

Life expectancy in Wirral 2018-20

Wirral Intelligence Service

September 2022

Life expectancy in Wirral 2018-20

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Version History	Date	Author	Reviewer	Actions	
V1	September 2022	Jack Font	John Highton	Added trend in gap in LEx charts	
V2	September 2022	Jack Font	Sarah Kinsella	Added amended HLEx charts	

Report Overview

Abstract		
Background to this report	This update summarises the most recently available data (2018-20) for life expectancy (LEx) in Wirral.	
Intended or potential audience	 External Wirral Partners General Public Internal Director of Public Health and wider Public Health Team JSNA Bulletin 	
Links with other topic areas	 <u>Deprivation</u> <u>Population</u> <u>Mortality</u> <u>Health Inequalities</u> 	

- Life expectancy (LEx) at birth in Wirral increased steadily from the 1990s to early 2000s for both males and females, but both appear to have plateaued since around 2009-11
- In 2018-20, LEx at birth in Wirral was 77.8 years for males and 81.6 years for females (both decreases from 2017-19); the gap between males and females has remained the same (3.8 years) as it was in 2017-19
- Birkenhead and Tranmere was the ward with the lowest LEx at birth for males (70.4), whilst Greasby, Frankby and Irby had the highest (83.0). For females, Birkenhead and Tranmere also had the lowest LEx (75.4) whilst Greasby, Frankby and Irby again had the highest (87.3)
- The gap between LEx at birth at ward level in Wirral has widened for both males and females. In males, the gap has increased from 10.7 years in 2017-19 to 12.6 years in 2018-20; in females the gap has increased from 11.2 years to 11.9 years
- LEx at 65 for males in Wirral in 2018-20 saw a decrease of 0.3 years compared to 2017-19.
 LEx at 65 for females in Wirral in 2018-20 also decreased, and by a greater amount (0.4 years) compared to 2017-19
- Following a steady increase between the early 1990s to the early 2000s, overall LEx at 65 then plateaued in Wirral, the North West and England from 2009-11 onwards (with small fluctuations). Research by the OECD shows that this trend is also apparent in other developed countries
- The recent decrease in life expectancy for both men and women has been matched by a corresponding decrease in Healthy Life Expectancy (HLE) locally more so in females (- 0.8 years in HLE compared to 2017-19) compared to males (- 0.1 years in HLE compared to 2017-19)
- Males in Wirral spend approximately 78.1% of their life in 'good' health and 21.8% (or 17.0 years) in less than good health. Women in Wirral are estimated to spend 77.3% of their life in 'good' health and 22.7% (or 18.5 years) in less than good health
- Since 2009-11, males in Wirral are spending more of their lives (proportionally and in number of years) in ill health. Women in Wirral, on the other hand, show the opposite trend, as since 2009-11, the years spent in ill health has decreased from 18.8 years to 18.5 years (23.1% of LEx compared to 22.7% of LEx). Despite this decreasing trend, women still spend more time in ill health than males in 2018-20 (18.5 years compared to 17.0 years)
- When comparing deprivation deciles, LEx at birth for Wirral males in the least deprived decile only, is very similar to England. For all other deciles, the England counterparts are greater. A similar pattern is observed for females, with decile 8 being the only decile that does not have a greater LEx than England

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This update summarises the most recently available data (2018-20) for life expectancy (LEx) in Wirral and compares local and national data. The World Bank (2018) estimates that the average life expectancy at birth globally is now 72.4 years; 74.7 for women and 70.2 for men.

Life expectancy at birth in England showed dramatic increases throughout the twentieth century as health and living conditions improved. It increased from 46 years for males and 50 years for females in 1900, to 78 years for males and 82 years for females in 2011. However, LEx appears to have plateaued since this time, not just in England but in other developed countries.

Increases in LEx have not been uniform across all social groups; marked increases have taken place amongst more affluent social groups, while progress has been significantly slower for people in more deprived social groups. The inequality gap in LEx between these groups has increased in recent years.

Consequently, reducing inequalities in LEx was a public health target throughout the 1990s and 2000s and is now one of the overarching indicators in the current <u>Public Health Outcomes</u> <u>Framework (PHOF)</u>. The causes of these health inequalities are complex and involve interactions between social, educational, economic and structural factors (Figure 1).



Figure 1: Causes of health inequalities

Life Expectancy at Birth

Life expectancy (LEx) is an estimate of the average number of years a person would survive if he or she experienced a particular area's age-specific mortality rates for that time period throughout the rest of his or her life.

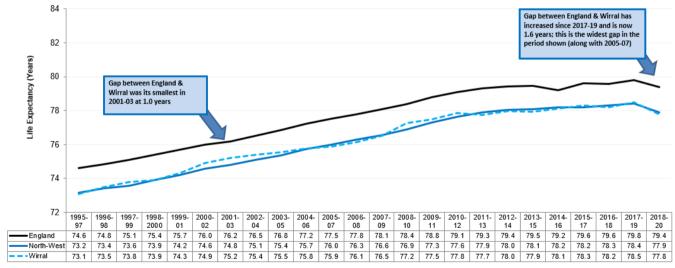
It is *not* the number of years a baby could actually expect to live, because it makes no allowance for probable future changes in death rates (i.e., people living longer) or for people moving away from the area in which they were born. Along with infant mortality, it is widely used by Public Health as a useful indicator of the health of the overall population.

