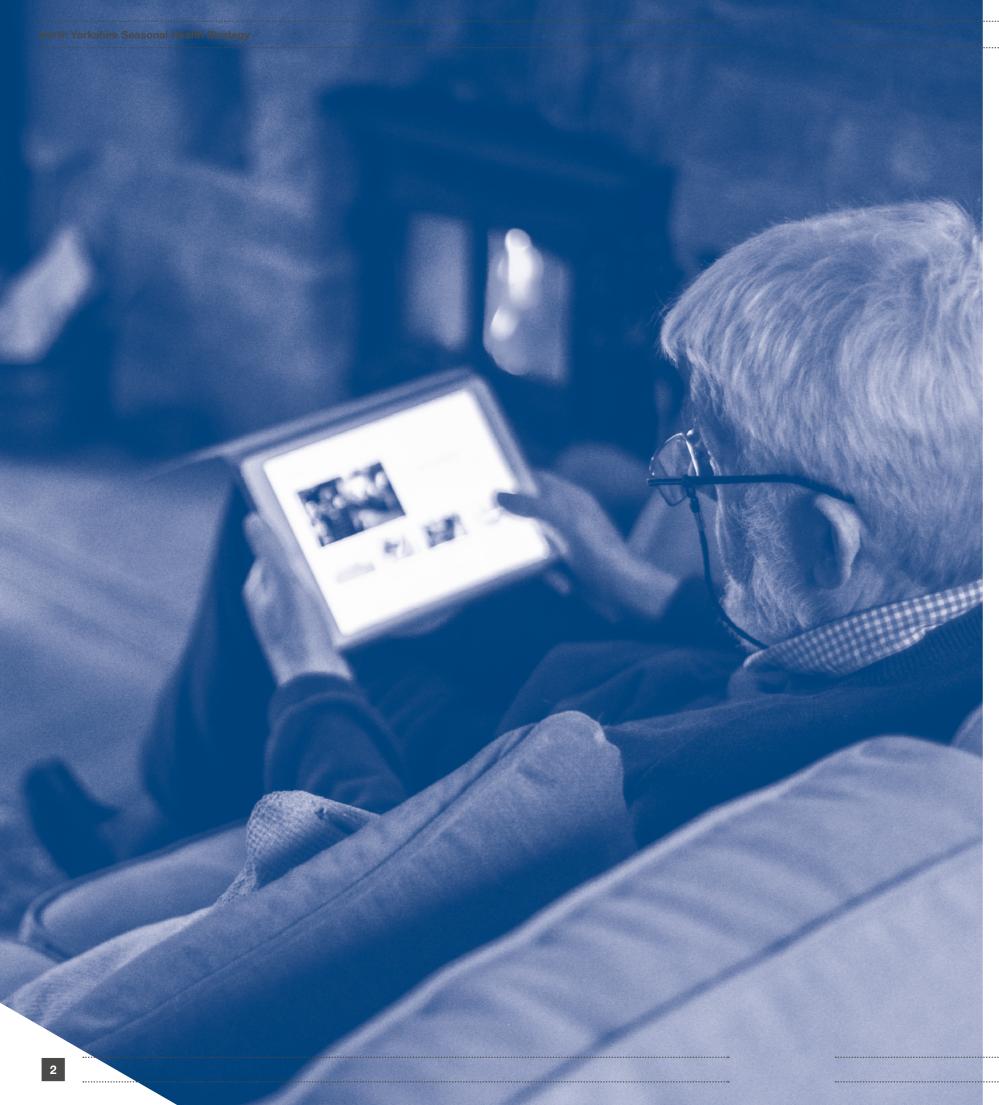
**Health and Wellbeing** Board North Yorkshire



North Yorkshire
Seasonal Health Strategy
2021-2026





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## Foreword

The seasonal health strategy, led by the seasonal health partnership sets out our ambitions to improve the health and wellbeing of North Yorkshire residents during cold and hot weather, with a particular focus on reducing excess winter deaths.

Cold weather can have a significant impact on people's health and this is largely preventable. In winter we see an increase in illness and deaths caused by cold weather such as heart attacks and respiratory conditions, in addition to other in-direct effects such as poorer mental health.

Since the launch of the previous winter health strategy (2015-20) we have made significant progress in establishing new programmes to reduce fuel poverty. In the last year for example the warm and well single point of contact has supported 1,103 households with issues such as energy advice, securing cheaper tariffs, energy top up vouchers, debt write off, emergency heating and Warm Home discount applications. Calculations estimate that these households have saved £75,710.33.

The partnership has also secured over £3 million in funding to support households living in fuel poverty, such as energy efficiency measures, new heating systems and emergency fuel payments. Every £1 spent on improving warmth in homes occupied by vulnerable households can result in £4 of health benefits which equates to £12 million of health benefits in North Yorkshire.

Yet there are still a number of people who cannot keep their homes warm due to low incomes, rising energy costs or energy in-efficient housing. Families have to make difficult choices to heat their home or to buy food. Growing up in a cold and damp home not only affects the physical health of children but it can also impact on their learning and mental health.

The impact of Covid-19 has resulted in an increase in the working age population and families seeking help with fuel bills and we need to ensure that seasonal health is considered as part of the recovery plans underway.

