

# Public Health England Segment Tool Analysis – Peterborough City Council & Cambridgeshire County Council

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### 1. Introduction

The Public Health England Segment Tool provides information on life expectancy at birth and the causes of death that are driving inequalities in life expectancy at local area level. Targeting the causes of death which contribute to observed life expectancy gaps can have a significant impact on reducing inequalities.<sup>1</sup> A national summary report and full data are available via URL:

<https://www.gov.uk/government/statistics/segment-tool-2016-data-update>

The most recent refresh of the data within this tool provides life expectancy at birth at local authority and district level for 2012-14. This report provides an overview of the following data contained within the tool:

- Male and female life expectancy at birth for the Peterborough and Cambridgeshire Local Authorities and the Cambridge City, East Cambridgeshire, Fenland, Huntingdonshire and South Cambridgeshire districts, as well as a comparison to England.
- Comparison at local authority and district levels between male and female life expectancy at birth within the most and least deprived quintiles within each area, as well as a comparison to England.
- Breakdown of the life expectancy at birth gap for males and females by broad causes of death for Peterborough and Fenland, the only areas of Cambridgeshire and Peterborough that have life expectancies at birth below that of England.
- Years of life expectancy gained or lost, for males and females, if Peterborough and Fenland had the same mortality rates as England by broad causes of death.
- Years gained or lost, for males and females, if Peterborough and Fenland had the same mortality rates as England for alcohol-specific deaths.

It should be noted that data within this refresh of the segment tool incorporate changes in ICD-10 coding made in 2014 and Index of Multiple Deprivation (IMD) data released in 2015; results are

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<sup>1</sup> <https://www.gov.uk/government/statistics/segment-tool-2016-data-update>

therefore not comparable to previous versions of the tool and resultantly year-on-year comparisons are not available.

## 2. Executive Summary

- Life expectancy at birth is lower in Peterborough than England for both males and females and higher than England in Cambridgeshire for both males and females. Life expectancy at birth is also lower than England for both males and females in Fenland but is higher than England for all other districts within Cambridgeshire.
- The absolute gap between life expectancy at birth in the most deprived and least deprived quintiles in Peterborough for males is -6.7 years (e.g. males living in the most deprived quintile of Peterborough can expect to live 6.7 years less than males in the least deprived quintile), whereas in Cambridgeshire it is -5.2 years. All districts within Cambridgeshire have a smaller absolute gap in life expectancy at birth between their most and least deprived quintiles than Peterborough, with the exception of Cambridge City, where the absolute gap is -9.3 years. For females, the absolute gap between life expectancy at birth in the most deprived and least deprived quintiles in Peterborough is -5.1 years and in Cambridgeshire it is -4.0 years. As with males, all districts within Cambridgeshire have a smaller absolute gap than Peterborough with the exception of Cambridge City, where the gap is -8.0 years.
  - In Peterborough, 27.6% of the life expectancy at birth gap for males is attributable to the respiratory diseases cause of death group, 27.1% due to cancer and 26.4% as a result of external causes (including injury, poisoning and suicide). For females, 27.3% of the life expectancy at birth gap is due to circulatory diseases, including coronary heart disease and stroke, 27.1% due to respiratory diseases (which include influenza, pneumonia and chronic obstructive airways disease) and 19.2% due to 'other' causes. If Peterborough's mortality rates were the same as England, male life expectancy at birth would rise by 0.31 years for cancer, 0.31 years for respiratory disease and 0.30 years for external causes. For females in Peterborough, if mortality rates were the same as England, life expectancy would increase by 0.22 years for circulatory diseases and 0.22 years for respiratory diseases. Rates of mortality from alcohol-specific causes are similar to England.
  - In Fenland, 56.5% of the life expectancy gap for males in comparison to England is caused by cancer, with external causes (including deaths from injury, poisoning and suicide) contributing to 15.9% of the gap and digestive diseases 13.0%. Among females in Fenland, respiratory diseases contribute to 25.5% of the life expectancy gap compared to England, 'other' diseases account for 26.7% and external causes contribute to 24.3% of the gap. If Fenland had the same mortality rates as England, life expectancy for males would increase by 0.30 years in relation to cancer and among females, life expectancy would increase 0.21 years for 'other causes', 0.20 years for respiratory causes and 0.19 years for external causes. Rates of mortality from alcohol-specific causes are similar to England.