Figures 2 and 3 show the annual trend in LEx at birth for males and females in England, North West, and Wirral between 1995-97 and 2018-20.

Since 1995-97, LEx at birth has increased by 4.7 years for males in Wirral, compared to 4.8 years for males in England. Therefore, although LEx has been increasing locally, it has also been increasing in England at a similar rate, meaning that the LEx gap between men in England and Wirral remains.

The latest period (2018-20) saw a decrease in LEx at birth amongst males in Wirral of 0.7 years compared to 2017-19. LEx at birth amongst males in England also decreased, but only by 0.4 years. This means that the LEx gap between males in Wirral and England has increased by 0.3 years, from 1.3 years in 2017-19 to 1.6 years. Compared to the North West, Wirral males now have a lower LEx for 2018-20 (77.8 vs 77.9).

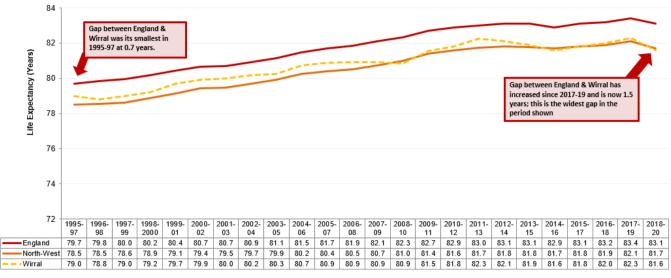
Figure 2: Trend in Life Expectancy at birth for males in England, North-West & Wirral, 1995-97 to 2018-20



Source: <u>Public Health Outcomes Framework, 2022</u> Note: A larger version of this chart is available in Appendix 1

Figure 3 shows that LEx at birth has increased for females in Wirral, since 1995-97, by 2.6 years, compared to an increase of 3.4 years for females in England over the same period. So, although LEx at birth has been increasing locally for females, it has not increased at the same pace as England, so the gap between Wirral and England continues to widen (currently 1.5 years, compared to a gap of 0.7 years in 1995-97). Compared to the North West, Wirral females now have a lower LEx for 2018-20 (81.6 vs 81.7).

Figure 3: Trend in Life Expectancy at birth for females in England, North-West & Wirral, 1995-97 to 2018-20



Source: <u>Public Health Outcomes Framework, 2022</u> **Note:** A larger version of this chart is available in Appendix 2

Life Expectancy at Age 65

Figure 4 shows life expectancy (LEx) at age 65 in Wirral, the North West and England for both males and females from 2001-03 to 2018-20. The chart shows that after many years of increasing gains in LEx at age 65, 2009-11 marked the start of a plateauing in England, the North West and Wirral, followed by a decrease in 2018-20.

The most recent time period (2018-20) showed a decrease in LEx at 65 amongst males in Wirral (-0.3 years), the North West (-0.4 years) and England (-0.3 years). This means that the gap in LEx in men aged 65 years between Wirral and England has remained the same. LEx at 65 for females in all three areas also decreased: in Wirral by -0.4 years, North West by -0.3 years and England by -0.2 years, and means the gap in LEx in women aged 65 years between Wirral and England has increased to 0.8 years.

These changes mean that the gap in LEx at 65 between males and females in Wirral has narrowed between 2017-19 and 2018-20 (from 2.5 to 2.4 years). The decrease also means the gap has narrowed between males in Wirral and the North West (0.1 to 0.0 years) and females in Wirral and North West (0.2 years to 0.1 years).

As shown above, LEx at birth and at age 65 has plateaued somewhat over the last few time periods. A <u>2019 report by the Organisation for Economic Cooperation & Development (OECD)</u> compares the rate of LEx globally and notes that trends for increases have also stalled in recent years in other developed countries, not just the UK.

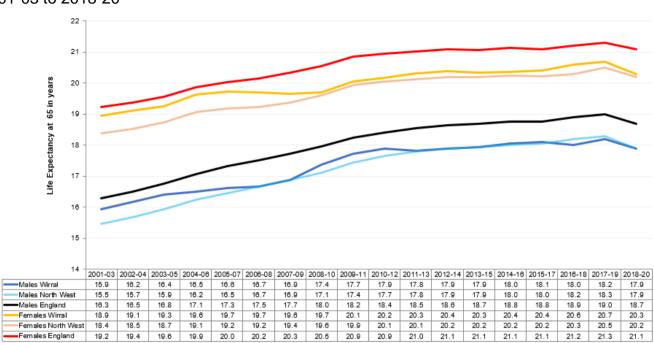


Figure 4: Life Expectancy at age 65 in England, North-West & Wirral, by males and females, 2001-03 to 2018-20

Source: Public Health Outcomes Framework, 2022

Inequalities in Life Expectancy within Wirral and England

Life Expectancy at Birth

There are well evidenced, long standing inequalities in LEx within Wirral. **Figures 5a and 5b** show life expectancy (LEx) at birth by deprivation decile (10%) and gender in Wirral for 2017-19 and 2018-20 (Public Health Outcomes Framework, 2022).

