

Severe Weather: Kingston JSNA fact sheet 2018

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Introduction

Kingston's increasingly ageing population (fig. 1) [1], combined with our changing climate, means the impact of severe weather on Kingston's population in the future is likely to increase.

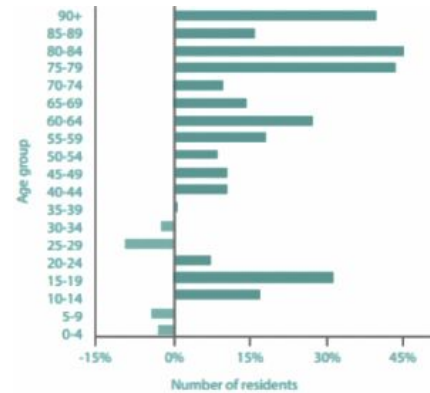


Figure 1: % change in age groups in Kingston over the next 10 years © GLA: 2016-based demographic projections.

Therefore, we believe a contemporaneous joint strategic needs assessment (JSNA) is essential, to help guide the provision of future severe weather action plans in the Kingston area.

Key facts

13.5% of people in Kingston are 65 or over (London average = 11.7%). [1] The elderly are more vulnerable to severe weather, so future health burdens from severe weather are likely to be amplified.

The excess winter death rate in Kingston has fluctuated over the last 15 years, and has on occasions (e.g. 2004-2007) been above the London and National average. However, wide confidence intervals mean that no statistically significant correlation can be inferred (fig. 2). [2]

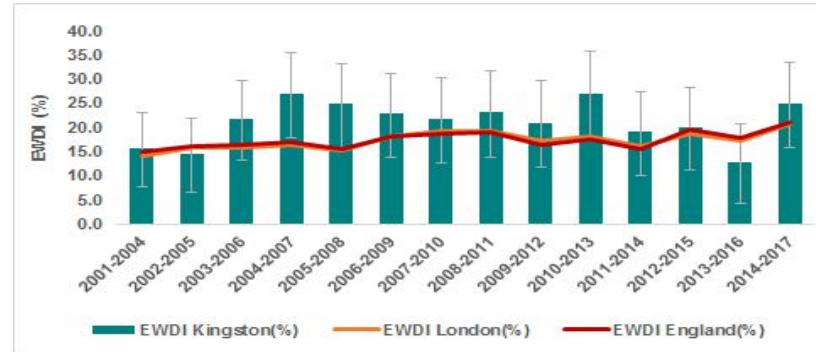


Figure 2: Excess Winter Deaths Index for Kingston, London and England, 3 year rolling average, person, all ages, 2001-04 to 2014-17



In 2015 in Kingston there were 6,072 households in fuel poverty (9.4% of homes in Kingston). In comparison to 10.1% in London & 11% in England. [3]



The NHS is estimated to spend £1.36bn every year treating illnesses caused by cold homes [4].



Influenza vaccination rates in the over-65s (67.9%) & pneumococcal vaccination coverage for 2 year olds (91.5%) in the borough for 2017-18 are currently below the UK average (72.6% & 69% respectively) & UK targets (>75% coverage for both) [5].

Key issues for Kingston

1) Demography

Our projected ageing population will mean Kingston is more susceptible to excess seasonal deaths in the future.

2) Climate change

The effects of worldwide climate change on our weather is anticipated to lead to an increase in the number of future seasonal excess deaths.

3) There is scope to improve certain areas

Although excess winter deaths appear to have reduced over the past 10 years, there is still room for future improvement in certain areas (e.g. tackling fuel poverty and increasing vaccination coverage).

4) Fuel poverty

Is an issue in the borough, and is widely accepted as a significant contributory factor in the rate of excess winter deaths.

Glossary of terms used in JSNA

Excess winter deaths (EWD) - the difference between the number of deaths during the winter months (Dec-Mar) and the average number of deaths during the preceding (Aug-Nov) and following (Apr-Jul) 4 month periods.

EWD = winter deaths - average non-winter deaths

EWD index (EWDI) is the excess winter deaths divided by the average non-winter deaths and is expressed as a percentage

EWDI = (excess winter deaths / average non-winter deaths) x 100

The EWDI is presented with **95% confidence intervals** in this document, which are calculated as: EWM index \pm 1.96 x (EWM Index / $\sqrt{\text{EWM}}$).

Fuel poverty - is defined as having to spend 10% or more of income on all fuel use, including heating the home, to an adequate standard of warmth.

