KENT PUBLIC HEALTH OBSERVATORY

Excess Winter Deaths

June 2017

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Background

Excess winter deaths are defined by the Office for National Statistics (ONS) as the difference between the number of deaths during the four winter months (December–March) and the average number of deaths during the preceding four months (August–November) and the following four months (April-July)[1]. The excess winter deaths index is not a reflection of the overall mortality rate. It shows the percentage of deaths above the mortality rate if it was stable throughout the year. Large fluctuation in excess winter deaths is common and trends over time are not smooth with other contributing variables such as cold weather snaps, winter viruses including influenza. To provide a clear trend over time Kent Public Health Observatory calculate excess winter deaths using three year pooled data moving average.

There were an estimated 24,300 excess winter deaths in England and Wales in 2015-16, approximately 15% more deaths than in the non-winter months and significantly decreased from 2014-15 which was uncommonly high[2]. While more people tend to die in the winter period, there is some evidence that mortality rate increased in periods of extremely high temperatures, which are then likely to mask high mortality in winter periods[3].

Key Issues and Gaps

- mortality is higher in the winter period than non-winter, many of these deaths are preventable
- people with existing and long-term health conditions, particularly those with respiratory conditions and those aged over 65
- there is growing evidence of association between poor, cold, damp housing and excess winter death
- there has been a decrease in the uptake of flu vaccinations.

Recommendations for Commissioners

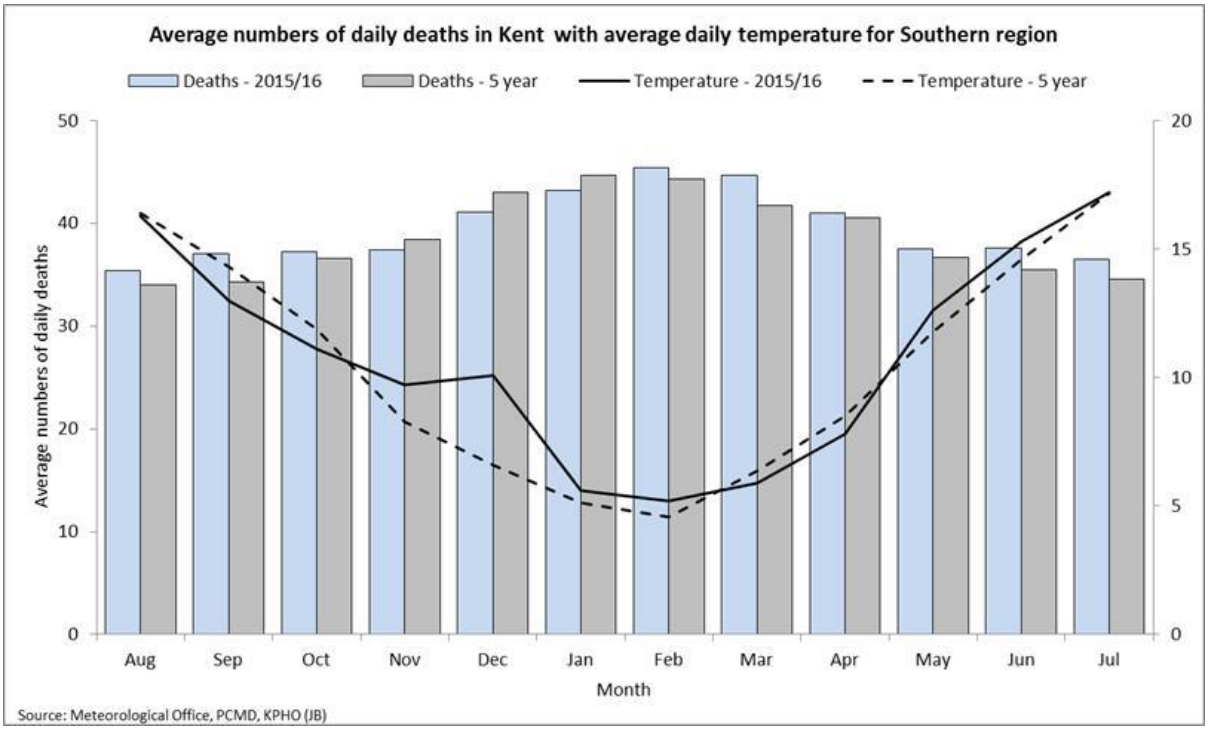
Recommendations	Risk	Action
Local authorities are well placed to support vulnerable people living in cold or damp homes, which in turn create poor health outcomes. Funding needs to be identified to support interventions such as housing retrofit, particularly as changes to the Energy Company	Cold homes lead to increased falls and higher risk of excess winter death	Local authorities to continue to identify government/external funding to support those living in cold homes, particularly those with