Life expectancy for males in Wirral overall decreased by 0.7 years overall between 2017-19 and 2018-20, with the largest decreases occurring in the most deprived decile (-1.5 years). No deprivation decile saw an increase in life expectancy for males between 2017-19 and 2018-20. There is a difference of 13.8 years between the most and least deprived deciles in 2018-20 (this difference has increased from 13.2 years in 2017-19) and is the highest since at least 2010-12 (the earliest data available).

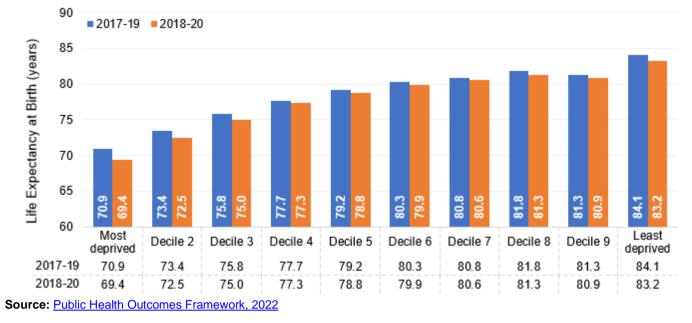


Figure 5a: Life expectancy at birth in Wirral by deprivation decile, males, 2017-19 and 2018-20

As with males, LEx for females in Wirral also decreased by 0.7 years between 2017-19 and 2018-20, with the largest decreases occurring in the most deprived decile (-1.9 years compared to a decrease of -0.8 years) in the least deprived decile. There is a gap of 11.0 years between the most and least deprived deciles in Wirral for 2018-20 (this difference has increased from 9.9 years in 2017-19); and again, is the highest since at least 2010-12 (the earliest data available).

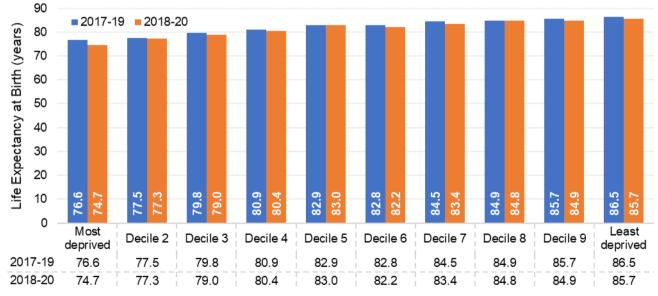


Figure 5b: Life expectancy at birth in Wirral by deprivation decile, females, 2017-19 and 2018-20

Source: Public Health Outcomes Framework, 2022

Life Expectancy at 65+

There are also inequalities in LEx at 65 years as shown by **Figure 6a and 6b**. For example, LEx at 65 for males in the most deprived decile of Wirral decreased by -0.7 years, whereas in the least deprived areas it decreased by -0.1 years. The gap in LEx at 65 years for males between the most and least deprived deciles has therefore widened from 5.4 years in 2017-19 to 6.0 years in 2018-20.

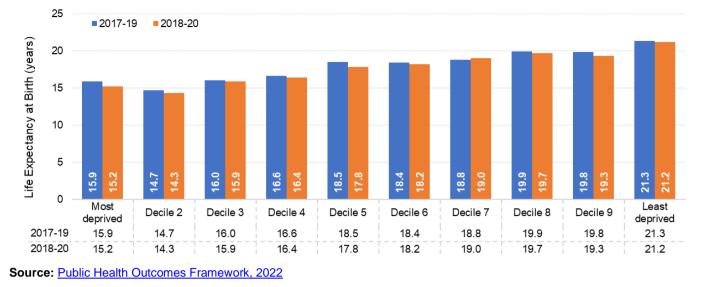


Figure 6a: Life expectancy at 65 in Wirral by deprivation decile, males, 2017-19 and 2018-20

As with LEx at birth in Wirral, LEx at 65 years for females also decreased (-0.4 years), however when analysed by deprivation decile, it also shows a mixed picture for the different deciles (**Figure 6b**). For example, LEx at 65 years for women decreased amongst all deprivation deciles with the exception of Decile 8 (increase of +0.1 years). LEx at 65 for females in the most deprived decile of Wirral decreased by 0.8 years, whereas in the least deprived areas it decreased by 0.5 years. Overall, the gap in LEx at 65 years for females between the most and least deprived deciles has widened from 6.8 years in 2017-19 to 7.1 years in 2018-20.