This strategy also acknowledges the impact that hot weather has on health and wellbeing. In hot weather we see an increase in heart and respiratory related conditions. As increases in the frequency and intensity of hot weather are predicted, promoting messages on how to stay safe and keep cool, including how to keep your home cool is an important priority for the partnership.

The seasonal health partnership is an example of how well agencies can work together to tackle the challenges faced. The partnership is chaired by the Fire and Rescue Service with representation from health, local authorities and the voluntary sector. There is also an opportunity to link this agenda to work around reducing carbon emissions. We will continue to take advantage of national funding available to make improvements to the worst quality homes that are hard to heat. Making homes more energy efficient will not only reduce energy bills for the householder but will also help us to meet the ambitious targets to become carbon neutral by 2030.

We want to continue to work together to make a difference to the lives of people during hot and cold weather and look forward to working with you on implementing this strategy.



Clir Michael Harrison (Chair of the North Yorkshire Health and Wellbeing board)



Amanda Bloor
(Vice chair of the North Yorkshire Health and Wellbeing board and Accountable Officer, North Yorkshire CCG)



**Clir Andrew Lee** (Executive Member for Public Health)

## Section one: Introduction

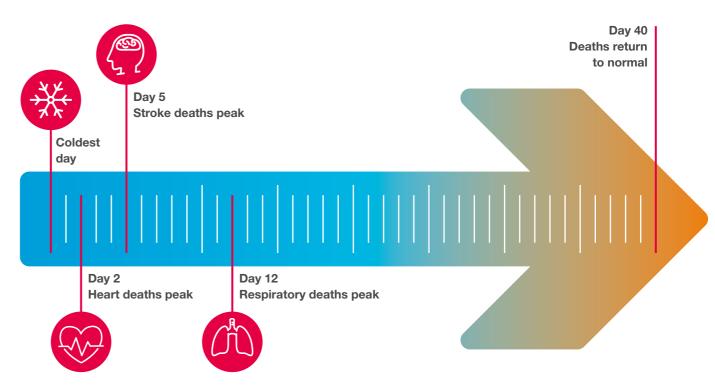
A five year winter health strategy was developed in 2015 setting out actions to improve and maintain health during winter months and to prevent avoidable ill-health and excess winter deaths. The strategy has led to many successful outcomes including establishing a single point of contact for advice around cold homes, training for a range of professionals and securing over three million pounds of funding to install new heating systems, energy efficiency measures and provide one to one support for residents.

Cold-related deaths represent the biggest weather-related source of mortality in England, and on average, there are approximately 35,000 excess winter deaths each year in England and Wales. The reasons more people die in winter relative to other times of the year are complex and interlinked and include:

- poor quality housing, particularly cold homes
- circulating infectious diseases, particularly flu and norovirus
- physical hazards such as snow and ice
- health inequalities

The death rate rises 2.8% for every degree Celsius drop in the outdoor temperature for people in the coldest 10% of homes. This compares with a 0.9% rise in deaths for every degree Celsius drop in the warmest 10% of homes<sup>1</sup>.

#### Cold weather death sequence



Source: Adapted from Donaldson GC, Keatinge WR. 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 1997; 51(6): 643-8

Excessive temperatures caused by hot weather can also cause health problems, and in extreme cases, death. The rise in mortality after hot weather occurs quicker than those caused by cold snaps in winter, often within one or two days. This means that action needs to be taken quickly.

The 2021-2026 strategy has been broadened to include seasonal health in response to feedback from professionals about the impact that hot weather has on health in the summer months. The strategy will look at how we can reduce illness and deaths from hot weather by raising awareness and providing support to people who have health, housing or economic circumstances that increase their vulnerability to heat. This is particularly important as we are increasingly likely to see an increase in the frequency and intensity of hot and cold weather. However the focus of the seasonal health strategy remains predominantly around winter health as this is when the majority of excess deaths occur.

The seasonal health partnership will lead the implementation of the strategy and associated action plan over the next five years on behalf of the North Yorkshire Health and Wellbeing board.

This strategy will cover a period when North Yorkshire County Council and the seven District Councils will be replaced with a new single unitary council – this will bring together the best services for residents and businesses, make them even better and present further opportunities to ensure the delivery of this strategy.

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<sup>1</sup> www.jrf.org.uk/report/cold-comfort-social-and-environmental-determinants-excess-winter-deaths-england-1986-1996

# Section two: Background/context

### 2.1 What has happened so far in North Yorkshire?

The North Yorkshire Winter Health Partnership was established in January 2015 and agreed a winter health strategy that ran from 2015-2020. The partnership and strategy has been successful in putting in place a number of programmes to improve winter health across North Yorkshire. Notable highlights are:

- Establishing a single point of contact (SPOC) initially set up by Rural Action Yorkshire and now delivered by Citizens Advice Mid North Yorkshire to provide advice to households who need support around cold homes, fuel poverty and energy efficiency.
- Further development of the "Warm and Well in North Yorkshire" brand which is recognised and trusted by professionals across North Yorkshire.
- Awareness raising campaigns to highlight the support that is available to North Yorkshire residents and also to communicate messages around keeping warm in winter.
- Training for professionals on identifying vulnerable groups who
  may be at risk of living in fuel poverty and the support available to
  them so that agencies can make easy referrals into the SPOC.
- Annual events to share good practice around winter health and prioritise actions for the action plan.
- Review of NICE guidance (NG6 Excess Winter Deaths and illness and the health risks associated with cold homes) to ensure the partnership is addressing the recommendations.
- Safe and well checks are offered by North Yorkshire Fire and Rescue Service and includes identification and signposting for residents living in cold homes.