Obligation has less focus on heating		existing health conditions
Support the Kent Health and Affordable Warmth Strategy. There is a wealth of providers within statutory and voluntary sector who can offer support for those living in fuel poverty and consequently cold homes. Partnerships need to be maintained and increased where possible to ensure the pathway for vulnerable clients is simple and joined up.	Vulnerable people are unable to find the most appropriate service for their needs	Support implementation of Kent Health and Affordable Warmth Strategy. Local authorities to work with partners from other statutory, private and voluntary sector to identify those at risk due to cold weather and housing conditions
Making Every Contact Count (MECC) is integral to Strategic Transformation Plans in order to reduce demand on services. Professionals should be holding holistic conversations to ensure clients home and social inclusion is conducive to good health. Social prescribing is nationally valued as good practice and partners should be signposting or referring when possible to ensure appropriate support is provided.	Wider determinants that contribute to poor health will not be addressed that create inequalities, there will be no reduction in service demand	Public Health to ensure that MECC training is available and appropriate level to all organisations that can have a brief conversation to identify housing/health issues and use social prescribing model
Winter viruses contribute to excess winter deaths	Increased prevalence and severity of winter viruses	Increase uptake of flu vaccinations
Risk stratification Work with integrated teams to ensure that the risk of seasonal mortality is fully incorporated into risk stratification work	High risk patients not identified	Ensure engagement with Clinical Commissioning Groups, Adult and Community services

Who is at Risk and Why?

The relationship between mortality, temperature, pre-existing health conditions, cold weather and influenza is complex, and while mortality does increase in cold weather as illustrated in Figure 1, this only explains a small amount of variance[4].

Figure 1: Average numbers of daily deaths in Kent with average temperature for Southern region



NICE[5] guidance found wider ranging reasons for vulnerability in cold weather, often due to a medical condition or personal circumstances, including:

- people with cardiovascular conditions
- people with respiratory conditions (in particular, chronic obstructive pulmonary disease and childhood asthma)
- people with disabilities
- older people (aged over 65)
- households with young children (from new-born to school age)
- pregnant women
- people on a low income.

Age

The excess winter death index shows trends in rates to be highest in older people, particularly those over the age of 85. Nationally, however in 2015/16 this was not as prominent as usually observed, with excess winter death rates being similar across all age groups. General Practitioner (GP) consultation data indicates that this was due to an influenza-like-illness that seemed to affect the 0-64 population that seemed to impact on younger people, rather than the elderly[6].

Public Health England also observed a decrease in uptake of flu vaccinations in the 0-64 age group[7]

Gender

Excess winter deaths are generally higher in females than males, although this could in part be explained by a higher proportion of females aged over 85 (65%) compared to males (35%)[8]. Nationally in 2015-16 of the 24,300 excess winter deaths, 53% were in females, compared to 47% in males.

Pre-existing medical conditions

Those people with pre-existing medical conditions are at most risk particularly in cold snaps. Respiratory disease accounted for 35% of the 24,300 excess winter deaths nationally in 2015-16, with pneumonia accounting for the largest proportion. Additionally those with dementia and Alzheimer's disease (23%) and circulatory disease (14%) are at risk with a combined excess winter death rate of (37%) in 2015-16.

Resilience in cold weather

Research shows that excess winter deaths vary across Europe, with countries experiencing frequent colder temperatures having low rates, while countries with milder winters such as England, Wales, Portugal and Spain having high rates[9]. This can be partially explained by people in warmer countries being less likely to wear warm clothing[10] and having homes with poorer thermal insulation that are harder to heat[11].