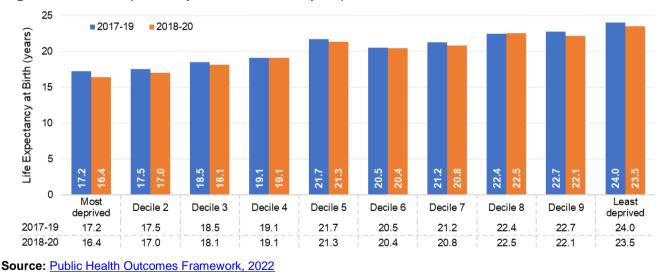


Figure 6b: Life expectancy at 65 in Wirral by deprivation decile, females, 2017-19 and 2018-20

Gap in Life Expectancy by Decile

As mentioned earlier in this report, there are gaps between males and females in Wirral and England in life expectancy at birth and at 65 years. The gap between genders in both Wirral and England for life expectancy at birth is shown below in **Figure 7a**, whilst **Figure 7b** shows the gap for LEx at 65 years.

As **Figure 7a and Figure 7b** show, there are stark differences in the size of the LEx gaps between Wirral and England, both at birth and at 65 years. In terms of LEx at birth, **Figure 7a** shows that males living in the most deprived areas of England live on average, 4.1 years longer than their Wirral counterparts; this is the biggest gap between Wirral and England in all four cohorts (males and females at birth and age 65). LEx at birth for men is higher in England for all but the least deprived decile in Wirral. For women, this pattern is similar, with Decile 8 being the only decile in which England does not have a higher LEx at birth than its Wirral counterparts.

Figure 7b shows the largest inequality in LEx at 65 years between Wirral and England is in males living in Decile 2 (the second most deprived decile); in England, men living in these areas live an additional 2.2 years longer on average after their 65th birthday than those in Wirral. LEx at 65 is higher in England for males in all deprivation deciles besides the least deprived. For women, LEx at 65 is higher in England in all deprivation deciles than Decile 5, Decile 8 and Decile 10.

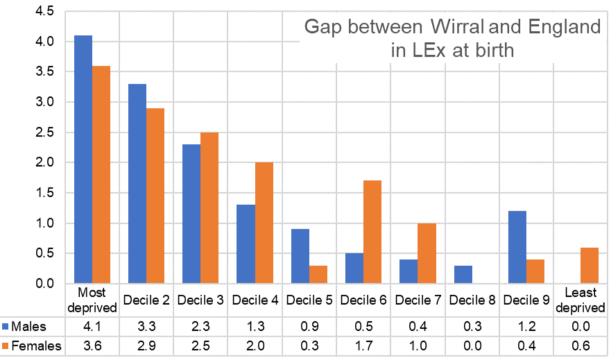


Figure 7a: Gap in life expectancy between Wirral and England, at birth, by gender, 2018-20

Source: Public Health Outcomes Framework, 2022

Note: Positive values mean England has a higher LEx, negative vales mean Wirral has a higher LEx

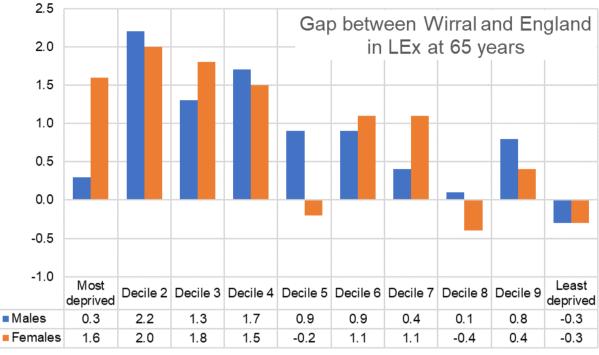
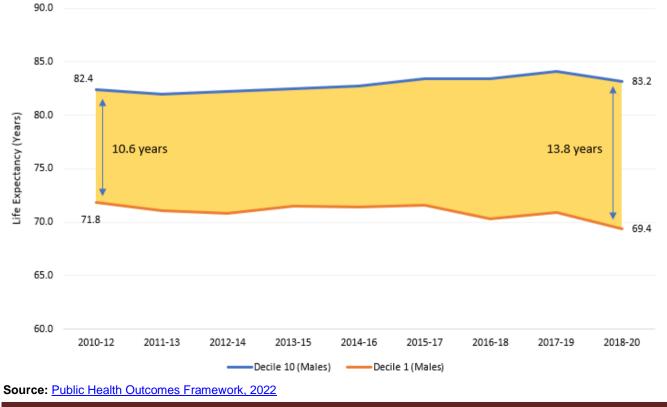


Figure 7b: Gap in life expectancy between Wirral and England, at 65 years, by gender, 2018-20

Note: Positive values mean England has a higher LEx, negative vales mean Wirral has a higher LEx

Figure 8a and 8b show the trend in gap in life expectancy between the most and least deprived deciles in Wirral by gender. It shows that, over time, the gap has widened by 3.2 years in males, and 2.1 years in females. In males in particular, life expectancy in the least deprived decile has increase by 0.8 years, but in the most deprived decile it has decreased by 2.4 years. For females, both deciles have shown a decrease in LEx, but by a lot greater amount in the most deprived decile (-2.5 years) than the least deprived decile (-0.4 years).