A key success of the partnership has been to secure additional funding which adds value to the current services available. The Warm and Well in North Yorkshire project receives £50,000 of funding from public health and together the partnership has attracted over three million pounds in additional funding. Other funding has also been secured by organisations in the partnership. This includes:

- British Gas Energy Trust funding was secured by Community First Yorkshire to provide follow up assistance for households in North Yorkshire which includes home visits, detailed energy and billing advice, energy efficiency measures and small home repairs, debt advice and a hardship fund for households in need. This contributed £334,760 to Warm & Well in North Yorkshire to be delivered over a three winter period.
- Warm Homes Fund to install first time gas central heating systems into 208 homes of vulnerable people without central heating. Also covers connection to the gas network if needed.

- Energy Best Deal Extra funding to offer energy advice appointments to clients to help with any issues to do with energy companies, billings or cost.
- Big Energy Saving Network funding to deliver training to front line workers on energy advice and how to assist clients on this topic.
- Big Energy Saving week funding to deliver campaigns and events to discuss the importance of switching energy suppliers and to discuss saving money on your energy bills.
- Warm Homes Fund to install 200 air source heat pumps into the homes of vulnerable residents whose properties are not connected to gas.
- Retrofit measures for 519 vulnerable households.

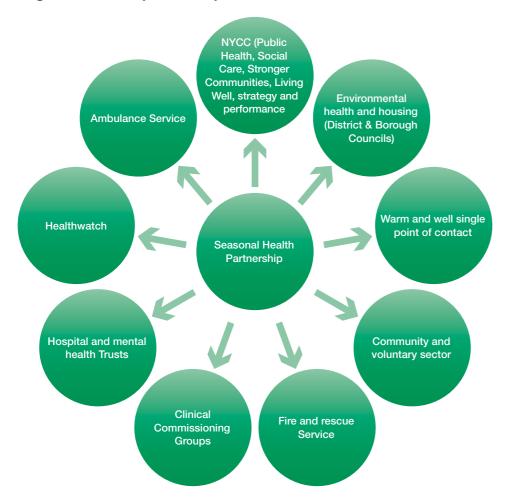
Every £1 spent on improving warmth in homes occupied by 'vulnerable' households can result in £4 of health benefits.

Centre for Ageing Better and The King's Fund Source: Watson, Housing and health: a case for investment (2019)

#### 2.2 The seasonal health partnership

In light of the new focus on seasonal health, the winter health partnership has been re-named as the seasonal health partnership. The group is made up of representatives from across the statutory and voluntary sector and meets three times a year to review progress and drive forward the priorities of the strategy. The partnership is currently chaired by the Fire and Rescue Service.

#### Role of different agencies on the partnership:



North Yorkshire Fire and Rescue Service chairs the partnership, and provides a key role in supporting vulnerable households through the provision of safe and well checks. These household visits identify any risks in the home, including around cold homes, heating appliances and fuel poverty.

The Public Health team services the seasonal health partnership and contract manages the seasonal health co-ordination contract. The team works with partners to improve healthy life expectancy, and reducing fuel poverty is an important element of closing the health inequalities gap.

Social care is a commissioner and provider of care, and works collaboratively with agencies on winter and seasonal planning. This includes identifying people at risk, providing and commissioning care and supporting safe discharge from hospital. The service has a role around prevention to improve the health, wellbeing and independence of the population.

District level housing, planning and environmental health teams have a strategic role in overseeing housing and have enforcement powers to make improvements, in particular in the private rented sector.

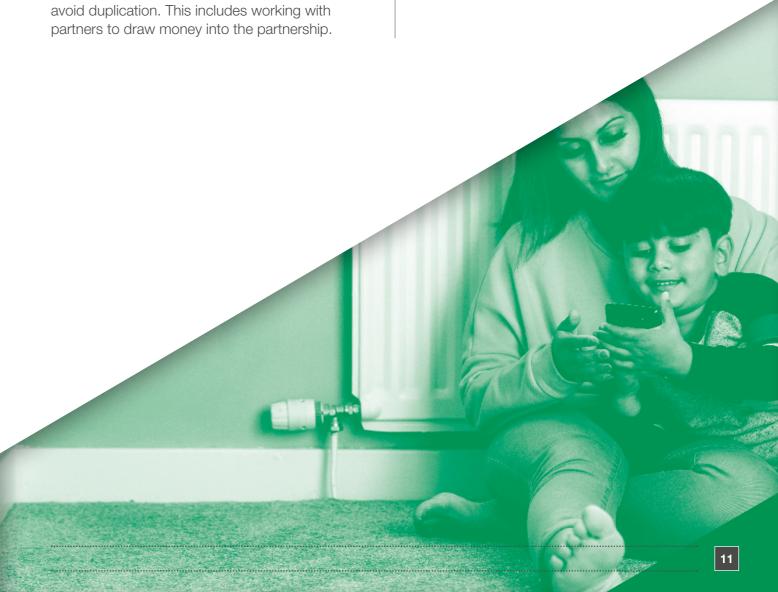
The warm and well single point of contact is a commissioned service that provides advice and support to residents around fuel poverty and energy advice. The service also brings together organisations working on fuel poverty to promote joined up working and avoid duplication. This includes working with partners to draw money into the partnership.

