

Excess Winter Mortality in Sefton

2016/17(provisional) and 2015/16(final)

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Data, Insight, Business Intelligence, & Performance

Document Control

Issue/Amendment Record

Version	Date of Issue	Reason for Issue
V1	23/01/2018	Initial Draft

Document Ownership

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Distribution

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Key Points

- There were an estimated 175 excess winter deaths in Sefton in 2016/17, with 17.7% more deaths in winter months compared to non-winter months
- Excess winter mortality in 2016/17 was similar to 2015/16 and significantly lower than in 2014/15. Final data for 2015/16 shows an Excess Winter Mortality Index of 18.4% (185 excess winter deaths)
- In 2015/16 deaths peaked later than typically seen, whereas in 2016/17 the highest numbers of deaths occurred during the usual December and January period
- Sefton's Excess Winter Mortality Index is higher than England and the North West as a whole and in the highest 20% of all local authorities. It is similar to local authorities with comparable adult social care populations.
- Pooled rates (three years combined) show a general upward trend in Sefton which is not mirrored in the North West nor England.
- Female excess deaths rose by 20% in 2016/17, most notably in the 65-84 age group. Females aged 65-84 were the group most affected by excess winter deaths in 2016/17, unlike preceding winters where most deaths occurred amongst very elderly (85+) females.
- As in previous years the 2016/17 and 2015/16 data revealed no social gradient for excess winter mortality
- Respiratory diseases were the main cause of excess winter mortality, accounting for approximately a third of excess deaths in 2016/17 and 2015/16.

Introduction

In England the number of deaths peaks in the colder winter months. Mortality in winter increases more in England compared to other European countries with colder climates suggesting that excess winter mortality is not simply a consequence of lower temperatures¹. Reducing these, therefore, preventable deaths is one of the outcomes for the "Healthy Life Expectancy and Preventable Mortality" domain in the Public Health Outcomes Framework 'Healthy lives, healthy people: Improving outcomes and supporting transparency'.

This report presents figures for excess winter mortality (EWM) in Sefton from the winter periods of 2015/2016 and, where possible, 2016/17. The data for 2016/17 is provisional and will not be finalised by the Office for National Statistics until autumn 2018.

The number of deaths that occurred in the winter period (December to March) is compared with non-winter months from the preceding August to November and the following April to July:

EWM = winter deaths – average non-winter deaths

The Excess Winter Mortality Index (EWMI) is calculated to allow comparison between different sexes, age groups and geographies. It is the number of excess deaths in winter divided by the average number of non-winter deaths. The EWMI is expressed as a percentage and shows the percentage of extra deaths that occurred in winter.

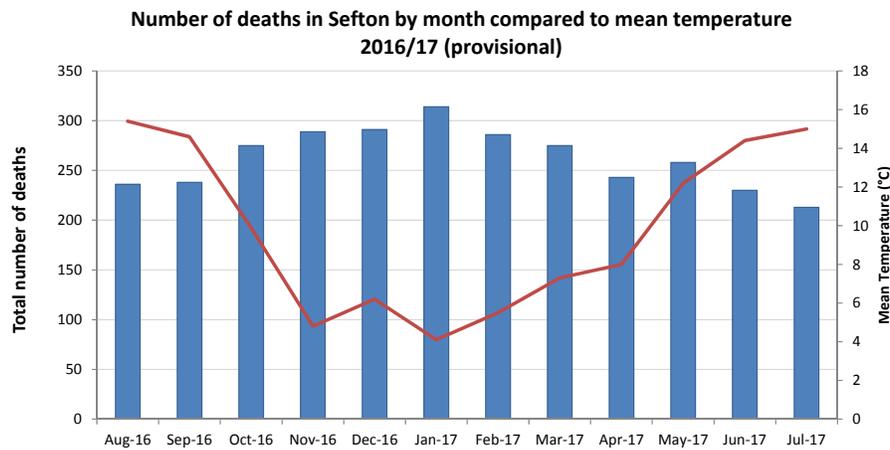
$$EWMI = (EWM / \text{average non-winter deaths}) \times 100$$

EWM figures are useful for quantifying winter deaths and understanding the underlying health conditions and affected population groups. This can be used to inform interventions to reduce avoidable winter deaths and measure the effectiveness of cold weather planning.