Figure 8a: Trend in gap in life expectancy between Decile 1 (most deprived) and Decile 10 (least deprived) in Wirral at birth, males, 2010-12 to 2018-20



Wirral Intelligence Service: Life Expectancy in Wirral: 2018-20

Source: Public Health Outcomes Framework, 2022

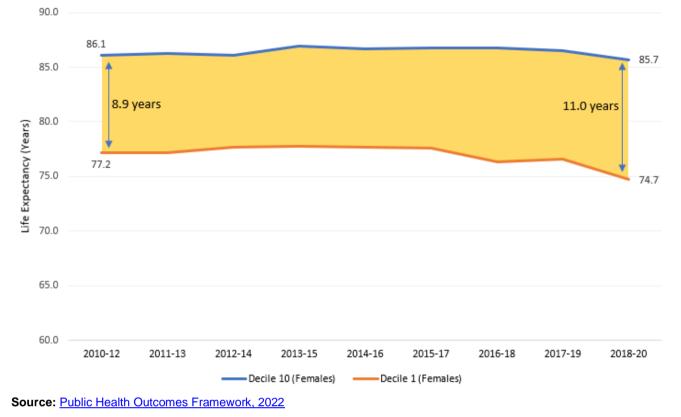


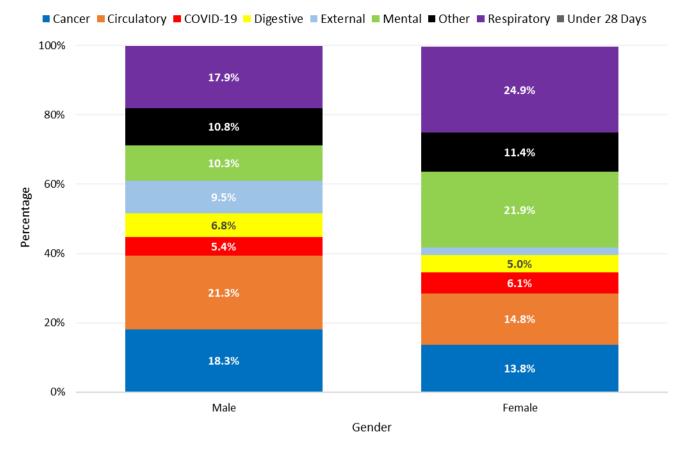
Figure 8b: Trend in gap in life expectancy between Decile 1 (most deprived) and Decile 10 (least deprived) in Wirral at birth, females, 2010-12 to 2018-20

Causes of the Gap in Life Expectancy between Wirral & England

Targeting the causes of death which contribute most to the life expectancy gap between Quintile 1 (Deciles 1 and 2) and Quintile 5 (Deciles 9 and 10) within Wirral should have the biggest impact on reducing inequalities. In order to help local areas identify which causes of death are driving health inequalities, Public Health England produce a Segment Tool which is available here: https://fingertips.phe.org.uk/profile/segment with Quintile 1 compared to Quintile 5 in **Figure 9** below.

Please note that this data is produced by the Office for Health Improvement and Disparities (OHID) irregularly, with the latest data showing 2020-21 (in contrast to the remainder of this report which is 2018-20). We have therefore replicated their methodology using local data to produce the Wirral 2018-20, so the chart below will not match what is on the Segment Tool.

Figure 9: Proportional (%) breakdown of the life expectancy gap between Wirral and England, by broad cause of death (2018-20)



Source: Public Health Intelligence Team, Wirral Intelligence Service, 2022

Source Footnote: Circulatory includes heart disease and stroke. Respiratory includes flu, pneumonia, and chronic obstructive respiratory disease. Digestive includes alcohol-related conditions such as chronic liver disease and cirrhosis. External includes deaths from injury, poisoning and suicide. Mental and behavioural includes dementia and Alzheimer's disease. Percentages may not sum to 100 due to rounding.

Note: It should be noted that the above 'scarf' charts only relate to deaths which contributed to the *gap* between Quintile 1 and Quintile 5 in Wirral - they are not the causes of *all* deaths in Wirral.

In 2018-20 there were gaps in life expectancy at birth between Quintile 1 and Quintile 5 in Wirral of 9.7 years (males) and 8.4 years (females). **Figure 9** shows how the broad causes of death contributed to these gaps in life expectancy between these quintiles by gender.

The largest contributors to the gap were different for males and females in Wirral. In males, cancer (18.3%) contributed to the gap the most, followed closely by respiratory diseases (17.9%). In females, however, respiratory disease contributed 24.9% of the gap followed by mental and behavioural causes (namely dementia and Alzheimer's) which contributed 21.9% of the gap.

Life Expectancy by Geography

Life Expectancy at Birth by Wirral ward

Life expectancy varies considerably between Wirral wards. As **Figure 10** shows, there is a gap of 12.6 years between the wards with the highest and lowest male LEx in Wirral for 2018-20 (Birkenhead and Tranmere and Greasby, Frankby and Irby). This is an increase of the gap, compared to the previous period, as it was 10.7 years in 2017-19. The average Wirral LEx for males was 77.8 years, whilst the England average was 79.4 for the same time period (1.6 years higher).

The four wards with the lowest LEx are also the four most deprived wards in Wirral according to the <u>IMD 2019</u>; Birkenhead and Tranmere, Bidston and St James, Rock Ferry and Seacombe.