The Level of Need in the Population

Table 1 shows the variation between the different districts in Kent. The latest available data district/borough council level shows that Canterbury continues to have the highest excess winter death ratio (21.0), followed by Thanet (20.1) and Tonbridge currently has the lowest ratio for the rolling period 2006-07 to 2013-16.

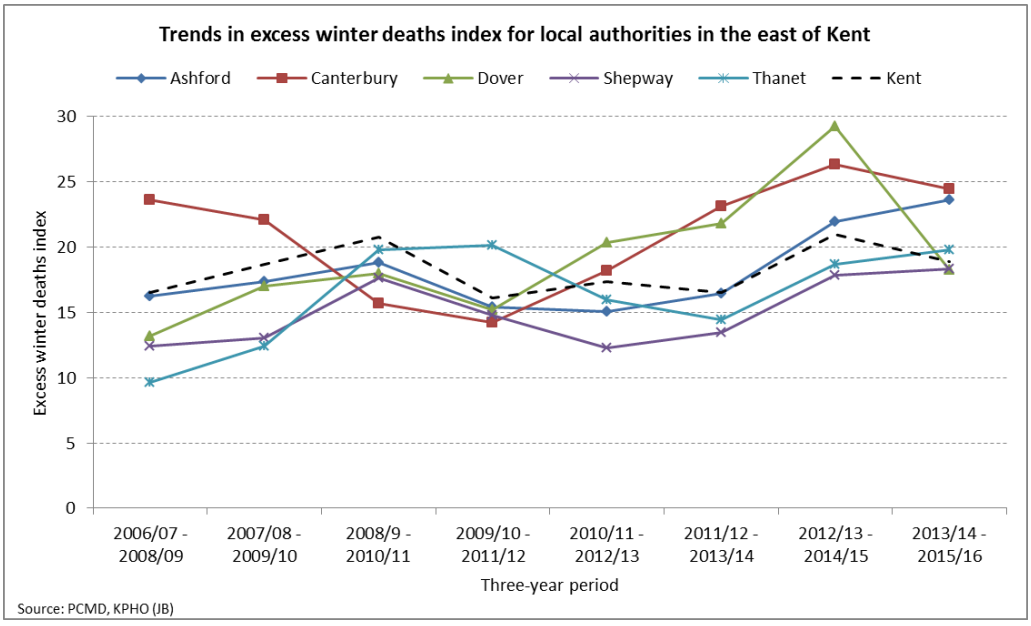
Table 1: Excess winter deaths index for three-year rolling periods, 2006-07 to 2015-16, Kent districts

Local authority	Period/excess winter deaths index								
	2006/07 - 2008/09	2007/08 - 2009/11	2008/09 - 2010/11	2009/10 - 2011/12	2010/11 - 2012/13	2011/12 - 2013/14	2012/13 - 2014/15	2013/14 - 2015/16	Period rate
Ashford	16.2	17.3	18.8	15.4	15.1	16.4	21.9	23.6	18.4
Canterbury	23.6	22.1	15.7	14.2	18.2	23.1	26.3	24.5	21.0
Dartford	13.1	17.0	18.0	15.2	20.4	21.8	29.2	18.2	18.2
Dover	12.4	13.0	17.6	14.7	12.3	13.5	17.9	18.3	14.8
Gravesham	9.6	12.4	19.8	20.1	15.9	14.4	18.6	19.8	16.1
Maidstone	12.6	15.4	14.5	9.3	13.6	17.2	23.3	20.3	15.7
Sevenoaks	13.6	17.1	21.9	16.8	19.4	12.3	20.8	15.9	16.4
Shepway	17.8	19.6	24.3	18.8	18.4	14.8	22.2	23.5	19.8
Swale	20.7	19.9	28.9	17.9	17.2	12.1	14.7	16.6	17.9
Thanet	17.6	21.5	23.4	16.6	21.5	20.4	25.5	23.2	20.1
Tonbridge and Malling	17.5	19.4	16.3	11.3	15.2	15.9	13.7	8.5	13.0
Tunbridge Wells	18.8	27.0	33.1	27.3	20.9	12.5	13.7	7.6	17.2
Kent	**16.5**	**18.7**	**20.8**	**16.1**	**17.4**	**16.5**	**21.0**	**18.9**	**17.6**

Source: PCMD, KPHO (JB)

Figure 2 illustrates the fluctuation in excess winter deaths that proves it is a challenge to tackle this issue on a geographical basis. While Thanet has the second highest rates in Kent for the rolling period 2006-07 to 2013-16, between 2012-13 to 2013-14, Dover had a particularly high rate compared to the whole period.