This to the Low Income High Cost definition generated by the Hills Report.

See <https://www.nea.org.uk/about-nea/fuel-poverty-statistics/>

95% confidence interval - a range of values that you can be **95%** certain contains the true mean of the data.

Abbreviations used

BRF - Borough Resilience Forum

CCG - Clinical Commissioning Group

CQUIN - Commissioning for Quality and Innovation

DECC - Department of Energy and Climate Change

DoH - Department of Health

ECO - Energy Company Obligation

GLA - Greater London Authority

HWB - Health & Wellbeing Boards

HPA - Health Protection Agency

HINST - Health Inequalities National Support Team

JESIP - Joint Emergency Services Interoperability Principles

JSNA - Joint Strategic Needs Assessment

KCAH - Kingston Churches Action on Homelessness

LRF - London Resilience Forum

NICE - National Institute for Clinical Excellence

ONS - Office for National Statistics

PHE - Public Health England

PPV - Pneumococcal Polysaccharide Vaccine

QOF - Quality and Outcomes Framework

RBK - Royal Borough of Kingston Upon Thames

SCG - Strategic Coordinating Group

VCS - Voluntary and Community Sector

WHO - World Health Organisation

Why it matters

Severe weather, both cold and hot, adversely affects the health of vulnerable people. There is strong evidence that these adverse effects are both predictable and largely preventable. [6]

On average, there are ~ 25,000 excess winter deaths each year in England. [7]

Currently, the fraction of excess deaths attributable to cold weather is much larger than that due to hot weather. Although temperatures are rising with climate change, cold weather deaths are still expected to be high by 2050, due to our ageing population. Thus, there is an ongoing need to protect the public from the effects of cold weather for many years to come. [8]

The phenomenon is not unique to England, but we are behind other countries with similar climates & living standards, with regards to the excess winter death index (England 18% vs Finland 10%, Germany 11% & the Netherlands 11%). [9]

In England and Wales ~ 2000 excess deaths occurred during the 2003 heatwave (4 to 13 August). [10]

Rapid evaluation of the 2006 heat wave by the HPA found there were 75 extra deaths per week, for every degree rise in temperature. [11]

The business case goes well beyond mortality targets. Recent research suggests that for every excess winter death there are 8 hospital admissions and 100 consultations with the GP. [12]

Who is at risk?

The elderly are most at risk from severe weather, but other 'vulnerable groups' must also be considered:



Cold weather & health

Direct effects of winter weather include an increase in incidence of: heart attacks, strokes, respiratory diseases, influenza, norovirus, falls leading to traumatic injuries & hypothermia (figure 3). Indirect effects of cold on health include an increase in mental health problems, carbon monoxide poisoning & disruption to healthcare services. [7]

Excess winter deaths are primarily due to exacerbation of cardiovascular disease (40%) and respiratory conditions (33%), rather than hypothermia directly. [7]

Studies have shown GP visits for respiratory tract infections to increase by up to 19% for every one degree drop in mean temperature below 5°C. [13]



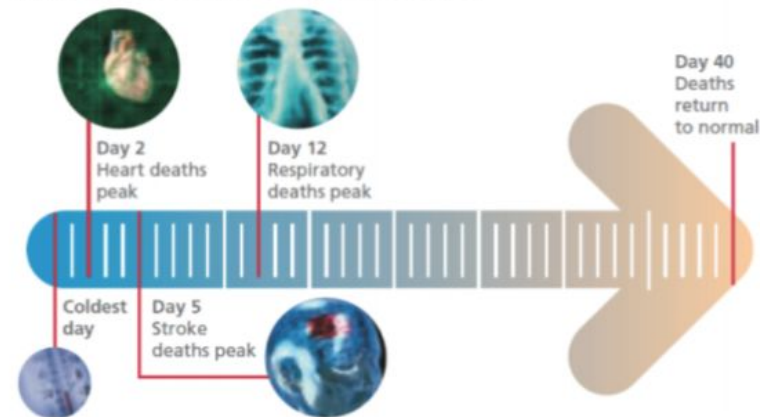
Warm weather & health

Similarly, the main causes of illness and death during a heatwave are from respiratory and cardiovascular diseases, rather than being directly from heat-related illnesses. An increase in certain bacterial infections (e.g. E.Coli) and suicide rates during previous heatwaves in the UK has also been observed. [14]

Higher levels of air pollution during periods of higher temperatures and humidity are also known to be a contributory factor to the observed increase in respiratory disease, during heat wave periods. [6]

As with cold weather, 'vulnerable groups' include the elderly, infants, those with severe physical & mental illnesses. All of these groups have impaired thermoregulation (the ability to regulate one's body temperature). [14]

Figure 3: Cold Weather Death Sequence [15]



Local picture:

What are we doing well? Where can we improve? Are there local inequalities?