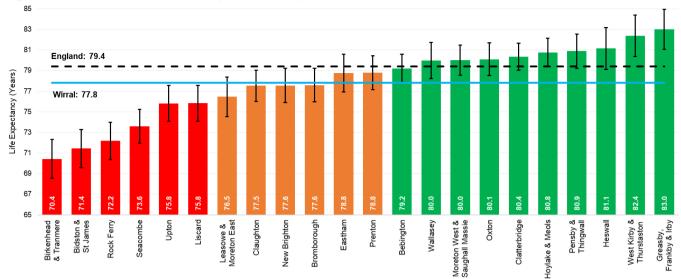


Figure 10: Male life expectancy at birth, by Wirral Ward, 2018-20

Source: Public Health Intelligence Team, Wirral Intelligence Service, 2022 **Note:** Confidence intervals displayed on each bar within this chart show the range at which we can be 95% certain the true value lies between

Figure 11 below shows that, for 2018-20, the gap between the Wirral wards with the highest and lowest female LEx was 11.9 years (Birkenhead and Tranmere and Greasby, Frankby and Irby). This is a widening of the gap, compared to the previous period, as it was 11.2 years in 2017-19. As was the case with males, the four wards with the lowest female LEx are the four most deprived wards in Wirral: Birkenhead and Tranmere, Bidston and St. James, Rock Ferry and Seacombe.

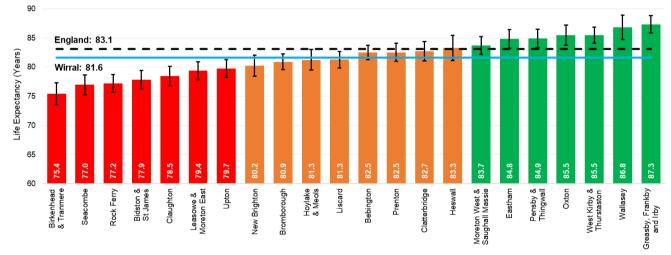


Figure 11: Female life expectancy at birth, by Wirral Ward, 2018-20

Source: Public Health Intelligence Team, Wirral Intelligence Service, 2022 **Note:** Confidence intervals displayed on each bar within this chart show the range at which we can be 95% certain the true value lies between

<u>Map 1</u> and <u>Map 2</u> (<u>Appendices 3 and 4</u>) show life expectancy at birth by Wirral railway station. These maps reinforce in a visual format the ward level data shown previously; that wards on the west side of Wirral are typically less deprived and have a higher life expectancy for 2018-20. Those of the east side of Wirral are typically those that are more deprived and have lower life expectancy. Healthy Life Expectancy (HLE) is produced by the Office for National Statistics and is an estimate of the number of years a person can expect to spend in 'very good' or 'good' health (<u>ONS, 2019d</u>). It is calculated using mortality data and self-reported health status data from the Annual Population Survey.

In 2018-20, HLE in Wirral was 60.8 years for men and 63.1 years for women, compared to 63.1 years for men and 63.9 years for women in England **(Table 1)**. On comparing HLE to LEx it shows that, in Wirral, a male could spend approximately 78.1% of their life in 'good' health and 21.8% (or 17.0 years) in less than good health. Women in Wirral are estimated to spend 77.3% of their life in 'good' health and 22.7% (or 18.5 years) in less than good health.

In 2018-20, male HLE in Wirral decreased from 60.9 to 60.8 years. There was also a decrease observed nationally (by the same amount); this means the gap between male HLE in Wirral and England has remained the same at 2.3 years.

For Wirral females, HLE for 2018-20 also decreased from 63.9 to 63.1 years (-0.8 years). In contrast HLE for females nationally increased by 0.4 years (63.5 to 63.9 years); this means the gap between female HLE in Wirral and England has increased to 0.8 years. Previously, women in Wirral had a greater HLE than in England.

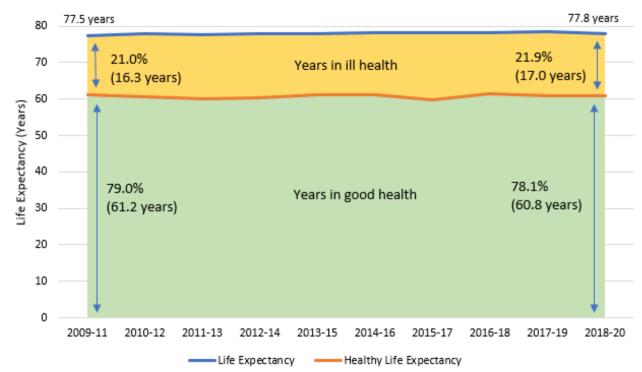
Table 1: Life Expectancy, Healthy Life Expectancy and proportion of life spent in good health,2018-20

Area	Life Expectancy, Males (Years)	Healthy Life Expectancy, Males (Years)	Proportion of life spent in 'good' health, Males	Life Expectancy, Females (Years)	Healthy Life Expectancy, Females (Years)	Proportion of life spent in 'good' health, Females
Wirral	77.8	60.8	78.1%	81.6	63.1	77.3%
North West	77.9	61.5	78.9%	81.7	62.4	76.4%
England	79.4	63.1	79.5%	83.1	63.9	76.9%

Source: Office for National Statistics (ONS), 2022

Figures 12 and 13 shows how HLEx has changed in comparison to LEx by gender. In **Figure 12**, for example, males are shown to be living longer overall than in 2009-11 (77.5 years compared to 77.8 years) but are spending more of that time, both proportionally (21.0% compared to 21.9%) and in the number of years (16.3 years compared to 17.0 years) living in ill health.

