



## **REPORT OF THE DIRECTOR OF PUBLIC HEALTH**

### **EXCESS WINTER DEATHS AMONG OLDER PEOPLE IN NOTTINGHAMSHIRE**

#### **Purpose of the Report**

1. Excess all-cause winter mortality is high among elderly populations nationally and locally in Nottinghamshire. This is a pattern which is not reflected in other Northern European countries, suggesting that these winter deaths are preventable. This paper presents the national and Nottinghamshire seasonal mortality statistics, national evidence-based recommendations, best practice and previous local experience. The relevant public health outcome measures are examined and winter warmth initiatives for 2014/15 are suggested.
2. To raise awareness of winter warmth as a Public Health issue.

#### **Background Information**

3. **England and Wales** experienced 31,100 excess winter deaths in 2012-2013, at a level that surpasses that experienced by other colder, Northern European countries.<sup>i</sup> This suggests that many of these deaths could be prevented through implementation of appropriate measures. As in previous years, there were more excess winter deaths among women (18,000 deaths among women and 13,100 among men).
4. The 2009 Annual Report of the Chief Medical Officer included a chapter entitled *Winter Kills*.<sup>ii</sup> This chapter highlighted the fact that mortality in England rises 18% during the winter months, but that colder European countries have smaller increases. The report also highlighted that illnesses occur during the winter in a predictable pattern, and that this should enable local and national advance preparation planning.
5. The majority of excess winter deaths are due to cardiovascular disease (40%) and respiratory illness (30%). Records show that for every 1 degree Celsius decrease in average winter temperature there is a resultant 8,000 additional deaths in England.<sup>iii</sup> Maintaining a warm home is critical to remaining healthy with the evidence suggesting that once the indoor temperature drops below 16°C (61°F), people's vulnerability to suffering respiratory illness is heightened. Table 1 shows fuller details of the effects of falling indoor temperatures.
6. The effects of cold weather are very predictable. Mortality during cold weather follows a set pattern, with deaths from heart disease reaching their peak 2 days after the coldest weather;

stroke deaths peaking after 5 days and the peak in respiratory deaths after 12 days. It takes 40 days for the mortality rate to return to normal.<sup>iii</sup>

Table 1: The effect of indoor temperatures on health

Indoor temperature	Effect on health
21°C (70°F)	Minimum recommended daytime temperature for rooms occupied during the day
18°C (65°F)	Minimum recommended night-time temperature. No health risks though occupants may feel cold
<16°C (<61°F)	May diminish resistance to respiratory diseases
9-12°C (48-54°F)	May increase blood pressure and risk of cardiovascular disease
5°C (41°F)	Poses a high risk of hypothermia

Source: Department of Health<sup>iv</sup>

7. In addition, the colder the winter, the greater the risk that vulnerable individuals will die from a cold-related cause, resulting in fluctuations from one winter to the next.<sup>v</sup> For example, the excess winter deaths for 2012 – 13 were nearly a third (29%) more nationally than in the previous winter.
8. The majority of excess winter deaths occur amongst those aged over 75 years. Reasons for this are multifactorial, including the increased amount of time spent indoors, a higher prevalence of fuel poverty, a reduction in fat to retain body heat and an increased likelihood of having underlying health conditions.<sup>vi</sup> Older women appear to be particularly at risk.<sup>vii</sup> Other factors that increase the risk of vulnerability to cold weather include:
  - housing – individuals living in poorly heated, badly insulated properties are at particularly high risk. Countries that have more energy efficient housing have lower excess winter deaths, and in the UK, excess winter deaths in the coldest quarter of housing are almost three times as high as in the warmest quarter<sup>viii</sup>. Damp housing also promotes mould growth, which increases the risk of respiratory infections and asthma<sup>ix</sup>
  - economic – households at higher risk of living in fuel poverty include families with children on a low income, people over 60 on a low income and long-term sick and disabled individuals
  - behavioural – there is evidence to suggest that people adapt to severe weather less effectively in England (where milder winters are more common) than in colder countries. Behaviour that increase vulnerability includes keeping bedroom windows open, not wearing sufficient clothing, heating just one room and frequent excursions outside in inadequate clothing
  - health – individuals with pre-existing health conditions such as cardiovascular disease, asthma, COPD, depression, anxiety and arthritis are at increased risk. Research has suggested that pre-existing respiratory conditions are the strongest predictor of excess winter deaths.<sup>x xi</sup>
9. **Seasonal Mortality in Nottinghamshire.** Winter warmth is a health and social care issue in Nottinghamshire. The causes are structural in terms of quality within the local building