Excess Winter Mortality

The Excess Winter Death Index (EWDI) in Kingston for 2016-17 was 38.3%. This was higher than London (22.9%) & England (21.6%) average and the differences were statistically significant. [2]

Due to Kingston's relatively small population, confidence intervals are consistently wide and the EWD index is therefore calculated over consecutive 3-year periods.

There are incidences in the past where the EWD rate in Kingston has been significantly above the national average (2004-2007, 2005-2008 and 2010-2013).

However, since 2011-14, there has been no significant difference in the EWDI between Kingston, London and England (figure 2)

Moreover, when old age (>85) is accounted for, there is no significant difference between the EWD index in Kingston and London or England since 2006 (figure 4).



Fuel poverty

In Kingston, between 2011 and 2015 there was no significant difference between levels of fuel poverty (see glossary for definition) compared with London & England (figure 5).

Those experiencing fuel poverty are often not the most deprived. In fact, those in social housing in Kingston are less likely to be a household suffering from fuel poverty. Fuel poverty affects unique groups, such as older people living in large private homes or individuals that privately rent. [16]

A recent JSNA on fuel poverty in Kingston identified local inequalities, with the proportion of over 75s in fuel poverty highest in Old Malden, St James and Alexandra wards. [16]

Rough Sleepers

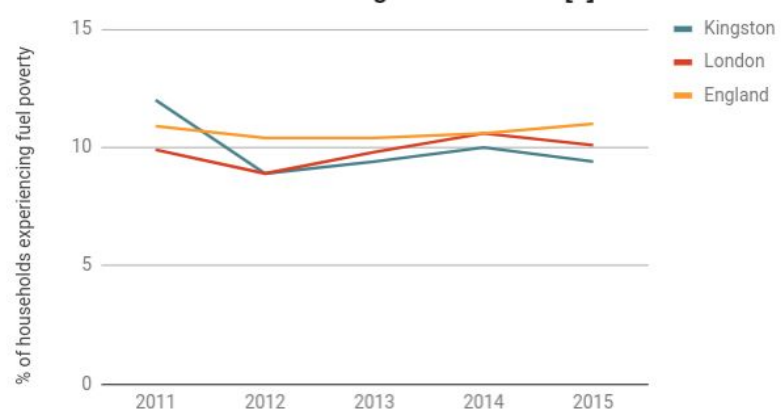
The number of rough sleepers in Kingston has risen from 11 in 2014 to 23 in 2018.

(MHCLG Rough sleeping returns, annual)

Figure 4: Excess Winter Deaths Index for Kingston, London and England, 3 year rolling average, person, aged 85+, 2001-04 to 2014-17



Figure 5: Households experiencing fuel poverty (%) in Kingston, London and England 2011-2015 [3]



Local picture [2]

Vaccination coverage

During the 2016-17 winter period, 36.4% of excess winter deaths nationally were due to a respiratory illness. [7] Influenza, influenza-like illnesses and pneumococcal pneumonia are a significant contributor to this.

In Kingston, influenza vaccination coverage in the over 65s for the 2017-18 winter period (figure 6) was similar to London, but below national average and WHO recommended target of 75%. [5]

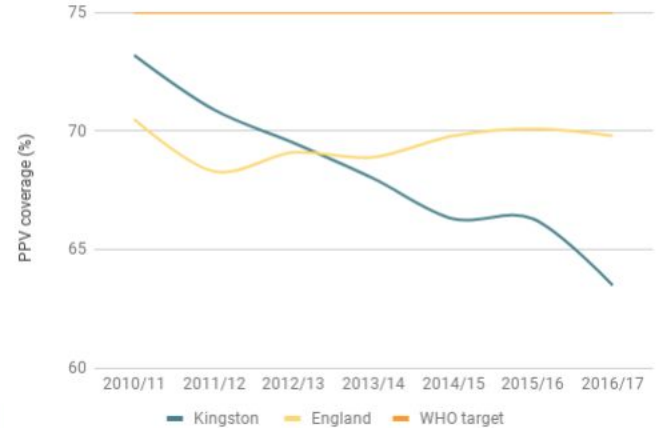
This trend has been observed for many years and one reason that has been postulated is the fact that Greater London boroughs generally have a more mobile population, compared to the rest of the country, which makes achieving high vaccination coverage more difficult.