Figure 2: Trends in excess winter deaths index for local authorities in the East of Kent



Between 2009-12 and 2013-16 in the west of Kent, Tunbridge Wells saw a reduction in rates, while in the same period Maidstone saw an increase. Figure 3 (similar to the east of Kent picture). In the north of Kent a decrease was observed in Swale, with an increase in Dartford (Figure 4).

Figure 3: Trends in excess winter deaths index for local authorities in the west of Kent

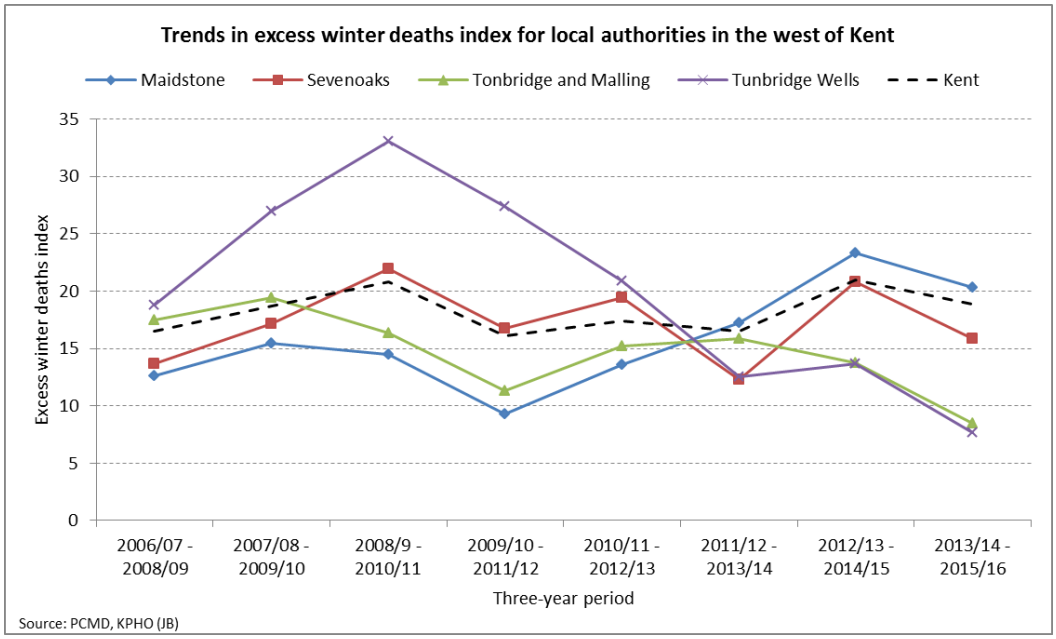


Figure 4: Trends in excess winter deaths index for local authorities in the north of Kent