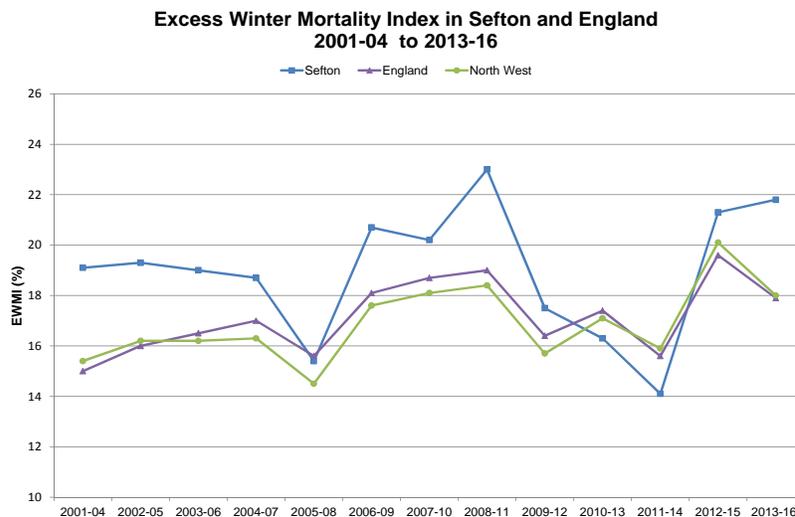
Excess Winter Mortality in Sefton

There were an estimated 175 excess winter deaths in Sefton in 2016/17. This means that an additional one in six deaths occurred in winter compared to non-winter months. This is similar to 2015/16 (185 deaths) and much lower than the 322 excess deaths seen in winter 2014/15.

In 2015/16 Sefton’s peak in mortality was less pronounced and occurred later than usual. In 2016/17 deaths followed a pattern more in keeping with that seen in 2014/15 and preceding winters. The highest number of deaths occurred in January (314) and December (291). The peak in deaths in January coincided with a drop in temperature at the beginning of the month. Nationally there was also a peak in daily deaths in June, coinciding with a period of high temperature around the 19th June 2017. Sefton did not experience this spike and deaths were lowest in July (213) and June (230).

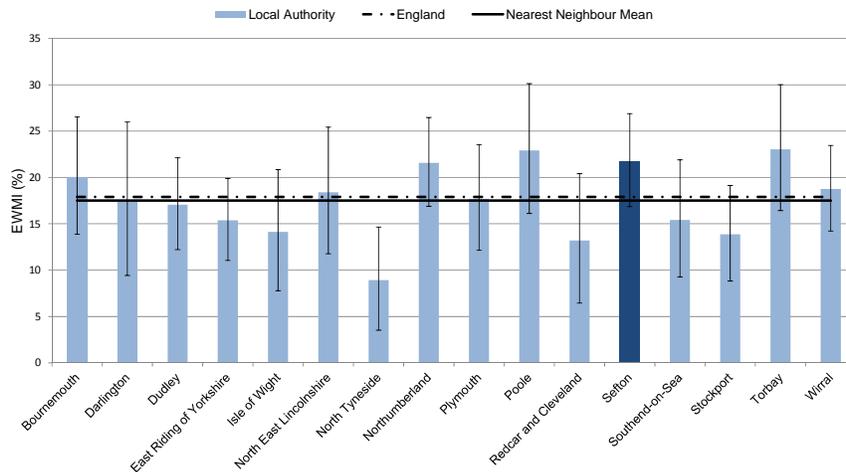


Sefton’s EWMI for 2016/17 is not significantly different to 2015/16, both of which are significantly lower than the high EWMI witnessed in 2014/15 (32.2%). It is common for mortality rates to fluctuate from year to year. To smooth out yearly variations and provide a clearer understanding of trends Public Health England have calculated three-year rolling averages. When these rates are considered Sefton’s EWMI (21.8%) has increased after decreasing from a peak of 23% in 2008/11.