stock, economic in terms of personal household budgets, and educational due to the poor understanding of the winter warmth messages. The challenge is also being able to identify and have suitable support in place to assist the most vulnerable.

10. Excess winter deaths and fuel poverty are included as indicators within the Public Health Outcomes Framework.<sup>xii</sup> Nottinghamshire’s scoring against the excess winter deaths indicator (4.15i) is similar to that for the England average. Against the fuel poverty indicator (1.17), which records the percentage of the residents experiencing fuel poverty, Nottinghamshire scores significantly worse than the England average. However, all East Midlands local authorities are significantly worse than the average as the indicator is a reflection of mean household income as well as fuel costs and fuel consumption.
11. The fuller definitions of these indicators are as follows:
  - *Excess Winter Deaths Index: the ratio of extra deaths from all causes, that occur in the winter months compared to the expected number of deaths, based on the average number of non-winter deaths<sup>1</sup>*
  - *Fuel poverty: a household is classified as fuel poor when they have required fuel costs that are above average (the national medium level), and where on spending that amount the household would be left with a residual income below the official poverty line. This new definition was introduced in August 2013 replacing the previous definition. The earlier definition was based on where a household would need to spend more than 10% of its income on energy in order to maintain an adequate level of warmth, and statistics are available for this definition as well.*
12. The latest statistical information available for the districts is through to the winter of 2011/12. In Nottinghamshire in 2011/12 a figure of 340 excess winter deaths was recorded. Table 2 shows the percentage values and variations of excess winter deaths for a five year period.
13. As mentioned above if Nottinghamshire reflects the national picture the 2012/13 figure will be in the region of 20%.

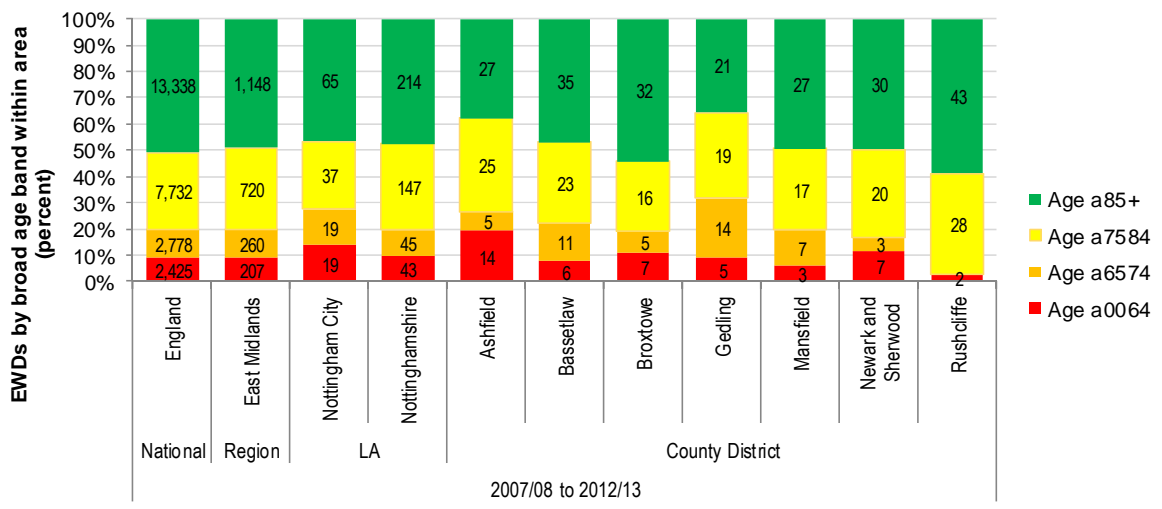
*Table 2. Numbers of excess winter death in Nottinghamshire between 2007/08 to 2011/12 in percentage values.*