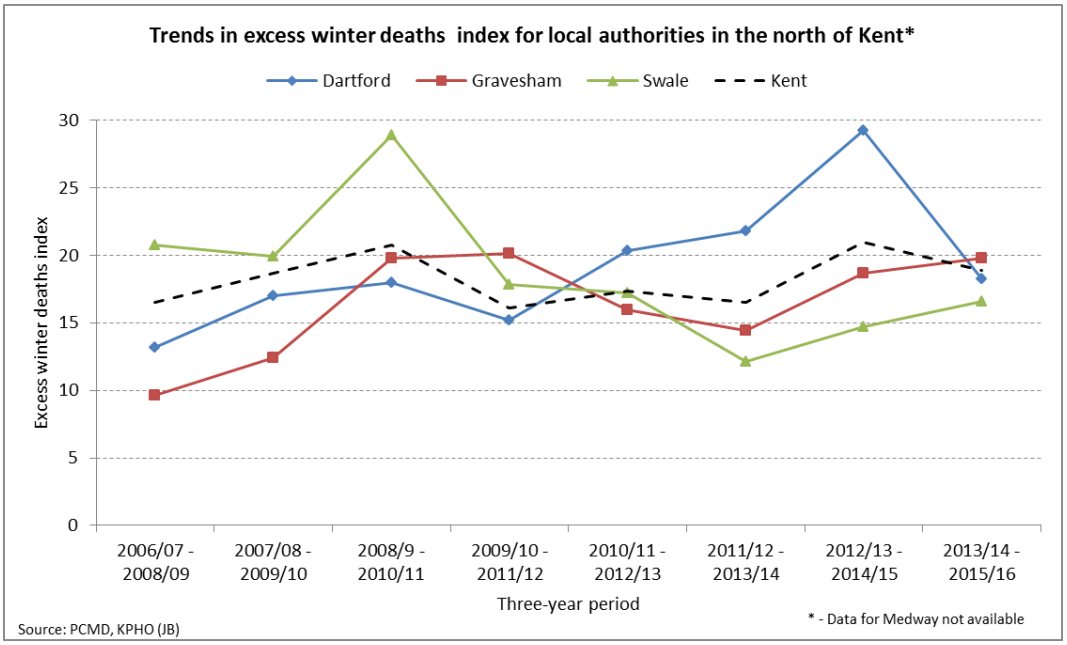
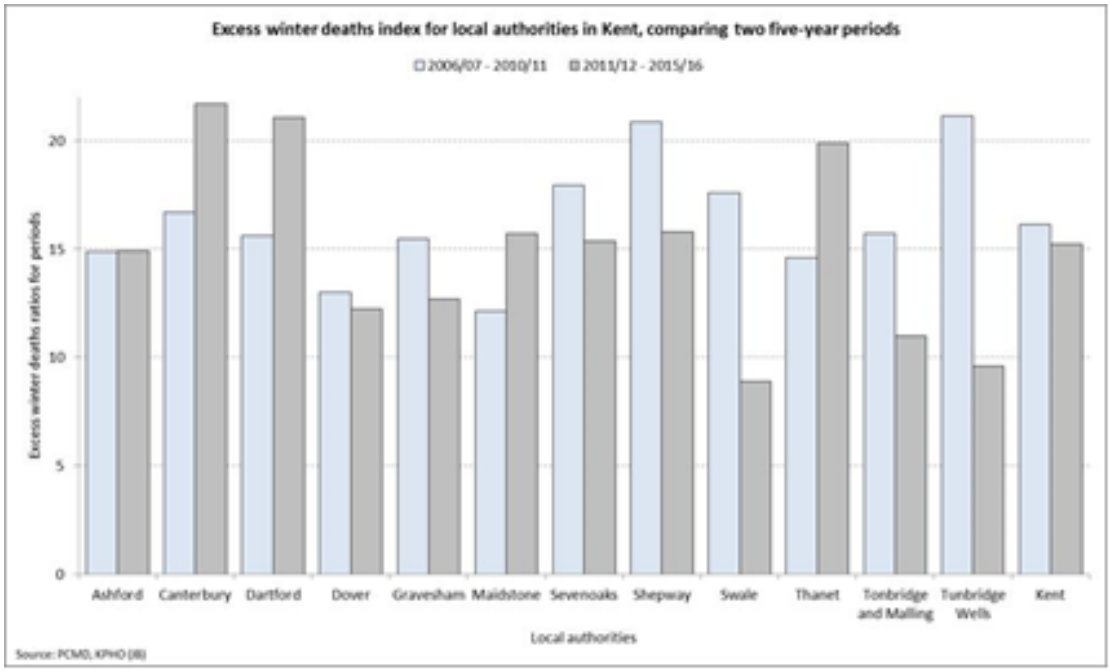


Figure 5 provides a comparison of the two most recent five year periods of the excess winter deaths index for local authorities in Kent. In the most recent five year period increases were observed in four districts, Canterbury, Dartford, Maidstone and Thanet. For the same period the largest reduction was observed in Tunbridge Wells and Swale.