### 3. Life Expectancy at birth, 2012-14

**Figure 1: Life Expectancy at Birth, 2012-14, Peterborough & Cambridgeshire Local Authorities/Districts**

Area	Male		Female	
	Life expectancy	Absolute gap in life expectancy between area and England (years)	Life expectancy	Absolute gap in life expectancy between area and England (years)
Peterborough	78.6	-1.0	82.4	-0.8
Cambridgeshire	81.2	1.6	84.5	1.3
Cambridge City	79.9	0.3	84.1	0.9
East Cambridgeshire	82.2	2.6	85.5	2.3
Fenland	79.4	-0.2	82.6	-0.6
Huntingdonshire	81.2	1.6	84.5	1.3
South Cambridgeshire	82.7	3.1	85.6	2.4
England	79.6	-	83.2	-

Source: Office for National Statistics 'Life expectancies for local authorities' contained with Public Health England Segment Tool, May 2016, <https://www.gov.uk/government/statistics/segment-tool-2016-data-update>

Data show that life expectancy at birth is lower in Peterborough, for both males and females, than in Cambridgeshire or any of its districts. Within Cambridgeshire, only Fenland has a lower life expectancy at birth than England and, as with Peterborough, life expectancy at birth is lower for both males and females. At 78.6 years, Peterborough's male life expectancy is 1.0 years below that of England (79.6 years) and Peterborough's female life expectancy at birth is 82.4 years, 0.8 years below the England female life expectancy at birth of 83.2 years. In Fenland, male life expectancy at birth is 0.2 years below that of England at 79.4 years compared to 79.6 years and for females, life expectancy at birth is 0.6 years lower than England, at 82.6 years compared to 83.2 years.

Life expectancy at birth is highest within South Cambridgeshire for both males and females. At 82.7 years, male life expectancy at birth in South Cambridgeshire is 3.1 years higher than in England (79.6 years) and for females, South Cambridgeshire life expectancy at birth is 2.4 years higher than England (83.2 years compared to 85.6 years).

#### 4. Absolute gap in life expectancy at birth between most and least deprived quintiles, 2012-14

**Figure 2: Absolute Gap in Life Expectancy at birth between most and least deprived quintiles, 2012-14, Peterborough & Cambridgeshire Local Authorities/Districts**

Area	Male			Female		
	Life expectancy in most deprived quintile of area	Life expectancy in least deprived quintile of area	Absolute gap in life expectancy between least deprived and most deprived quintile of area (years)	Life expectancy in most deprived quintile of area	Life expectancy in least deprived quintile of area	Absolute gap in life expectancy between least deprived and most deprived quintile of area (years)
Peterborough	76.0	82.7	-6.7	81.4	86.5	-5.1
Cambridgeshire	78.6	83.8	-5.2	82.6	86.6	-4.0
Cambridge City	76.2	85.5	-9.3	80.8	88.8	-8.0
East Cambridgeshire	81.2	84.4	-3.2	85.3	87.3	-2.0
Fenland	76.7	81.2	-4.5	81.4	82.9	-1.5
Huntingdonshire	79.4	84.1	-4.7	82.6	87.3	-4.7
South Cambridgeshire	80.8	83.4	-2.6	84.0	86.0	-2.0
England	75.1	82.7	-7.6	79.8	85.7	-5.9