Hospital Trusts play a role in identifying people who may be living in fuel poverty and signposting to support so that people are not discharged to a cold home.

Community and Voluntary Sector – play a key role in delivering fuel poverty projects e.g. The Yorkshire Energy Doctor, and also supporting with opportunities to find funding e.g. British Gas and Northern Gas Networks.

Clinical Commissioning Groups are the commissioners of healthcare services and also lead on winter planning. In North Yorkshire we are supported by North Yorkshire CCG; Vale of York CCG and Airedale, Wharfedale and Craven CCG.

Healthwatch represents the views of users of health and social care services in North Yorkshire.



#### 2.3 Covid 19 and seasonal health

During the development of this strategy, Covid 19 became a global pandemic. This delayed the launch of the strategy but also presented us with an opportunity to ensure seasonal health priorities are reflected in any recovery plans and support for communities.

During the pandemic demand for support around fuel poverty increased significantly, with enquiries to the single point of contact increasing by 290% compared to the same time the previous year. Community Support hubs signposted residents to the single point of contact, and the age range of those seeking support changed to be predominantly those of working age.

The Centre for Ageing Better highlighted that "Spending extended periods exposed to damp and mould is likely to exacerbate or induce respiratory and cardiovascular conditions, in turn increasing the risk of contracting COVID-19."

Nearly a third of adults in Britain (31%) reported having physical or mental health problems because of the condition of their homes during lockdown. (Source: National Housing Federation, Housing issues during lockdown: health, space and overcrowding 2020)



As highlighted in the infographic above, people at greater risk of serious illness from covid are also those more likely to be living in fuel poverty and at greater risk of harm from cold weather.

2.5m people in England are unable to afford the rent or mortgages of their homes. (Source: National Housing Federation, 1 in 7 people in England directly hit by the housing crisis (2019)

# Section three: Aims, objectives and action plan

The partnership reviewed progress and the evidence base and identified the following priorities:

**Vision:** Partners in North Yorkshire will work effectively together to ensure the population of North Yorkshire maintain as good health as possible throughout seasonal variations in weather with a focus on reducing excess winter deaths and fuel poverty.

#### Aims:

- Reduce excess winter deaths
- Reduce fuel poverty
- Reduce morbidity and mortality associated with heat waves and hot weather

#### **Objectives:**

- 1. Improve cold homes and energy efficiency, and identify people at risk
- 2. Increase uptake of flu vaccination
- 3. Ensure support for fuel poverty and cold homes is integrated into NHS winter planning, clinical pathways and covid recovery
- 4. To increase awareness of cold homes and fuel poverty, focussing on health inequalities
- To raise awareness of health risks associated with heat waves and actions which can be taken to reduce morbidity and mortality

#### What will we do?

- 1. To improve cold homes and energy efficiency and identify people at risk
  - Continue to provide a single point of contact for advice around cold homes and energy efficiency (Warm and well)
  - Continue to support the delivery of and the finding of funding for home visits to deliver energy advice, installation of energy efficiency measures, provision of an accessible hardship fund and delivery of debt advice to support with budgeting and managing fuel debts.
  - Provide heating systems and measures to homes eligible through the warm homes fund and other funding streams e.g. Green Homes Grant
  - Identify further funding opportunities to deliver improvements to homes
  - Work with district/borough councils (housing, planning and environmental health) to ensure buildings reach required standards
  - Provide safe and well checks to identify households needing additional support
  - To encourage residents to keep an eye on vulnerable neighbours and family during hot and cold spells

#### 2. To increase uptake of flu vaccinations

- Raise awareness of the national flu programme amongst target groups
- Support social care staff to access flu vaccinations

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- 3. Ensure support for fuel poverty and cold homes is integrated into NHS winter planning, clinical pathways and covid recovery
  - Ensure the seasonal health partnership links to the relevant NHS structures and groups e.g. A&E delivery boards, Primary Care Networks providing updates on progress and raising awareness
  - Include support for individuals on seasonal health in relevant pathways
     e.g. respiratory pathways
  - Strengthen the links with health around hospital discharge and cold homes
  - Ensure that support for households around seasonal health is linked into plans for covid 19 recovery
- 4. To increase awareness of cold homes, fuel poverty and summer health messages
  - Provide training and support to staff working with residents who may be at risk of fuel poverty
  - Provide training to staff around messages and support available during hot weather and heat waves
  - Deliver a joint programme of communications throughout the year promoting seasonal health messages
  - Provide training to health staff regarding the work of Environmental Health Officers working in Private Sector Housing

- 5. To raise awareness of health risks associated with heat waves and actions that can be taken to reduce morbidity and mortality
  - Promote key messages on keeping cool and keeping hydrated
  - Provide advice for households/organisations who are at risk of experiencing overheating e.g. care homes, park homes, flats
  - Promote the advice in the national heatwave plan, liaising where necessary with partners such as the resilience and emergencies team and the Local Resilience Forum

### Monitoring

- Seasonal health partnership to meet three times a year
- There is an annual review of data of the action plan
- Annual report on progress is produced, measuring progress against outcomes
- Annual partnership event is held



## Section four: Data and evidence base

There is clear evidence that tackling issues such as fuel poverty can help to reduce excess deaths. In 2015 NICE carrying out a comprehensive review of the evidence and provided a series of recommendations for local areas to implement.

