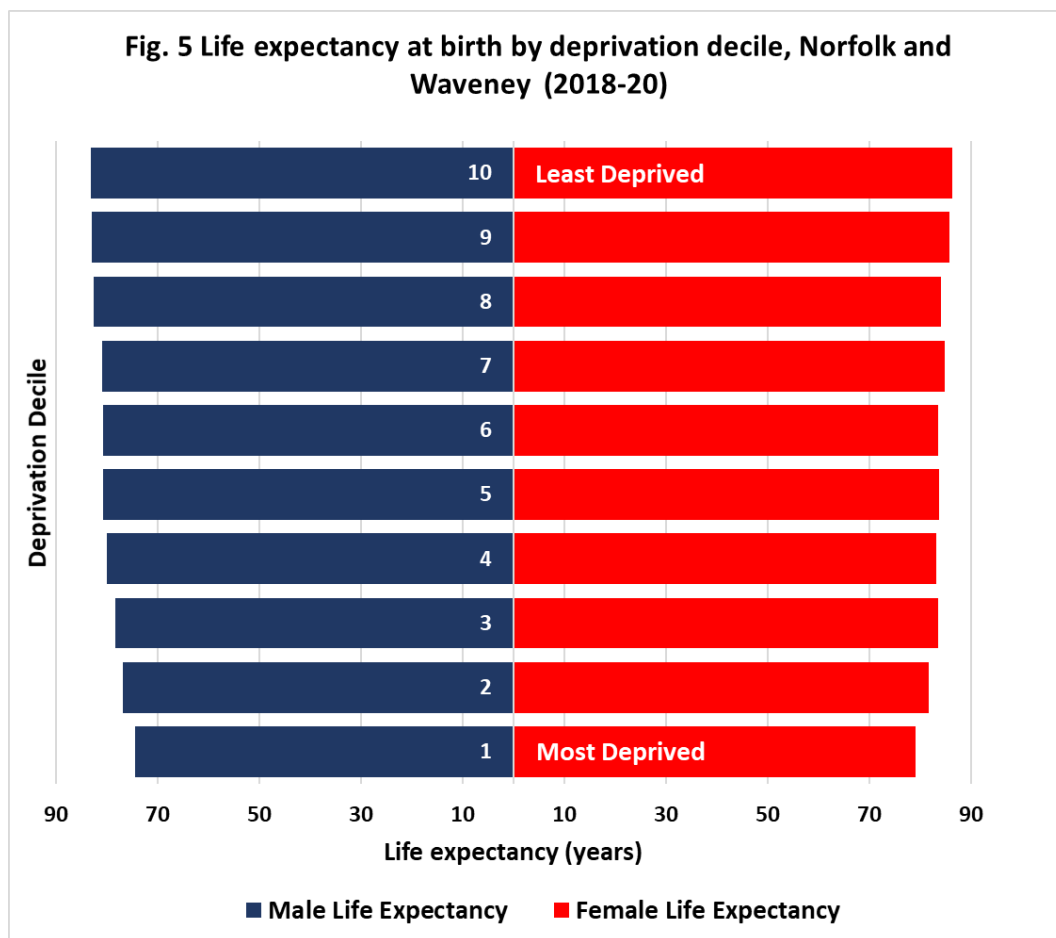


**Figure 4 – Female life expectancy at birth for Norfolk and Waveney, 2015-19. Darker areas show worse life expectancy.**

It is widely recognised that people living in more affluent areas live significantly longer than those living in deprived areas. North Lynn and Yarmouth Parade are two of the most deprived areas in Norfolk and Waveney.

The difference in life expectancy for Norfolk and Waveney’s population differs according to the level of affluence or deprivation in their area. The Index of Multiple Deprivation 2019 is the official measurement of deprivation. It is split into ten levels (deprivation deciles). Decile 1 represents the population living in the 10% most deprived areas nationally, whilst decile 10 measures those living in the 10% least deprived areas nationally.

Males living in the most deprived deciles of Norfolk and Waveney can expect to live 9 years and 2 months less than those living in the most affluent areas. Females living in the most deprived areas can expect to live 7 years and 2 months less than those living in the most affluent areas (Figure 5).



**Figure 5 – Life expectancy at birth for Norfolk and Waveney by deprivation decile, 2018-20.**

The difference isn't just between the most and least deprived populations, there is a gradient of decline in life expectancy with each relative increase in deprivation in the population. For each extra population decile of deprivation, life expectancy decreases on average by eleven months for males and nine months for females in Norfolk and Waveney (Office for National Statistics 2019c). This change reflects the changing contribution of deprivation including as socio-economic factors (income, education, housing), environmental factors (air pollution, access to green space) and the contribution of health behaviours (e.g. smoking, alcohol, nutrition, physical activity) (Office for National Statistics 2017).