For the 2013-16 period, Sefton had a higher EWMI than England (17.9%) and the North West (18%). Sefton’s EWMI was the highest of the Liverpool City Region and in the highest 20% of all local authorities. However, these differences may be a reflection of Sefton’s demography, with areas with larger proportions of older people tending to experience higher winter mortality. In agreement with this Sefton’s EWMI was not significantly different to the mean of its adult social care nearest neighbours (17.5%)

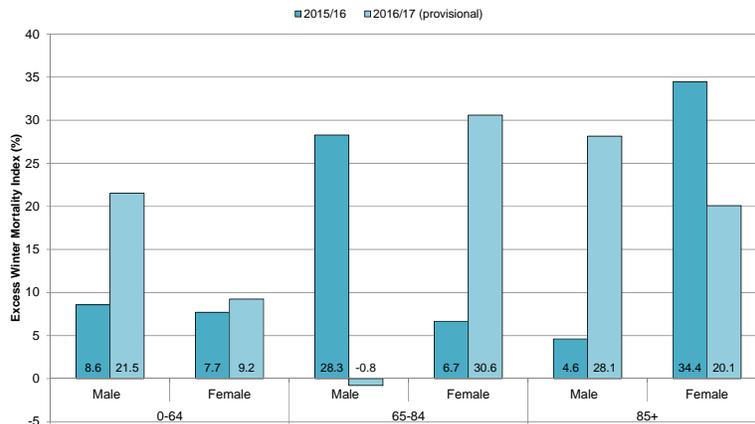
Excess Winter Mortality Index for Sefton's Adult Social Care Nearest Neighbours (2013-16)



Sex and Age

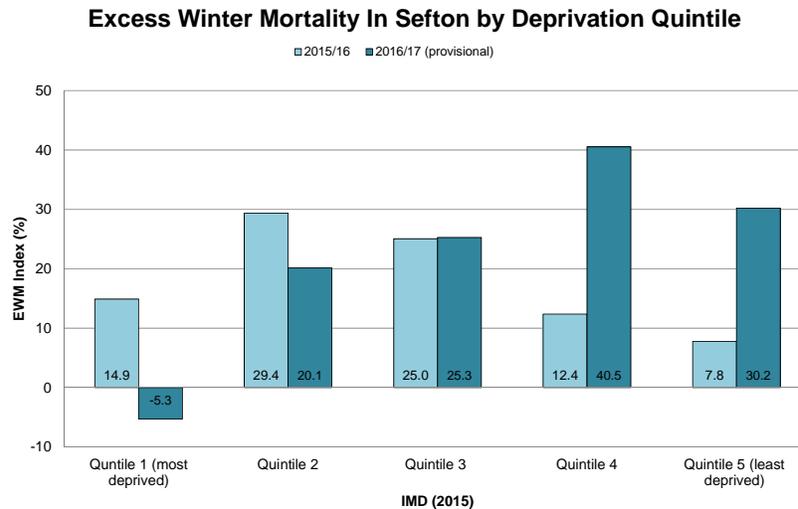
Of the 175 excess winter deaths in Sefton in 2016/17, 122 were amongst women (70%) and 53 amongst men (30%). In previous years excess winter deaths have been found to most affect Sefton’s very elderly female population (85+). However in 2016/17 the EWMI for females aged 85+ was 14 percentage points lower than in 2015/16. Females in the 65-84 group had the highest EWMI at 30.6%, an increase from 6.7% from 2015/16 and the largest increase of any age group. Excess winter deaths amongst men followed the opposite pattern, reducing in the 65-84 age group but increasing in the 85+ group. In 2016/17 almost three quarters of male excess deaths were amongst the very elderly (85+).