The recommendations are:

- 1. Develop a strategy to address the health consequences of cold homes
- 2. Ensure there is a single point of contact health and housing referral service for people living in cold homes
- 3. Provide tailored solutions via the single-point-of-contact health and housing referral service for people living in cold homes
- 4. Identify people at risk of ill health from living in a cold home
- 5. Make every contact count by assessing the heating needs of people who use primary health and home care services
- 6. Non-health and social care workers who visit people at home should assess their heating needs
- 7. Discharge vulnerable people from health or social care settings to a warm home
- 8. Train health and social care practitioners to help people whose homes may be too cold
- 9. Train housing professionals and faith and voluntary sector workers to help people whose homes may be too cold for their health and wellbeing
- 10. Train heating engineers, meter installers and those providing building insulation to help vulnerable people at home
- 11. Raise awareness among practitioners and the public about how to keep warm at home
- 12. Ensure buildings meet ventilation and other building/trading standards

We have combined these to inform our priorities set out in section three, and also reviewed the documents in the box below.

Table: Strategic drivers that have been used to inform the development of the strategy and accompanying programmes of work:

NICE guidance (NG6) on Excess Winter Deaths and morbidity; the health risks associated with Cold Homes (March 2015): recommends that areas should develop a strategy for people living in cold homes; identify people at risk from cold homes; train practitioners to help people with cold homes; raise awareness of how to keep warm at home and ensure buildings meet required standards

Clean Growth Strategy 2017: Plans for improving the energy efficiency of homes and all fuel poor homes to be upgraded to Energy Performance Certificate (EPC) Band C by 2030

Public Health Outcomes Framework: includes specific indicators to reduce excess winter deaths and address fuel poverty

Housing and Environmental Health legislation: enforcement powers to tackle hazards to health and housing in homes, particularly in the private rented sector (e.g. Housing Act 2004; Private Rented Property Minimum standard guidance)

Cold weather plan for England (published annually by NHSE and PHE): recommends a coordinated multi agency planning approach and a series of steps to reduce the risks to health from cold weather for: the NHS, local authorities, social care, and other public agencies; professionals working with people at risk and individuals, local communities and voluntary groups. Includes an alert system and raising awareness of responding to cold weather. NHS long term plan: Detecting and diagnosing respiratory problems earlier

GP core contract: Incentives through the Quality and Outcomes Framework (QOF) to refer patients with COPD to pulmonary rehabilitation programmes

Cold homes and excess winter deaths – a preventable public health epidemic that can no longer be tolerated (NEA, 2018)

Heat wave plan for England (2019, NHSE and PHE): recommends steps to reduce the risks to health from prolonged exposure to severe heat

North Yorkshire Loneliness strategy – The links between living in a cold home and social isolation are clear. There is a lot of evidence to support the fact that living in a cold home causes, or worsens, a range of physiological issues, including depression, anxiety and social isolation. This is often made worse by the stresses caused by financial strain from worrying about fuel payments or having to go without.

Fuel poverty briefing paper, House of Commons (Nov 2020)

4.1 Groups at risk of excess deaths caused by hot and cold weather

"Older people are at most risk of extremes of heat and cold; lower income groups are disproportionately impacted by extreme weather by virtue of living in poorer quality housing in vulnerable locations and conditions and not being able to afford to move, and tenants are more vulnerable than owner-occupiers as they have less ability to modify their homes and to prepare for and recover from climate events" (Sir Michael Marmott, 2020)

The strategy will focus on prioritising vulnerable groups and reducing health inequalities linked to seasonal health and fuel poverty. There are a number of groups who are more at risk of deaths or illness caused by the weather. These include:

- older people, especially those over 65 years old
- older people who are frail and/or socially isolated
- people with pre-existing chronic medical conditions such as cardiovascular and respiratory conditions, in particular chronic obstructive pulmonary disease (COPD) and asthma, and diabetes and on medications that potentially affect renal function, the body's ability to sweat, thermoregulation (e.g. psychiatric medications) or electrolyte balance (diuretics) can make this group more vulnerable to the effects of heat
- children (in particular infants who are vulnerable to cold and heat due to immature thermoregulation, smaller body mass and blood volume, high dependency level, dehydration risk in case of diarrhoea)
- people with cognitive impairment, mental health conditions or learning difficulties
- people assessed as being at risk of or having had recurrent falls – over 65s are more at risk of falls and home hazards increase this risk, which may be exacerbated by being indoors for long periods