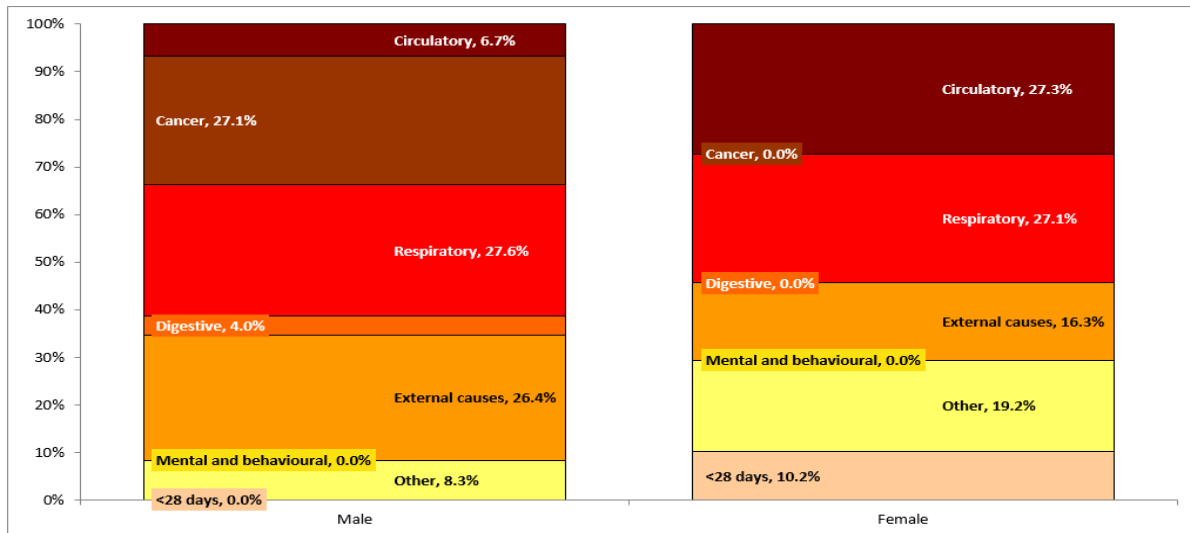
Source: Office for National Statistics 'life expectancies for deprivation quintiles within local authorities' contained with Public Health England Segment Tool, May 2016, <https://www.gov.uk/government/statistics/segment-tool-2016-data-update>

The table above shows that life expectancy at birth is lower in Peterborough than in Cambridgeshire within both the most deprived and least deprived areas of the respective localities. Peterborough also has a lower male life expectancy at birth in its most deprived quintile than any of the districts of Cambridgeshire have in their respective most deprived quintiles, although Fenland has a lower male life expectancy at birth in its least deprived quintile (81.2 years) than Peterborough (82.7 years). The absolute gap in life expectancy at birth for males between the most and least deprived quintiles is -6.7 years in Peterborough and -5.2 years in Cambridgeshire. Among Cambridgeshire districts, the absolute gap is widest in Cambridge City (-9.3 years) and this is the only district with an absolute gap wider than that of England (-7.6 years).

For females, life expectancy at birth in the most deprived quintile of area is lowest in Cambridge City (80.8 years) and highest in East Cambridgeshire (85.3 years) and in the least deprived quintile of area, female life expectancy at birth is lowest in Fenland (82.9 years) and highest in Cambridge City (88.8 years). The absolute gap in life expectancy at birth for females between the most and least deprived quintiles is -5.1 years in Peterborough and -4.0 years in Cambridgeshire, although at district level, the absolute gap is widest in Cambridge City (-8.0 years), which is also the only district with an absolute gap wider than that of England (-5.9 years).