Certain vulnerable groups also have a lower life expectancy than the general population, for example those with a learning disability. In England women with a learning disability have an average life expectancy of 67 years - 17 years lower than those without, men an average life expectancy of 66 - 14 years lower (2018)(NHS Digital 2020). Those who are homeless also have a significantly lower life expectancy nationally. Males who were homeless at the time of their death lived 31 years fewer than average, and for females this was 38 years (Office for National Statistics 2019b).

Norfolk and Waveney is known to be less ethnically diverse than England, about 9% of the population are non-white British compared to 21% in England. The Office for National Statistics recently produced life expectancy estimates by ethnicity for the first time in England and Wales (Office for National Statistics 2021a). This was done by linking death records to the 2011 census records. This experimental data showed that despite living in higher levels of deprivation, in 2011-14, male and female life expectancy was higher in minority groups when compared to white and mixed groups. This is partially attributed to lower smoking prevalence and alcohol consumption in ethnic minority groups, which may in part mitigate some of the impacts of the socio-economic disadvantage (The King's Fund 2021).

### Contributors to inequalities in life expectancy

There are some causes of death that drive inequalities in life expectancy more than others. Targeting these causes would have the biggest impact on reducing inequalities. The largest contributors towards the life

expectancy gap between the most and least deprived populations in Norfolk and Waveney are circulatory diseases, cancer, and respiratory diseases (Figure 6).

Circulatory disease contributes to around a quarter of the gap in life expectancy in both males and females (Figure 6). If the death rate from circulatory disease was the same in the most deprived areas as in the least deprived the difference in life expectancy between these groups would be reduced by around 24% for males and females.

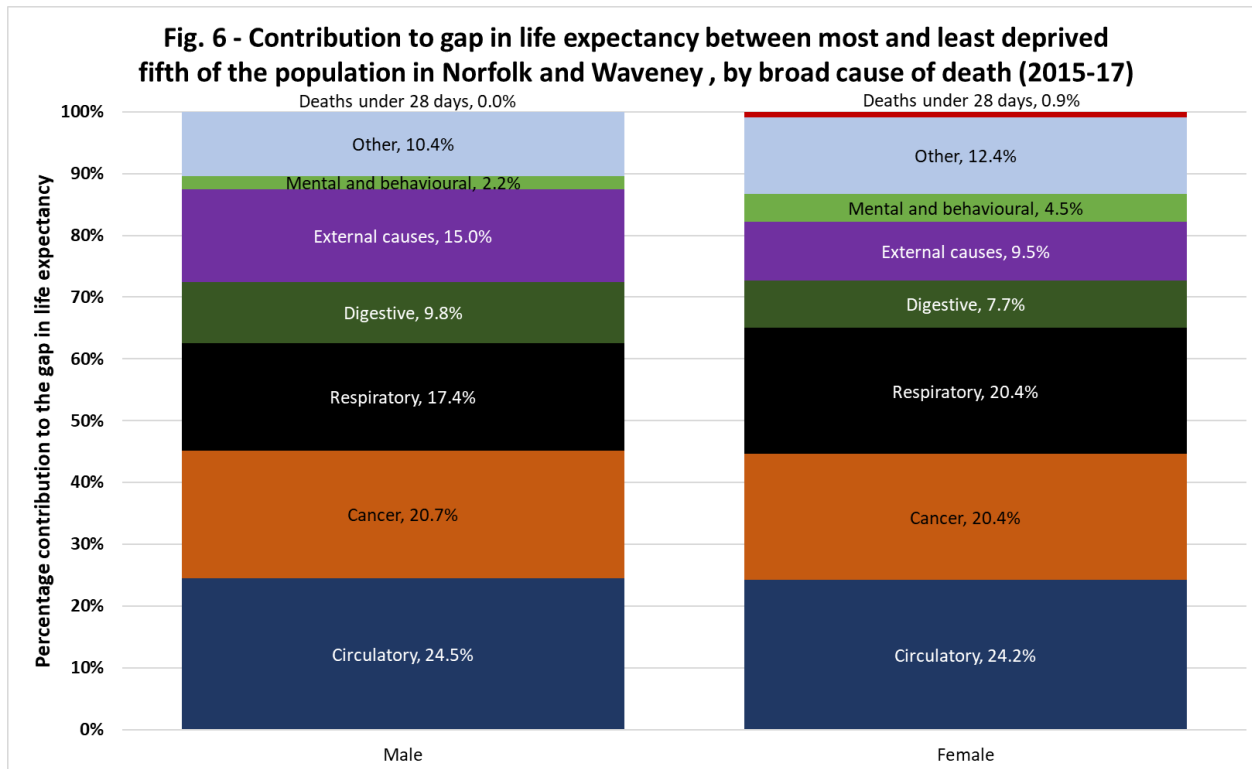


Figure 6 – Contribution to life expectancy gap between most and least deprived areas by broad cause of death, in Norfolk and Waveney between 2015-17.