However, influenza vaccination coverage for all at-risk individuals in Kingston (47.6% in 2017-18) is similar to the England average (48.9% in 2017-18), and has been since 2010-11. [5]

Figure 6: % influenza vaccination coverage for those aged >65 (2017-18)



Figure 7: Pneumococcal vaccine (PPV) coverage (%) in over 65s in Kingston and England



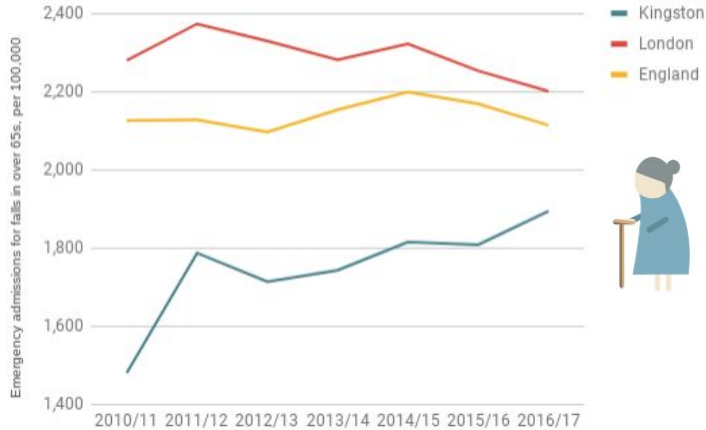
Conversely, there has been a noticeable decline in the rates of pneumococcal vaccine (PPV) coverage for at-risk individuals in Kingston, compared with national coverage [5] (figure 7)

Local picture [3]

Slips, Trips and Falls

Rates of emergency hospital admissions due to falls in the elderly are lower in Kingston than London and the rest of England, and this has been the trend for the past 7 years. [17] (figure 8)

Figure 8: Emergency hospital admissions due to falls in the over 65s in Kingston, London & England (per 100,000)



Warm weather outcomes

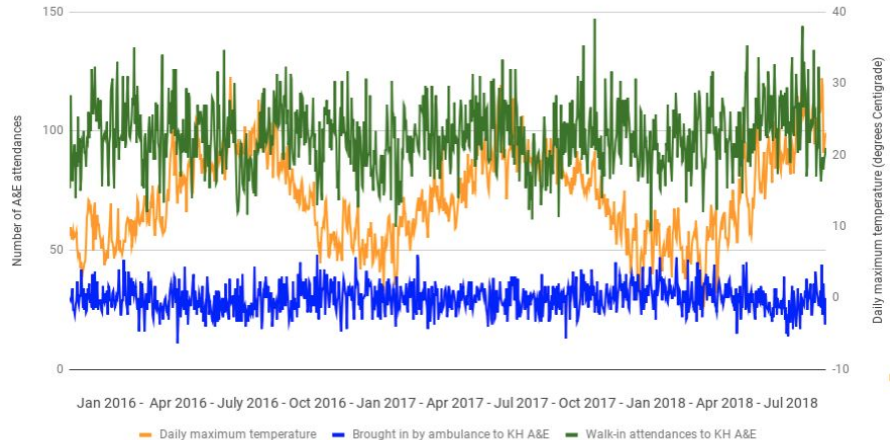
There is a well-established link between increased ambient temperatures and adverse health outcomes in the UK [18]

The precise impact from this summer's heat wave will not be known for several months, but the most recent ONS quarterly mortality report (quarter 2, 2018) highlighted specific instances of increased mortality that coincided with periods of increased temperature in England. [8]

Whether or not these deaths can be directly attributed to the heatwave will be addressed in the next quarterly release. Moreover, ONS quarterly mortality reports from 2016 and 2017 have highlighted hundreds of additional deaths nationally, associated with brief periods of heatwave conditions in July 2016 and June 2017. [8]

However, upon analysing A&E attendance figures for the previous 3 years (figure 9) there does not seem to be a significant correlation between daily mean high temperature and attendances to A&E.

Figure 9: Daily Kingston hospital A&E attendances & daily maximum temperature in Kingston (January 2016 - July 2018)



How can excess seasonal morbidity and mortality be prevented?