## 5. Peterborough Local Authority – Additional analysis of causes of life expectancy gap

**Figure 3: Breakdown of Life Expectancy gap between Peterborough and England by broad cause of death, 2012-14**

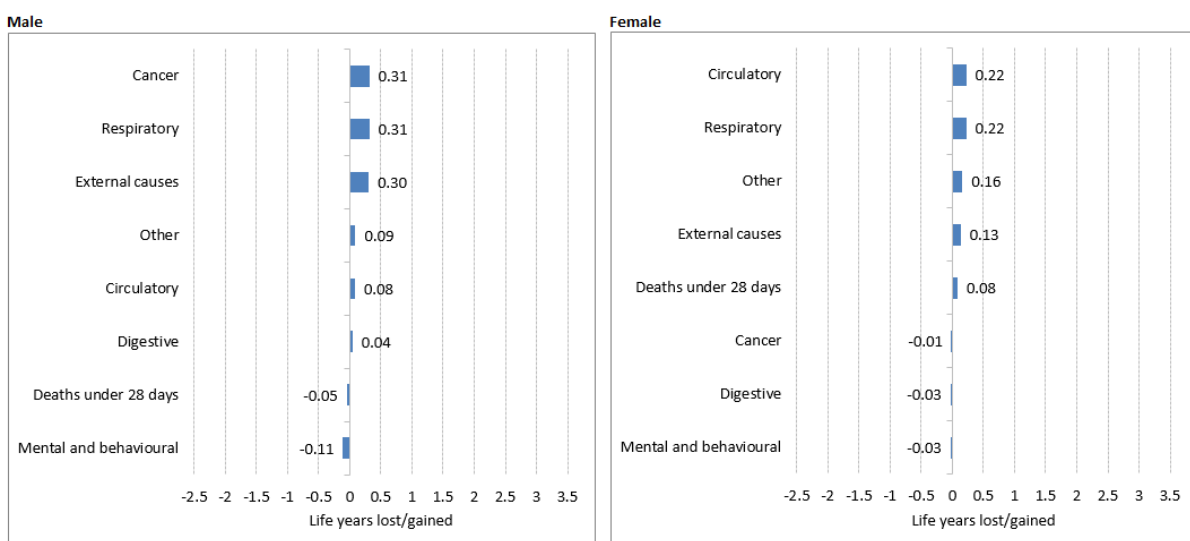


Source: Public Health England Segment Tool, May 2016, <https://www.gov.uk/government/statistics/segment-tool-2016-data-update>

The chart above shows that in Peterborough, for males, 27.6% of the life expectancy gap is due to respiratory diseases, 27.1% due to cancer and 26.4% as a result of external causes.

27.3% of the life expectancy gap in comparison to England for females is due to circulatory diseases, including coronary heart disease and stroke. Respiratory diseases, which include influenza, pneumonia and chronic obstructive airways disease account for 27.1% of the gap, 'Other' causes comprise 19.2% of the gap and external causes, which include deaths from injury, poisoning and suicide, account for 16.3% of the gap.

**Figure 4: Years gained or lost if Peterborough had the same mortality rates as England, by broad cause of death, 2012-14**

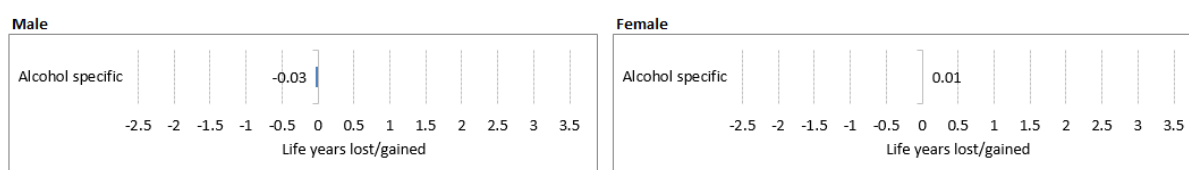


Source: Public Health England Segment Tool, May 2016, <https://www.gov.uk/government/statistics/segment-tool-2016-data-update>

Data show that life expectancy at birth in Peterborough for males would improve if mortality rates were the same as for England for six of eight broad categories of death. If Peterborough's mortality rates were the same as England, male life expectancy at birth would rise by 0.31 years for cancer, 0.31 years for respiratory disease, 0.30 years for external causes, 0.09 years for 'other' causes, 0.08 years for circulatory diseases and 0.04 years for digestive causes.

For females, if Peterborough mortality rates were the same as England, improvements in life expectancy would be observed in relation to five broad categories of death and there would be observed rises with regards to circulatory diseases (0.22 years), respiratory diseases (0.22 years), other causes (0.16 years), external causes (0.13 years) and deaths under 28 days (0.08 years).