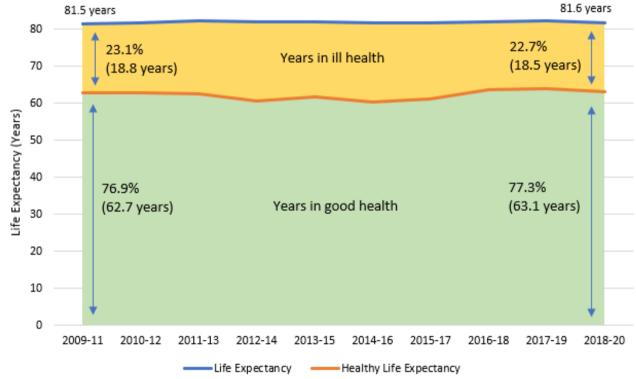
Figure 13, on the other hand, shows that females are living slightly longer overall than in 2009-11 (+0.1 years), and are also spending less of that time, both proportionally (23.1% compared to 22.7%) and in the number of years (18.8 years compared to 18.5 years) living in ill health. These figures show, however, that despite females living longer, and with a decreasing trend of time spent in ill health, females do still spend longer both proportionally (22.7% compared to 21.9%) and in the number of years (18.5 years compared to 17.0 years) in ill health compared to males.





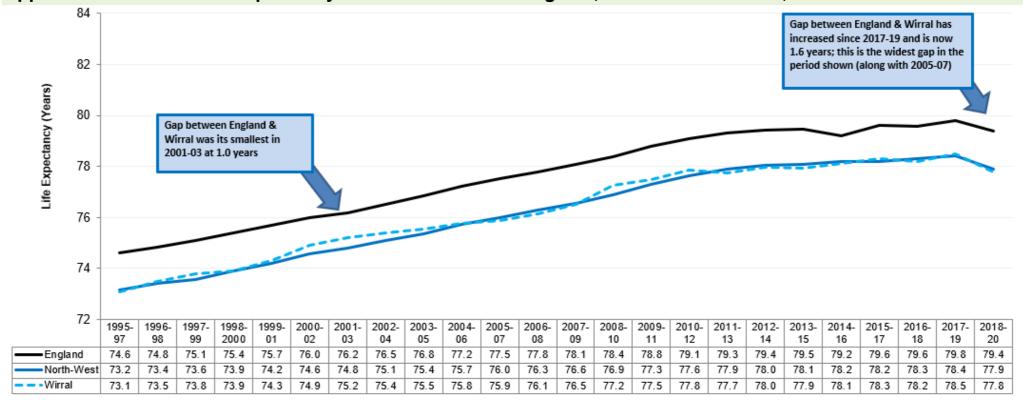
Source: Public Health Outcomes Framework, via Public Health Intelligence Team, Wirral Intelligence Service, 2022

Figure 13: Trend in Life Expectancy and Health Expectancy in Wirral, females, 2009-11 to 2018-20

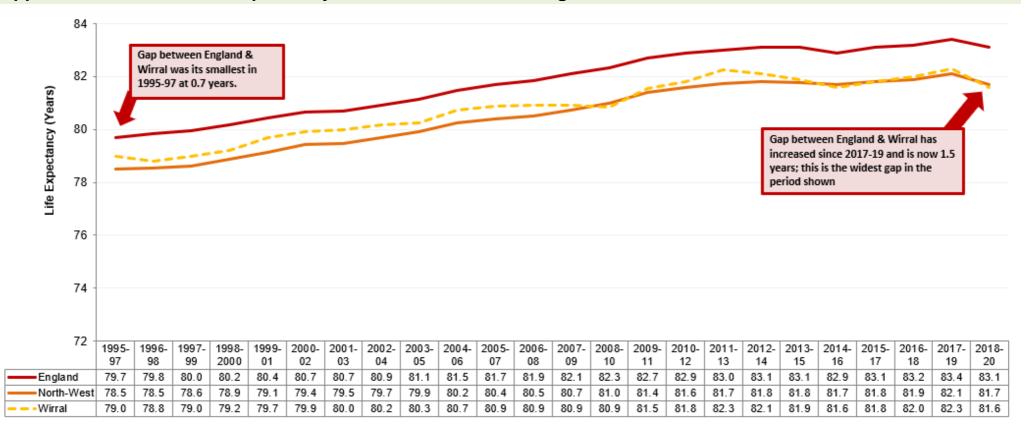


Source: Public Health Outcomes Framework, via Public Health Intelligence Team, Wirral Intelligence Service, 2022