- people who are housebound or otherwise have low mobility
- homeless people (those who sleep in shelters as well as outdoors) may be at increased risk from cold weather and heatwaves.
- people living on a low income or in deprived circumstances
- people who are living in households experiencing fuel poverty
- people experiencing homelessness or rough sleeping
- pregnant women
- people living in accommodation or having occupations linked to environmental factors and overexposure to the heat and cold weather e.g. living in urban areas and southfacing top-floor flats, poorly adapted homes, being homeless, activities or jobs that are in hot or cold places or outdoors and include high levels of physical exertion, children and adults taking part in organised sports (particularly children and adolescents)

#### 4.2 Excess Winter Deaths data

Even during mild winters, more people die in the winter than the summer. Every year in North Yorkshire there are hundreds of additional deaths over the winter period compared to the average level for the rest of the year. These Excess Winter Deaths (EWDs) are calculated by comparing the number of deaths that occurred during the December to March winter period with the average number of deaths occurring in the preceding August to November and the following April to July. The leading causes of these excess deaths are respiratory and circulatory conditions such as pneumonia, as well as dementia and Alzheimer's. Around a third of these can be directly attributed to cold homes and are therefore largely preventable.

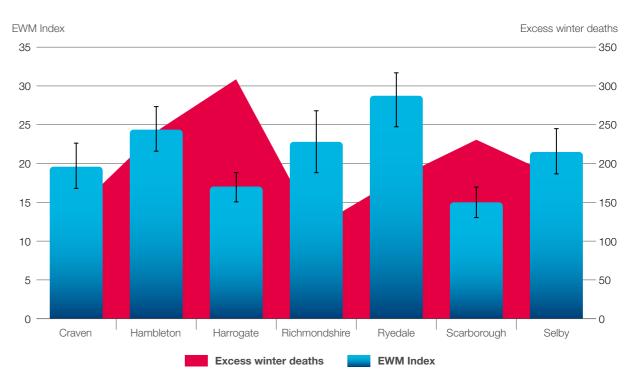


- In 2016/17 there were an estimated 517 EWDs in North Yorkshire (ONS).
- The majority of winter deaths occur in people aged 75 and over.
- For every EWD it is estimated there are an additional 8 emergency admissions. This means thousands of potentially preventable admissions e.g. approx. 4,136 avoidable NHS hospital admissions in winter 2016/17.

The following Figure 1 shows both EWDs and the Excess Winter Mortality Index by District. It demonstrates the large variation across North Yorkshire. The 3 year snapshot comparison between the districts shows Ryedale with the highest EWM Index and Scarborough with the lowest. Harrogate, with the highest population, has the largest number of EWDs but when adjusted for the size of the population the EWM index is lower than Ryedale.

Excess winter mortality index is calculated as excess winter deaths (EWD) divided by the average non-winter deaths, expressed as a percentage.

## North Yorkshire EWM Index and Excess Winter Deaths by District, 2014-2017 (EWM = winter deaths - average non-winter deaths)



#### Seasonal Influenza (Flu)

As respiratory illness is a main cause of excess winter deaths, vaccination coverage is the best indicator of the level of protection a population will have against vaccine preventable communicable diseases. A number of people are eligible for the free flu vaccine, including toddlers aged two and three, children and adults who are in risk groups for flu (including those aged 65 years and over, pregnant women, people with long term medical conditions or weakened immune systems). These groups are targeted as they are at risk of more severe flu symptoms. Many people who work with these populations (e.g. health and social care workers) are also eligible for vaccination.

The chart below highlights flu vaccine uptake in adults aged 65 and over increased in 2020/21 and it is thought that this was linked to concerns around covid 19 and the need to reduce winter pressures on hospitals. Over 50's were also included for the 1st time as part of England's biggest ever flu vaccination programme.

## Flu Vaccination Coverage - Individuals aged 65 and Over (2010/11 to 2019/20) Source: PHE



#### 4.4 Fuel poverty data

Fuel poverty is a potential causal factor of increased morbidity and mortality from winter weather.

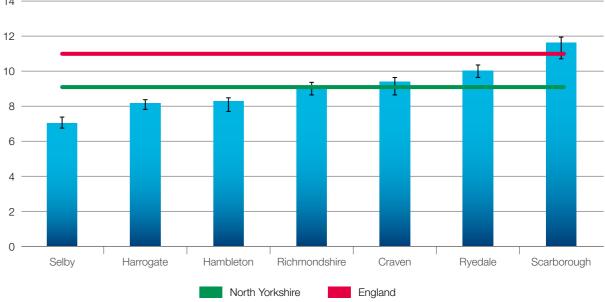
The chart below shows the distribution of fuel poverty in households across North Yorkshire. Fuel poverty in England is measured<sup>2</sup> using the Low Income High Costs (LIHC) indicator. Under the LIHC indicator, a household is considered to be fuel poor if:

- they have required fuel costs that are above average (the national median level)
- were they to spend that amount, they would be left with a residual income below the official poverty line

Fuel poverty can be a useful indicator for areas where households struggle to heat their homes, but it does not necessarily describe the temperature of a household. Households with higher fuel poverty may have well heated homes, and conversely, a low fuel poverty household may have a poorly heated home.