<b>Year</b>	<b>Excess Winter Mortality Index (Number of Excess Winter Deaths expressed as percentage increase of average rest-of-year deaths).</b>
2007/2008	14%
2008/2009	24%
2009/2010	17%
2010/2011	19%
2011/2012	14%
Average	18%

*Table 3. The proportion of excess winter death by age bands*

<sup>1</sup> The excess winter deaths index is calculated by subtracting the average number of deaths between August and November and April and July from the number of deaths in the winter months (December to March), expressed as percentage of the average number of deaths between August and November and April and July

**Distribution of Excess Winter Deaths (EWD) within area by broad age band 2007/08 to 2012/13 (6 winters)**  
 (labels indicate average counts per year)



Source: ONS Mortality statistics

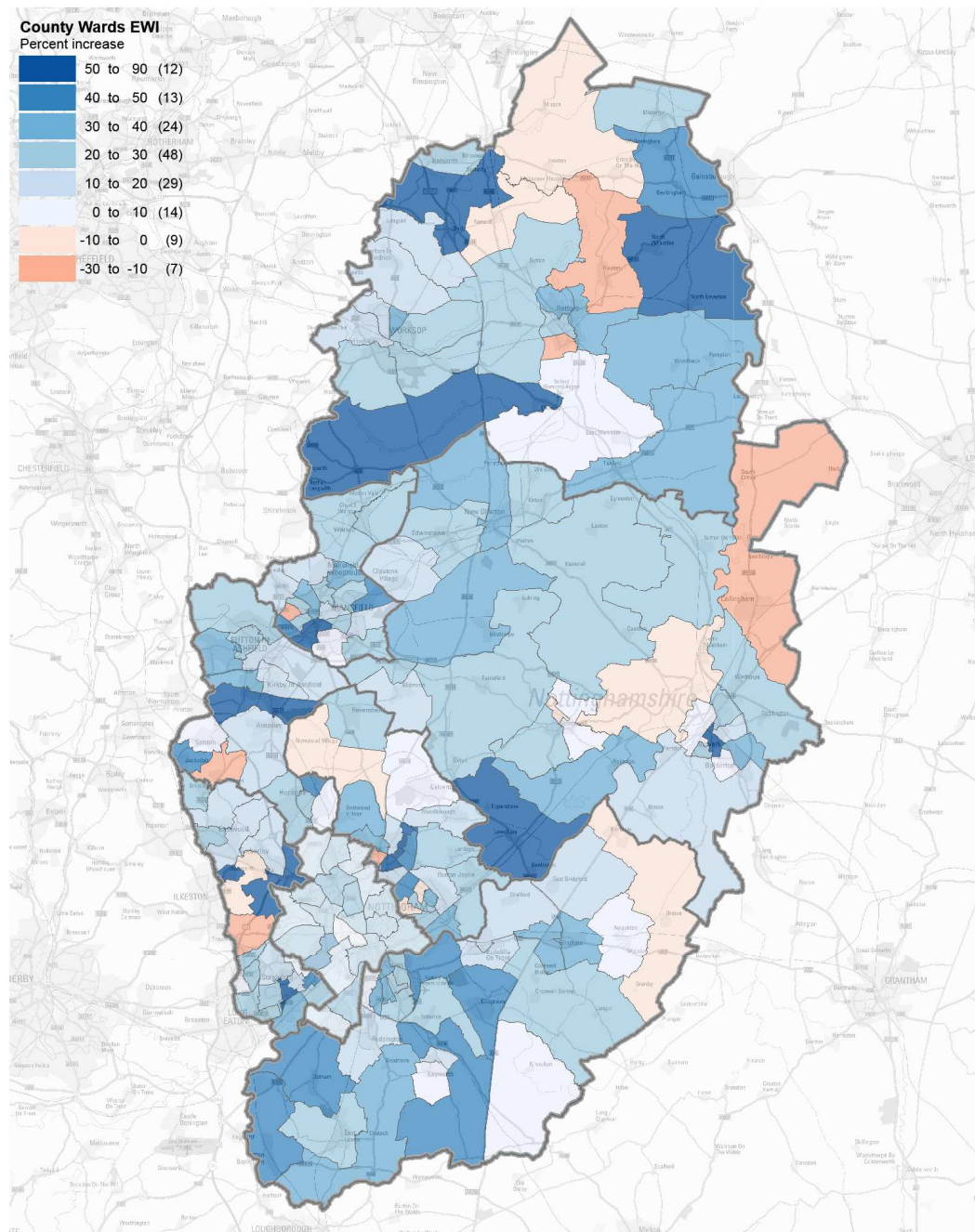
14. Table 3 shows the consistency of the age distribution of excess winter deaths within the districts of Nottinghamshire and compares this to the national and regional picture. These statistics show how the majority of the winter deaths are in the age groups of 75 years and above across the county.