## Healthy Life expectancy

Healthy life expectancy measures the average number of years a person would expect to live in good health rather than with a disability or in poor health. Good health measures an individual's perception of being disability free through a self-reported lack of long-lasting physical or mental health conditions that limit their daily activities. Healthy Life Expectancy information is currently only available for Norfolk due to the way it is reported nationally.

Latest data (2018-20) shows, on average, that a female in Norfolk would expect to live to approximately 84 years old but have a healthy life expectancy of 63.9 years. This means that a woman spends approximately 24% of their life or 20 years in poor health (Figure 7). Males in contrast are expected to live to approximately 80 years, with a healthy life expectancy of 62.9 years, meaning that they spend 21% of their total life or 17 years and 1 month in poor health.

Although females live longer than males, they spend a longer amount of their life in poor health. This is in line with what we see nationally.

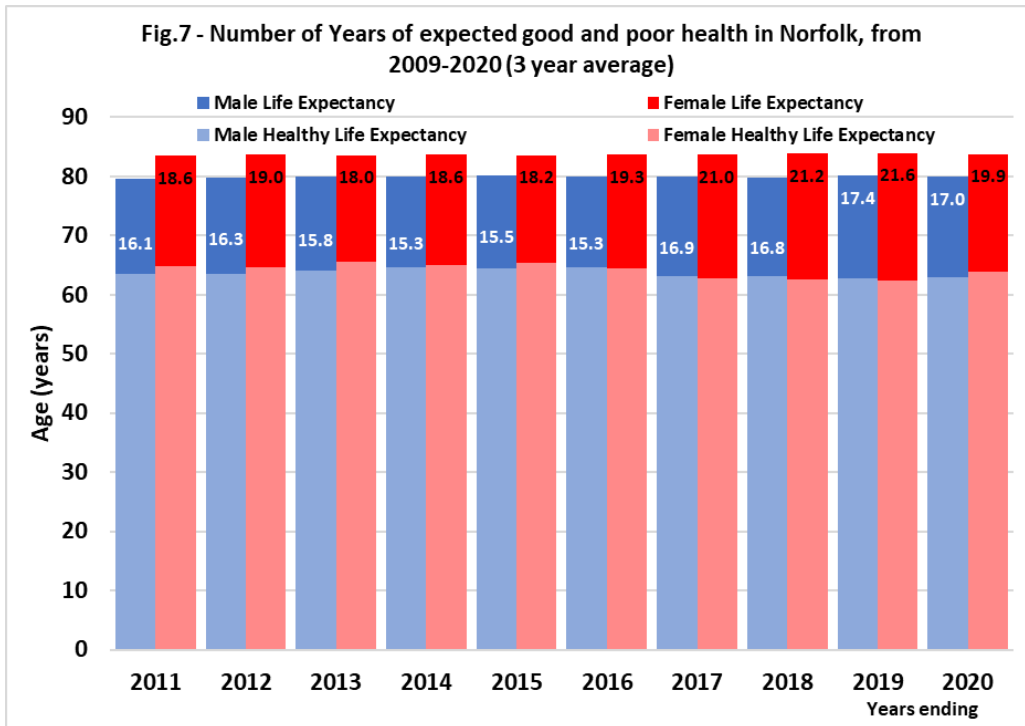


Figure 7 – Healthy life expectancy and life expectancy by gender for Norfolk from the periods 2009-11 to 2018-20. The dark coloured gap depicts the period of years in which there is expected poor health.

Since 2016 healthy life expectancy for males in Norfolk has fallen. Despite an increase in life expectancy for the same period this indicates an expectation for an increased period of poor health in late life for males in Norfolk (Figure 8). Healthy life expectancy also declined in females from 2016, however latest data for 2018-20 shows an increase indicating a recent increased period of good health in later life for females in Norfolk (Figure 9).