### 2017 Fuel Poverty by District Source: DECC





The extent of fuel poverty and cold homes are both major contributors to poor winter health. Fuel poverty is caused by three main factors:

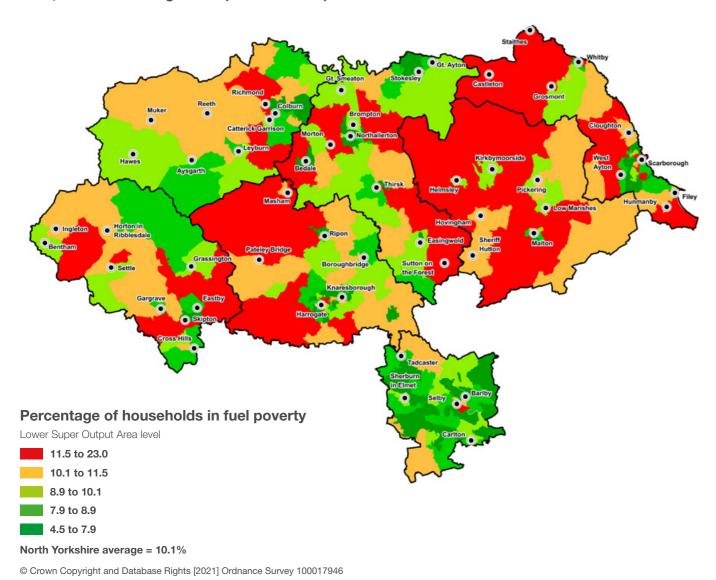
- · inefficient homes,
- high energy costs and
- low incomes.

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<sup>2</sup> www.gov.uk/government/collections/fuel-poverty-statistics

Improving the energy efficiency of housing has been shown to reduce health and social care costs and improve health and wellbeing. In North Yorkshire, there are an estimated 26,500 households in fuel poverty. This figure equates to about 10% of households in North Yorkshire. The map below shows the distribution of households in fuel poverty across North Yorkshire. Fuel poverty is more likely to occur in rural areas like North Yorkshire because housing tends to be older and more difficult to make energy efficient. Many homes have solid walls so are more difficult to insulate and a large proportion of homes are off the mains gas network, meaning higher costs for heating fuels. More generally in rural areas, there is a lower take up of benefits and energy advice and grants. Fuel poor households on the lowest incomes are also at risk from carbon monoxide (CO) poisoning caused by not being able to afford to service, repair or replace unsafe gas, oil and solid fuel appliances.

## North Yorkshire Residents, % of Houses in Fuel Poverty 2018, Low Income High Cost (Source DECC)



The following diagram highlights the impact fuel poverty can have on public health and how it can increase health inequalities.

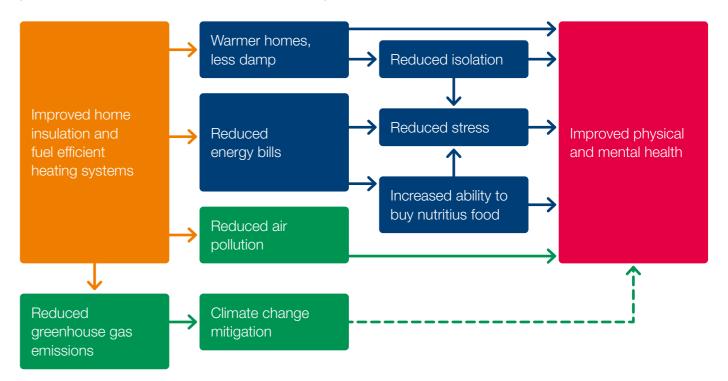


Figure 1: Mechanisms through which interventions to improve home energy efficiency can improve health. Source: Faculty of public health, Fuel Poverty and Affordable Warmth.



The impact of living in a cold home is highlighted in the following infographic:



Children living in cold homes are more than twice as likely to suffer from a variety of respiratory problems as children living in warm homes.



Mental health is negatively affected by fuel poverty and cold housing for any age group. More than 1 in 4 adolescents living in cold housing are at risk of multiple mental health problems.



Mobility and falls. Cold homes affect mobility and increase falls and non-intentional injuries. In cold homes, symptoms of arthritis become worse and strength and dexterity decreases, increasing the risk of falls in the elderly.



Other indirect effects include a risk of carbon monoxide poisoning and a wider effect on wellbeing and life opportunities.

Source: Cold homes toolkit, Citizens Advice and Cornwall Council, 2018

Alongside mental health issues, cold homes can contribute to social isolation as individuals are often reluctant to invite friends and family over for fear around the temperature of their homes or feelings of shame. They are also less likely to go out for fear of getting cold, and then returning to a cold home and being unable to get warm. Combined with the financial pressures of living in fuel poverty all these factors could make someone in a cold home more at risk of loneliness. This has an impact on people of all ages as highlighted above.

The type of housing people live in is also an indicator of whether someone is living in fuel poverty. Making houses more energy efficient can reduce household bills, reduce fuel poverty and improve health outcomes.

#### Risk factors of cold homes characteristics



Buildings constructed with solid walls have a higher prevalence of fuel poverty compared to those with cavity walls.



Older and larger buildings see higher levels of fuel poverty compared to new builds and smaller dwellings.