15. Map 1 provides a visual display of the distribution of seasonal mortality across Nottinghamshire, highlighting those electoral wards where the greatest numbers are recorded.

Map 1.

### Excess winter deaths 2007/08 to 2012/13 (6 winters)

The Excess Winter deaths Index (EWI) is the number of excess winter deaths expressed as a proportion of the expected winter deaths



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## Addressing Seasonal Mortality. National approaches.

16. **The National Support Team for Health Inequalities** outlined a 3 stage process to address the issues caused by excess winter deaths as part of a population-based, systematic process, together with 9 key interventions to improve the resilience of vulnerable individuals during spells of cold weather.<sup>xiii</sup> The stages are as follows:

*Stage 1: preparation*

*Stage 2: identify vulnerable people*

*Stage 3: systematically offer interventions*

17. **The National Cold Weather Plan** was published in 2013.<sup>xiv</sup> The purpose of the plan is “to protect the population from harm to health from cold weather. It aims to prevent the major avoidable effects on health during periods of cold weather in England by alerting people to the negative health effects of cold weather, and enabling them to prepare and respond appropriately.” In contrast to the 2012 version, the updated publication focuses on long term planning, winter action and preparedness. As well as reducing deaths, implementation of the plan could assist in reducing pressures on health and social care services during the busy winter months.

## Addressing Seasonal Mortality. Nottinghamshire’s Experience

18. In November 2011, local authorities were invited by the Department of Health to apply for funding from the **Warm Homes Healthy People fund**. The aim of the fund was to support local authorities to reduce the levels of deaths and morbidity in their area that were due to vulnerable people living in cold housing. Nottinghamshire County Council, in partnership with other local key players including Fire and Rescue Services, the Borough Councils and the voluntary sector, submitted a proposal and received a grant for £243,613, with delivery between January and March 2011.

19. There were 3 main strands to this **Warm Homes, Healthy People** initiative, these were:

- a local winter wellbeing media campaign, comprising information leaflets and room thermometers
- information and training for frontline staff
- targeted services for vulnerable people, including
  - energy advisers to offer advice on heating, energy switching and home insulation
  - Handy Person services to undertake basic insulation measures and heating system checks
  - provision of a fire-lighting service to vulnerable households with coal fires or heating systems
  - emergency heating system repair scheme
  - good neighbour, befriending and outreach services

20. The main outputs from the delivery of **Warm Homes, Healthy People** initiative included the following:

- 94 calls to the County Council customer hotline between Jan and June 2012. Nearly three-quarters of these calls related to the provision of information. The majority of calls were received in the first two months.
- 5,000 visits to the Winter Warmth website placed on the Council’s site. Again the majority of visits were in January and February.