Figure 5: Excess winter deaths index for local authorities in Kent, comparing two five year periods



Current Services in Relation to Need

The Kent Environment Strategy 2016[12] places a strategic emphasis on the impact of extreme weather and in particular the implications of fuel poverty and being unable to adequately heat the home. This vision is implemented through various groups and forums in Kent.

The Kent and Medway Sustainable Energy Partnership is a county-wide group of local authorities who oversee the Kent and Medway Warm Homes programme. The objectives of this programme are to lower household bills, tackle fuel poverty and to reduce CO_2 emissions through energy efficiency. Utilising the Government Energy Company Obligation Scheme to provide heating and housing retrofit, the programme has since 2013 undertaken 1,458 interventions at 1,400 homes[13].

Kent local authorities and partner agencies continue to work together to reduce the negative impact of cold weather on health. The Kent Energy Efficiency Partnership of local authorities, housing providers, voluntary sector developed the Kent Health and Affordable Warmth Strategy outlining the links between housing and health. The strategy aims to raise awareness of the

implications of poor housing on health: by ensuring this agenda is included in national and local initiatives and strategies; ensuring that housing stock in Kent is capable of delivering affordable warmth, particularly for the most vulnerable residents; establishing a single referral system[14].

Public Health England and NHS Keep Warm, Keep Well winter campaigns are promoted by local authorities, NHS partners, Kent Fire and Rescue Service, home improvement agencies, Age UK, Citizens Advice bureaus and many voluntary sector partners. Those organisations providing home visits, such as Kent Fire and Rescue Service, home improvement agencies, have embedded Winter Warmth in their assessment along with falls screening.

Local authorities are undertaking pilot work across the county, working with hospital discharge teams, to ensure that vulnerable clients receive home visits to enable timely discharge to a safe and warm home.

Making Every Contact Count (MECC) is intrinsic to the success of Strategic Transformation Plans[15]. The Five Year Forward View[16] emphasises the need for prevention of ill health to improve patient outcomes and reduce demand for healthcare services. Kent and Medway have developed an online MECC resource[17] and currently Kent Community Healthcare, Maidstone housing teams and Kent Fire and Rescue Service have undertaken this training. A training the trainer programme is planned to increase capacity for training in the system.

References

[1] Excess winter mortality in England and Wales: 2015/16 (provisional) and 2014/15 (final) November 2016 ONS

[2] Excess winter mortality in England and Wales: 2015/16 (provisional) and 2014/15 (final) November 2016 ONS

[3] Excess winter mortality in England and Wales: 2015/16 (provisional) and 2014/15 (final) November 2016 ONS

[4] Brown G, Fear V and Wells (2010) Exploratory analysis of seasonal mortality in England and Wales 1998-2007 Health Statistics quarterly 48,58 to 81 accessed 18 October 2014

[5] https://www.nice.org.uk/guidance/ng6/chapter/1-Recommendations#recommendation-1-develop-a-strategy

[6] Surveillance of influenza and other respiratory viruses in the United Kingdom: winter 2015 to 2016 (2016) Public Health England

[7] Excess winter mortality in England and Wales: 2015/16 (provisional) and 2014/15 (final) November 2016 ONS

[8] ONS (2015a) Population estimates for UK, England and Wales, Scotland and Northern Ireland: mid-2015 (14th November 2016) ONS

[9] Excess winter deaths in Europe: a multi-country descriptive analysis 2014 Fowler et al

[10] Cold exposure and winter mortality from ischaemic heart disease, cerobrovascular disease, and all causes in warm and cold regions of Europe (1997) The Lancet 349, 1341 to 1346

[11] Excess winter mortality in Europe: a cross sectional analysis identifying key risk factors 2003 Healy J D

[12] http://www.kent.gov.uk/__data/assets/pdf_file/0020/10676/KES_Final.pdf

[13] http://www.kent.gov.uk/about-the-council/campaigns-and-events/warm-homes

[14]https://www.dartford.gov.uk/__data/assets/pdf_file/0005/61682/Kent_Health_Affordable_Warmth_Strategy.pdf

[15] http://makingeverycontactcount.co.uk/

[16] https://www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf

[17] http://makingeverycontactcount.co.uk/training/e-learning/