Households with no boiler or a non-condensing boiler have higher levels of fuel poverty compared to those with condensing boilers.



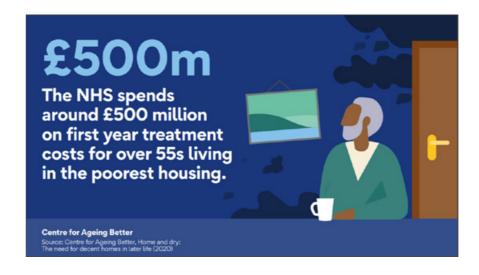
The level and depth of fuel poverty is also greater for households not connected to the gas grid.

The table below shows the estimated housing stock in North Yorkshire and highlights that the majority of houses in North Yorkshire were built before 1944.

Housing estimated build dates	Number of homes (estimated)
Pre-1919	66,700
Pre-1944	114,000
1945-2015	92,415
Post-2015 (new builds)	+
Park homes 2019 (mobile homes)	17,365
Total	295,480+

The Energy Efficiency Rating scheme summarises the energy efficiency of buildings. The property is given a rating between A – G where A is the best (very energy efficient) and G the worst (inefficient). An estimated 60% of homes in North Yorkshire have an Energy Performance Certificate (EPC). The average property in North Yorkshire is in band D or E, and those properties with the poorest rating (G) includes park homes. The most energy efficient park home can only achieve an EPC of D. The worst rated properties are more predominantly in rural areas.

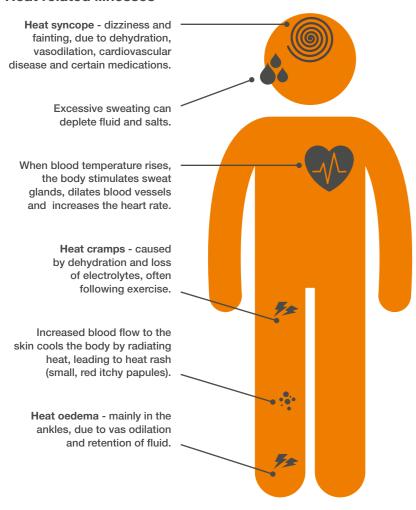
There are national drivers aim to encourage EPC ratings of Band C or better, including funding for new heating systems and insulation. However there are additional challenges for rural areas accessing these schemes, for example 37% of North Yorkshire households are not on the gas network, rising to 58% in Ryedale. 34% of homes do not have cavity walls, making them hard to insulate.



#### 4.5 Heat waves and health data

The main causes of illness and death during a heat wave are respiratory and cardiovascular diseases. A linear relationship between temperature and weekly mortality was observed in England in summer 2006, with an estimated 75 extra deaths per week for each degree of increase in temperature. Some of these deaths may be exacerbated by air pollution which can occur more frequently in hot weather, and can make respiratory symptoms worse.3 There are around 2,000 heat related deaths in England each year, many of which are largely preventable.

#### Heat related illnesses



#### Health effects of heat

during a heatwave are respiratory and cardiovascular diseases. Additionally, there are specific heat-related illnesses including:

#### **Heat Exhaustion**

- Nausea or irritability

- Fatique
- Heavy sweating

#### Heatstroke

- Confusion
- · Loss of consciousness
- Seizures
- · Very high body temperature

The main causes of illness and death

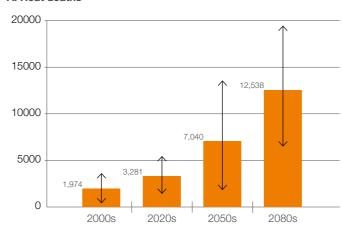
- Dizziness
- Muscle Cramps or weakness
- Feeling faint
- Headache

- High body temperature

- Hot, dry skin or profuse sweating

It is expected that with climate change there will be an increase in the frequency and intensity of hot weather, which will have a negative impact on health.

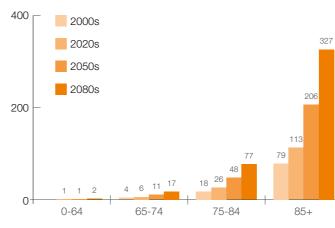
#### A: Heat deaths



Hajat et. al. 2014

Heat deaths are predicted to increase in all age groups over the next 60 years. However, this increase is greatest in older age groups, who are both most susceptible and whose number is also increasing most rapidly.

#### A: Heat deaths / 100K



Hajat et. al. 2014

Hot weather and heat waves can also be linked to other indirect but related deaths such as drowning, caused by people trying to cool off in open water.4

#### Key messages for hot weather and heat waves:

- High temperatures have **significant health consequences** and are associated with increased mortality and increased morbidity.
- Certain groups are **more vulnerable** to the health consequences of high temperatures but everybody can be affected.
- The harm to health associated with high temperatures is **not inevitable**. There are things we can do all year round and in the emergency response context to minimise the impact on human health. E.g. stay in the shade, hydrate and cover up.

3 Heatwave plan for England - Making the case: the impact of heat on health - now and in the future

Source: PHE

<sup>4</sup> National data are produced on water fatalities but these also include suicide and are not broken down locally. Therefore this is out of scope of the strategy https://www.nationalwatersafety.org.uk/waid/reports-and-data/



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