- Energy advisors employed in each districts, generating 512 contacts overall. 56% of these contacts were among the under 65 year olds and so a smaller number in the older age groups. In Gedling and Newark and Sherwood the outcome of the contact were provided, showing that over 90% of people contacted were provided with insulation advice, and 85% with general advice.
- 10,000 leaflets with room thermometers were printed and distributed.

### **Excess Winter Deaths Initiatives in 2011/12 and 2012/13.**

21. Subsequent to the implementation and evaluation of the Warm Homes, Healthy People project, initiatives have continued to be provided through partnership approaches using non-recurrent finances throughout the County. Steering and oversight has been provided through a winter warmth partnership group, with district housing leads and the voluntary sector. The group has been chaired by an officer from Nottinghamshire County Council, Adult Social Care Health & Public Protection. Funding has been sourced mainly through the remaining underspend of the Warm Homes, Healthy People Nottinghamshire initiative.

22. The range of initiatives that have continued to be sustained during 2013/14 have included the following:

- Emergency boiler and heating repairs
- District level energy advisors and County Customer Service Centre hotline support
- Information including the provision of leaflets to health workers and the public, and room thermometers
- Oil filled radiations
- Bulk oil purchase schemes
- Handy Persons winter warmth checks
- E-learning packages for staff working with older people

23. **The Healthy Housing Service.** The Healthy Housing Service provision is in the three Boroughs of Gedling, Rushcliffe and Broxtowe. The Healthy Housing Service (HHS) aim is to reduce fuel poverty by maximising the take-up of grants by private households for insulation and heating measures, through cooperation between health, social services, the Voluntary Sector and Housing Professionals. The service targets the most deprived sector households with the emphasis on people over 60 years of age and families with under five year olds. This aim is achieved through the following measures:

- Delivering brief intervention training to front-line staff
- Awareness raising through community presentations and events
- Receiving home heating and insulating referrals and supporting people to complete the relevant applications to enable the actual improvement measures to be implemented.

24. **Handypersons and Preventative Adaptation Service (HPAS).** The Handyperson and Preventative Adaptation Service (HPAS) is a service available to all residents who are 60 years and above or who have a disability. The service enables simple adaptations to be installed in people's homes facilitating their capacity to remain safe and secure at home. Referral is through a range of pathways including the First Contact scheme. In 2012/13 677 Handy person jobs were undertaken and 1450 adaptations. The scheme's expenditure in

2012/13 was £302,256 in total. First Contact provides a single-point referral, multi-agency information, advice and signposting service. First Contact and the Community Outreach Advisors are Nottinghamshire County Council and public health initiatives also seeking to support those most at risk, signposting through to supportive services.

25. The Public Health grant has provided continued funding to support initiatives including the wider Handy Persons Adaptation Scheme, First Contact and Community Outreach Advisors all aimed at reducing fuel poverty and seeking to ensure that those at most risk are signposted to key providers. The Director of Public Health also has an ongoing oversight role in ensuring good uptake of flu immunisation, a significant factor in reducing excess winter mortality.

### **Seasonal Mortality initiatives for 2014/15 and Future Planning.**

26. Currently options are being investigated for the coming winter of 2014/15 including working with the **Local Authorities' Energy Partnership (LAEP) Nottinghamshire and Derbyshire.**

27. For taking forward winter warmth initiatives for 2014/2015 the following schemes have the potential to address seasonal mortality in Nottinghamshire:

- Identifying approaches for ensuring the most vulnerable of residents are able to access support and home heating insulation grants successfully.
- Promoting referral pathways to ensure the on-going identification of those people who are able to benefit from the home heating and insulation grants and finance schemes available.
- Establishing support for people wishing to 'make the move' in situations where their home is no longer a good match for their needs.
- Developing local knowledge of the relationships between excess winter deaths and ill-health and health inequalities.