Excess Winter Mortality in Sefton by Age and Sex



Deprivation

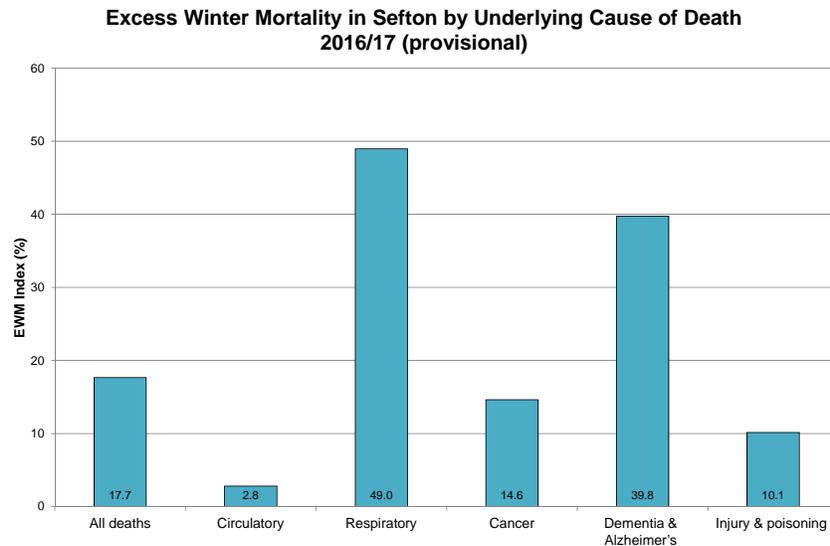
EWM may be expected to be greater in areas of greater deprivation. However no such association has been found between these two variables². Sefton's EWMI for 2016/17 and previous years reflects this, with no clear social gradient in excess winter mortality rates. No similarities have been found between the 2016/17 analysis of EWM by deprivation and that of previous winters. In 2016/17 Sefton's EWMI was highest in the second least deprived quintile (40.5%) whereas in 2015/16 the second most deprived quintile had the highest EWMI index (29.4%).



Underlying Cause of Death

Respiratory diseases are the main cause of EWM in Sefton, accounting for 34% of all excess winter deaths in 2016/17 and 30% in 2015/16. The EWMI shows a large seasonal effect with almost twice as many people dying of respiratory diseases in the winter months than the non-winter months. Pneumonia and COPD were responsible for most of Sefton's excess respiratory deaths in winter 2016/17 and 2015/16.

Dementia and Alzheimer's disease also causes a substantial number of winter deaths in Sefton. In 2016/17, 28% of all excess winter deaths in Sefton were due to dementia and Alzheimer's disease. The EWMI for deaths due to dementia and Alzheimer's disease shows that 40% as many people died from dementia and Alzheimer's in winter compared to non-winter months. The Office for National Statistics suggests that people with Dementia and Alzheimer's may be more susceptible to respiratory diseases, problems with self-care and falls that become more significant in winter months³



Recommendations

Final data for 2015/16 and provisional data for 2016/17 suggest that EWM in Sefton has dropped back to average levels following the sharp increase in 2014/15. Pooled rates, however, show a general upward trend in EWM. It will be important to monitor this so any sustained increases in winter mortality are identified at the earliest opportunity. This is particularly important given Sefton's ageing population.

Sefton Public Health should continue to work with Adult Social Care, the Affordable Warmth team, Sefton's CCGs and other partners to identify at risk populations and build community resilience against the health hazards of winter. This includes activity to improve the heating and insulation of homes in Sefton and communications to alert residents to the dangers of cold weather and help them keep warm and well (e.g. Stay Well This Winter). Vaccination programmes, such as flu and pneumococcal vaccination should continue to be promoted to guard against any increases in viral activity. Particular attention should be paid to the over 65 female population and those with long term conditions such as respiratory illness and dementia. The specific targeting of keep warm and well messages to carers/families of or those with dementia or Alzheimers started in the winter of 2017/18 should continue.

References

- 1) Fowler et al. (2014) Excess winter deaths in Europe: a multi-country descriptive analysis, *European Journal of Public Health*, 25(2), p339-45
- 2) NICE(2015) Evidence Review and Economic Analysis of Excess Winter Deaths <https://www.nice.org.uk/guidance/ng6/evidence>
- 3) Office for National Statistics (2017) Excess Winter Mortality in England and Wales: 2016/17 (Provisional) and 2015/16 (Final), <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/excesswintermortalityinenglandandwales/2016to2017provisionaland2015to2016final>