Appendices

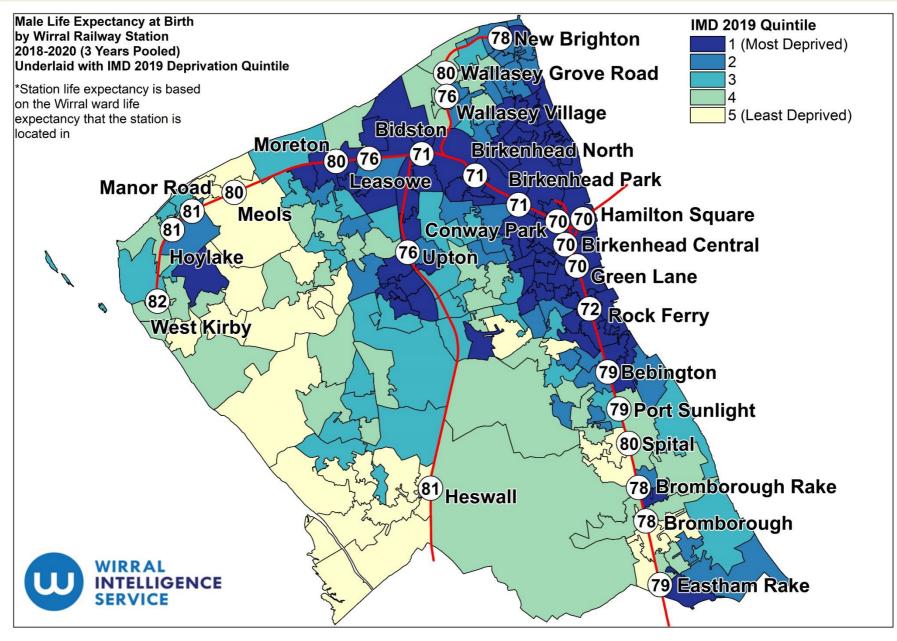


Appendix 1: Trend in Life Expectancy at birth for males in England, North-West & Wirral, 1995-97 to 2018-20

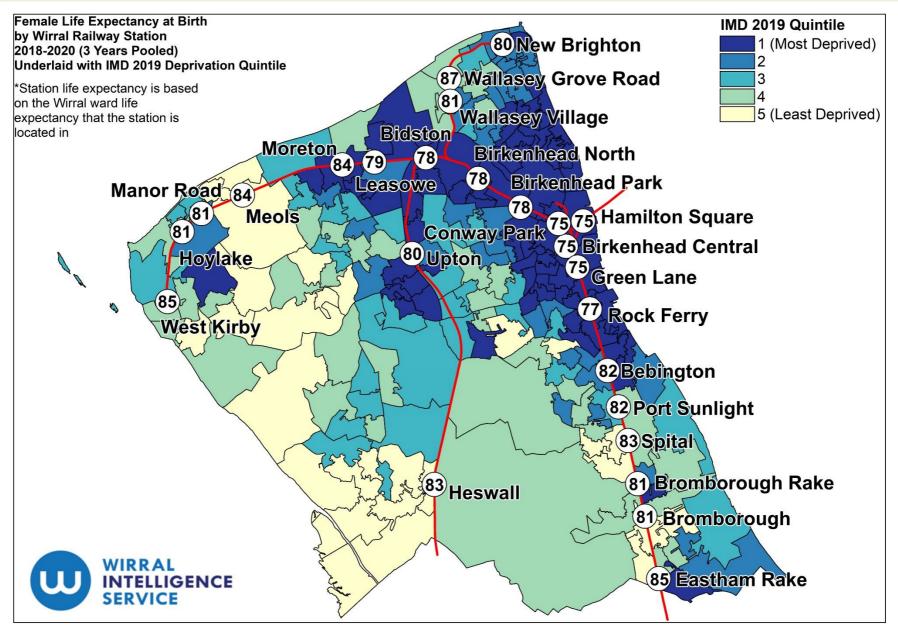


Appendix 2: Trend in Life Expectancy at birth for females in England, North West & Wirral, 1995-97 to 2018-20

Appendix 3: Life expectancy at birth in males by Wirral Railway Station (2018-20) and Indices of Multiple Deprivation (2019)



Appendix 4: Life expectancy at birth in females, by Wirral Railway Station (2018-20) and Indices of Multiple Deprivation (2019)



Further Reading / Links

- Wirral JSNA: <u>https://www.wirralintelligenceservice.org/</u>
- Health & Social Care Outcomes Framework: <u>https://www.gov.uk/government/collections/health-and-social-care-outcomes-frameworks</u>
- Public Health England Data and analysis tools: <u>https://www.gov.uk/guidance/phe-dataand-analysis-tools</u>
- Office for National Statistics Life Expectancies: <u>https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexp</u> <u>ectancies</u>
- Indices of Multiple Deprivation 2019 Explorer: <u>http://dclgapps.communities.gov.uk/imd/iod_index.html</u>

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