**Figure 5: Years gained or lost if Peterborough had the same mortality rates as England, alcohol specific deaths, 2012-14**

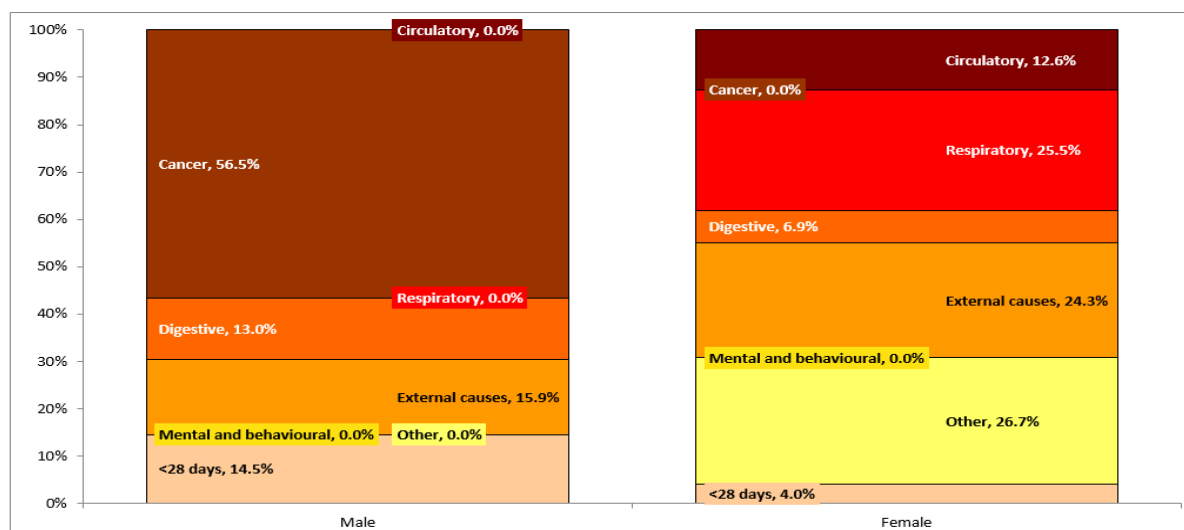


Source: Public Health England Segment Tool, May 2016, <https://www.gov.uk/government/statistics/segment-tool-2016-data-update>

Peterborough's alcohol-specific mortality rates are similar to those of England; the table above shows that 0.03 years of male life expectancy at birth would be lost if Peterborough's alcohol-specific mortality rate was the same as that of England and that there would be an observed gain in female life expectancy at birth of 0.01 years if Peterborough's alcohol-specific mortality rate was the same as that of England.