Wider determinants of health, such as socioeconomic inequalities, fuel poverty and housing energy efficiency are linked to excess seasonal deaths, and PHE recommend **year-round, multi-agency** approaches to address all these issues, in addition to **severe weather action**.

To achieve cost-effective interventions across a range of departments and organisations, **collaboration is essential**.

Local authorities should produce written **severe weather plans** covering **strategies** (listed to the right) to address health inequalities & wider determinants of health. These plans should be distributed to all appropriate agencies so that the most vulnerable groups can be targeted.

Mitigating harm from warm weather



Many of the excess deaths due to excessive heat exposure are preventable if a few very simple precautions, to adapt and cool ourselves, are taken:



Beat the heat: staying safe in hot weather



1. Dissemination of key public health messages & severe weather action

As with winter planning, it is essential that key public health messages related to heat wave conditions are communicated both to the public and appropriate agencies working with vulnerable individuals (e.g. social services, residential & care homes, voluntary organisations and day centres). PHE publishes several concise heat wave leaflets entitled: “**Beat the heat**”, which offer public health advice for care home staff and the general public. [19]

Furthermore, as with cold weather, **an alert system & communications cascade** should be activated locally in response to a **Met Office heatwave alert**. This should inform all relevant agencies locally, so that contingency action plans for warm weather can be activated.

2. Year-round planning strategies

A) Community environmental action plans

- 1) Increasing tree planting & green space (reduce CO₂ & evaporation from trees = cooling effect)
- 2) Other infrastructure to reduce ‘urban heat island’ effect - (e.g. green roofs, green pavements)

B) Community social action plans - e.g promoting energy efficient housing in the borough



Mitigating harm from cold weather

The majority of the burden of cold-related ill-health occurs at moderate outdoor winter temperatures (from 4-8°C). Therefore PHE recommend an emphasis on **year-round planning & winter preparedness** to protect 'at-risk' population groups and help prepare them for winter:



1. Tackling fuel poverty



Fuel poverty has long been established as an important contributory factor to EWDs and strategies to reduce fuel poverty are a common focus for local authorities to improve winter health outcomes.

The 2015 Fuel Poverty Strategy for England set out the Government's approach to reducing fuel poverty, outlining three guiding principles to future action: prioritisation of the most severely fuel poor, supporting the fuel poor with cost-effective policies and reflecting vulnerability in policy decisions. The strategy introduced a statutory target to achieve an energy efficiency standard of Band C by 2030 for as many fuel poor households as possible. [20]

A report commissioned by Save the Children identified that for every £1 spent on fuel poverty grants schemes, the health service saved 42p as a by-product, of which 41% related to excess cold and 24% to mental health and well-being. [21]



2. Improving vaccine uptake



Respiratory illness is a significant contributory factor to excess winter deaths in vulnerable individuals. NICE and PHE recommend those who are at risk of greatest harm from respiratory illness (the elderly and those with chronic lung disease, diabetes and immunosuppression due to illness or medication) should be offered vaccination against influenza and pneumococcal disease.

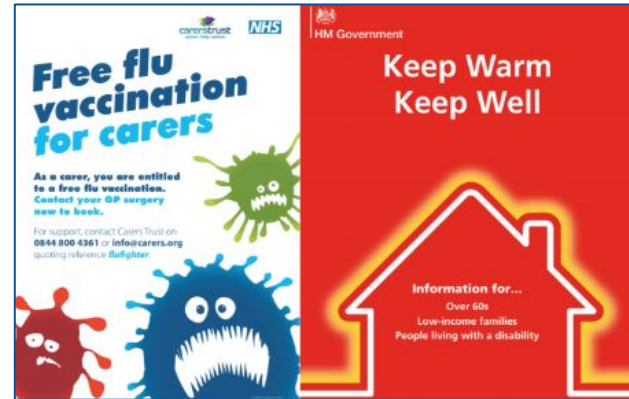
The WHO sets a target of 75% coverage of vulnerable individuals, for both of these vaccination programmes. On 12th September 2018 PHE announced a more effective flu vaccine for over 65s this winter, which is predicted to reduce GP consultations by 30,000, hospitalisations by over 2,000 and prevent over 700 hospital deaths from flu in England.

Organisational incentives to increase uptake are offered by the QOF in primary care and CQUIN system in secondary care. NICE guidelines(NG 103: <https://www.nice.org.uk/guidance/ng103>) on how to increase flu vaccine uptake, advocate a multicomponent approach, and cover: raising awareness in health and social care staff and vulnerable groups along with detailed strategies on ways to increase uptake in eligible groups, both in primary and secondary care.