### **Reason/s for Recommendation/s**

28. As highlighted above (point 10.) the latest Public Health Outcome Framework indicators for Nottinghamshire are showing the amber rating for seasonal mortality (Indicator 4.15i, winter 2011/12) and red rating for fuel poverty (Indicator 1.17. 2011).

### **Statutory and Policy Implications**

29. This report has been compiled after consideration of implications in respect of crime and disorder, finance, human resources, human rights, the NHS Constitution (Public Health only), the public sector equality duty, safeguarding of children and vulnerable adults, service users, sustainability and the environment and ways of working and where such implications are material they are described below. Appropriate consultation has been undertaken and advice sought on these issues as required.



## **Financial Implications**

30. Financial implications relating to seasonal mortality are included in existing budget allocations or will be built into future business cases.

## **Implications in relation to the NHS Constitution**

31. Regard will be taken to the NHS Constitution together with all relevant guidance issued by the Secretary of State in any service changes relating to the implementation of the Health & Wellbeing Strategy.

## **Implications for Service Users**

32. Implementation of winter warmth initiatives will improve general health and wellbeing for the people of Nottinghamshire, and in particular for those aged over 75 years.

## **Sustainability and the environment**

33. One of the most sustainable ways of tackling fuel poverty is to address poor energy efficiency within local housing stock

## **RECOMMENDATION/S**

That the Public Health Committee is asked to:

- i. Note this report

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## **Constitutional Comments**

34. Because this report is for noting only no Constitutional Comments are required.

## **Financial Comments (KAS 23/4/14)**

35. The financial implications are contained within paragraph 30 of the report.

## **Background Papers and Published Documents**

See Appendix 1 for references

## **Electoral Division(s) and Member(s) Affected**

- All

## Appendix 1. References

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- <sup>i</sup> Office for National Statistics. (2013) *Excess Winter Mortality in England and Wales, 2012/13 (provisional) and 2011/12 (final)*
- <sup>ii</sup> Department of Health (2009) *Annual Report of the Chief Medical Officer, 2009*
- <sup>iii</sup> Donaldson, G. and Keating, W (1997) Early increases in ischaemic heart disease mortality dissociated from and later changes associated with respiratory mortality after cold weather in south east England *Journal of Epidemiology and Community Health* 51(6):643-648
- <sup>iv</sup> Department of Health (2011) *Cold Weather Plan for England: Making the case – why cold weather planning is essential to health and wellbeing*
- <sup>v</sup> Department of Health (2010) *How to reduce the risk of seasonal excess deaths systematically in vulnerable older people to impact at population level*
- <sup>vi</sup> Department of Health (2011) *Cold Weather Plan for England: Making the case – why cold weather planning is essential to health and wellbeing*
- <sup>vii</sup> Department of Health (2009) *Annual Report of the Chief Medical Officer, 2009*
- <sup>viii</sup> Marmot Review Team (2011) *The health impacts of cold homes and fuel poverty*
- <sup>ix</sup> Department of Health (2011) *Cold Weather Plan for England: Making the case – why cold weather planning is essential to health and wellbeing*
- <sup>x</sup> Rudge, J. and Gilchrist, R. (2005) Excess winter morbidity among older people at risk of cold homes: a population based study in a London borough *Journal of Public Health* 27(4):353-358
- <sup>xi</sup> Wilkinson, P. et al (2004) Vulnerability to winter mortality in elderly people in Britain: population based study *British Medical Journal* 10.1136/bmj.38167.589907.55
- <sup>xii</sup> Department of Health (2012) *Healthy lives, healthy people: Improving outcomes and supporting transparency*
- <sup>xiii</sup> Department of Health (2010) *How to reduce the risk of seasonal excess deaths systematically in vulnerable older people to impact at population level*
- <sup>xiv</sup> Department of Health (2011) *Cold Weather Plan for England: Protecting health and reducing harm from severe cold*