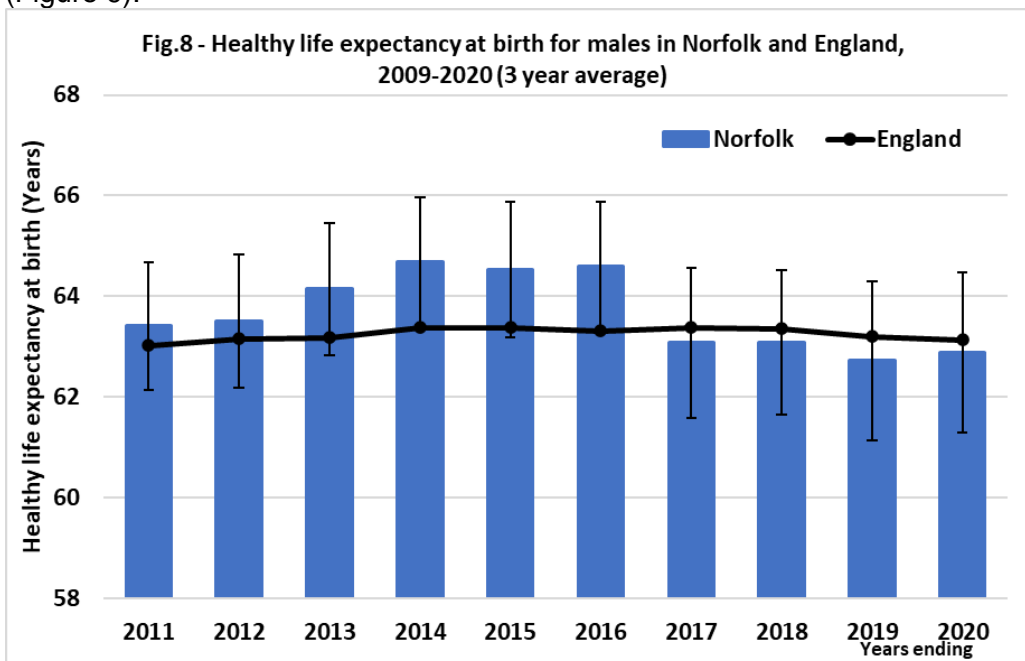


Figure 8 – Healthy life expectancy at birth for males in Norfolk between 2009-11 and 2018-20.

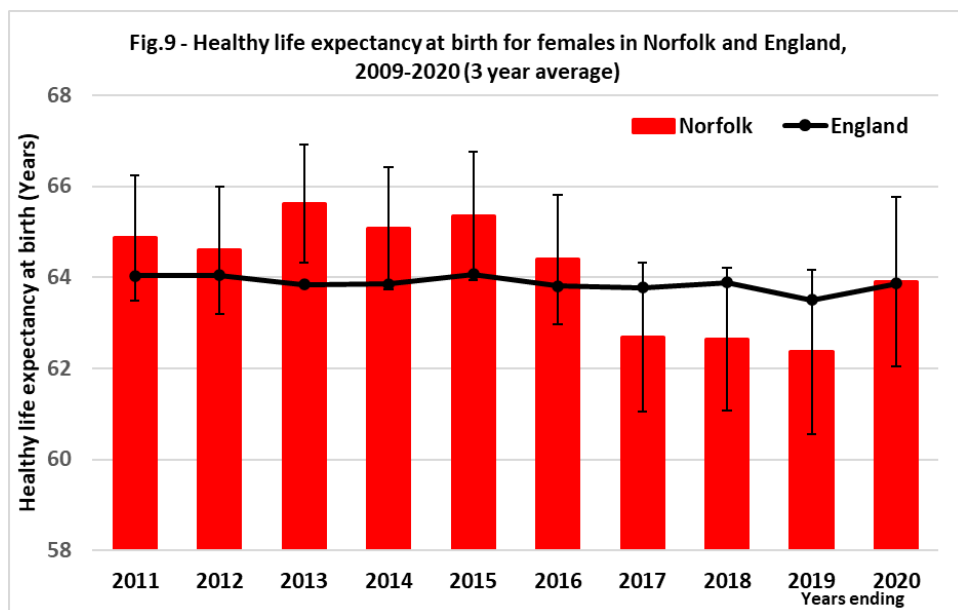


Figure 9 – Healthy life expectancy at birth for females in Norfolk between 2009-11 and 2018-20.

## Impact of Covid-19 on Life Expectancy calculations

The estimates in this report rely on the assumption that current levels of mortality, which are unusually high, will continue for the rest of someone's life. Once the coronavirus pandemic has ended and its consequences for future mortality are known, it is possible that life expectancy will return to an improving trend (Office for National Statistics 2021c).

The information presented has been calculated based on death registrations in the period 2018 to 2020, which includes the first wave and part of the second wave of the coronavirus (COVID-19) pandemic (Office for National Statistics 2021b). The 2019-2021 data release will help us to understand the longer lasting impacts of the pandemic.

## Further Information

- [Dissecting the life expectancy gap in England provides clues on how to reduce it - The Lancet Public Health](#)
- [Mortality and life expectancy trends in the UK | Health Foundation](#)
- [National life tables – life expectancy in the UK - Office for National Statistics \(ons.gov.uk\)](#)
- [Nearest Neighbour Model \(cipfa.org\)](#)
- [Public Health Profiles - PHE - Indicator Definitions and Supporting Information](#)
- [Public Health Outcomes Framework: commentary February 2021 - GOV.UK \(www.gov.uk\)](#)
- [The Marmot Review \(2010\), 'Fair Society, Healthy Lives', London: The Marmot Review](#)



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