## 6. Fenland District – Additional analysis of causes of life expectancy gap

**Figure 6: Breakdown of life expectancy gap between Fenland and England by broad cause of death, 2012-14**



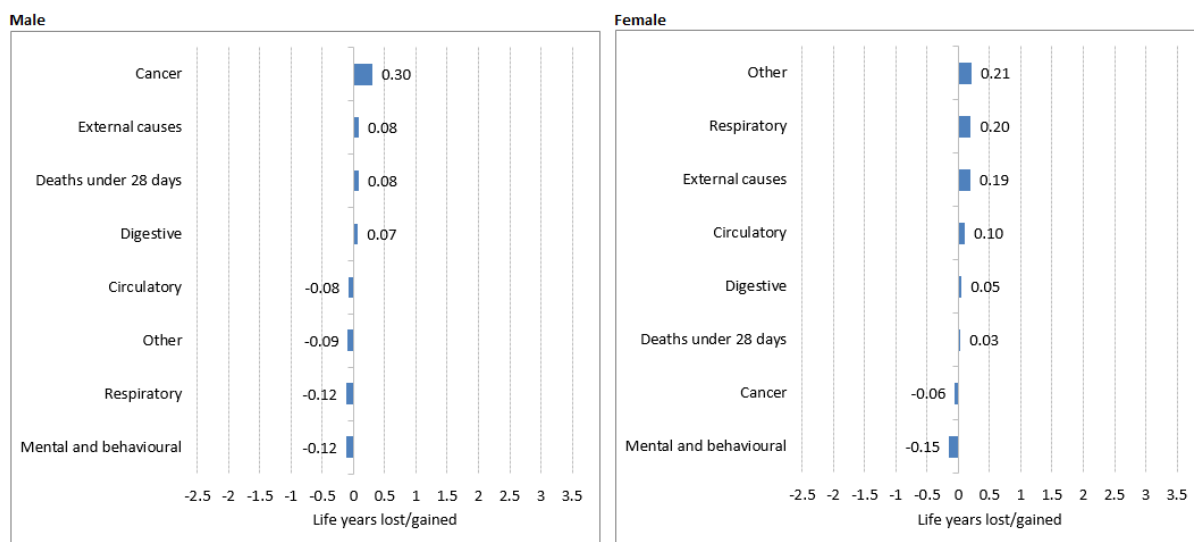
Source: Public Health England Segment Tool, May 2016, <https://www.gov.uk/government/statistics/segment-tool-2016-data-update>

In Fenland, among males, cancer accounts for 56.5% of the life expectancy gap in comparison to England, with external causes, which include deaths from injury, poisoning and suicide assessed as

contributing to 15.9% of the gap and digestive diseases, which include alcohol-related conditions such as chronic liver disease and cirrhosis contributing to 13.0% of the gap.

For females in Fenland, 'other' conditions account for 26.7% of the life expectancy gap in comparison to England, respiratory diseases (which includes influenza, pneumonia and chronic obstructive airways disease) contributes to 25.5% of the life expectancy gap and external causes, which includes deaths from injury, poisoning and suicide, 24.3%.

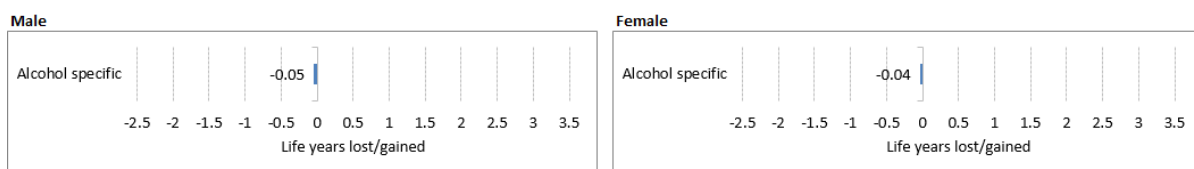
**Figure 7: Years gained or lost if Fenland had the same mortality rates as England, by broad cause of death, 2012-14**



Source: Public Health England Segment Tool, May 2016, <https://www.gov.uk/government/statistics/segment-tool-2016-data-update>

In Fenland, life expectancy at birth for males would rise across four broad cause of death categories if the area had the same mortality rates as England. Years gained would equate to 0.30 years for cancer, 0.08 years for external causes, 0.08 years for deaths under 28 days and 0.07 years for digestive causes. For females, life expectancy at birth would rise across six broad categories of death if mortality rates were the same in Fenland as England, with gains of 0.21 years for other causes, 0.20 years for respiratory, 0.19 years for external causes, 0.10 years for circulatory, 0.05 years for digestive causes and 0.03 years for deaths under 28 days.

**Figure 8: Years gained or lost if Fenland had the same mortality rates as England, alcohol specific deaths, 2012-14**



Source: Public Health England Segment Tool, May 2016, <https://www.gov.uk/government/statistics/segment-tool-2016-data-update>

Fenland's alcohol-specific mortality rates are below that of England and therefore there would be no gain in life expectancy at birth if rates were the same as England. Life expectancy at birth influenced by alcohol-specific mortality would fall by 0.05 years for males and 0.04 years for females if mortality rates were the same in Fenland as in England.



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