3. Dissemination of key public health messages & severe weather action

PHE recommend that throughout winter key public health promotion advice is disseminated to the public and can be accessed by key partners - e.g. managers of care, residential and nursing homes. Examples of PHE communications for cold weather advice include the “**Keep Warm, Keep Well**” and the “**Top tips for keeping warm and well**” leaflets.

Moreover, an **alert system & communications cascade** should be in place, in response to **Met Office alerts** of imminent severe cold weather. This communications cascade should initiate appropriate emergency actions plans, throughout multiple agencies.



Winter Fuel Payments - This is a government funded one-off annual payment to help pay for heating during the winter. Anyone born on or before 5 January 1953 is eligible and will normally be automatic for those eligible receiving the state pension or another social security benefit.

What Support & Services do we currently have in place?

Cold Weather Support National schemes / services



Priority Service Register

Energy suppliers are obliged to offer a range of free services, known as the priority services register, to their most vulnerable customers. These services are free to join and are available from all main gas and electricity suppliers. The scheme is available to all household gas and electricity consumers who are of pensionable age, have a disability or have long-term ill-health.

ECO - The Energy Company Obligation (ECO) is the government's umbrella term for its programme to make houses in the UK more energy efficient. This aims to cut carbon emissions and reduce fuel poverty. The scheme means that gas and electricity suppliers with more than 250,000 domestic customers are obliged to help households financially with measures that improve the energy-efficiency of their homes.

Energy funds - Those in debt to their energy supplier might be able to get a grant from a charitable trust to help pay it off. Energy companies, such as British Gas and EDF offer grants and schemes, for which you don't have to be a customer. There are also companies who offer grants specifically for their customers (e.g. npower, Scottish Power and Ovo Energy).

Cold Weather Payments

These are government funded one-off payments to help eligible individuals with extra heating costs when it is cold. A payment is received each time the temperature drops below a specific temperature for a set period of time. Only those who receive the following benefits are eligible: pension credit, income support, income-based jobseeker's allowance, income-related employment and support allowance or universal credit. The next scheme is due to start on 1st November 2018.

Warm Home Discount Scheme is a one-off discount of £140 on your gas or electricity bill, between September 2018 and March 2019, for those in receipt of pension credits or on a low income. This does not affect eligibility to receive cold weather payments and / or winter fuel payments.

Big London Energy Switch is a collective energy switching scheme funded by DECC. Increases public awareness of the potential for reducing energy bills through collective switching, with a particular focus on engagement with vulnerable consumers and those in fuel poverty.



RE:NEW is a Greater London Authority (GLA) support programme aimed at increasing the retrofitting of homes with energy saving measures. RBK has a support agreement in place with the GLA's RE:NEW Support Team to work with the team and other partners, to identify and develop suitable opportunities for retrofit.



Scrapped in 2013 - Warm Homes Healthy People Fund - During the winter periods for 2011-12 LAs were able to bid for funds to support the most vulnerable. RBK had commissioned **Staywell** to offer free support, including: clearing snow or ice, arranging boiler repairs, draught proofing, supplying emergency heaters & winter fuel payments. This scheme was scrapped in 2013, in spite of a government review declaring it "universally popular".



The **Warm Home Better Health** scheme is funded by Kingston Public Health & administered by **Thinking Works**, a non-profit organisation. They provide the following services:

1 → **General advice** on energy bills, keeping warm and dry in the home and access to heating and insulation grants.
2 → **Referrals for benefits check** - making sure that residents claim all the benefits they're entitled to (e.g. Warm Home Discount Scheme)

3 → **Free home visits** for >65s and those >50 with long-term health conditions are offered help to make sure their home is a warm and healthy place to live.

4 → **Health promotion advice**, including: ensuring all eligible residents are vaccinated for influenza, referrals for NHS health checks if 35-74 and advice about useful local health and wellbeing services.

People are referred to the scheme from the voluntary sector, health and social care professionals and can self-refer. Referrals are also generated through outreach at flu clinics and targeted GP mail shots. The service has been running since 2010 & provides 300 visits each year.

Electricity Meter Loan Scheme

Kingston Libraries run a scheme where library card holders can borrow an electricity meter for free for up to two weeks. The smart meters show how much electricity is used in real time and help people work out how to **reduce energy wastage** and lower electricity bills.

Better Homes - This 5-year programme aims to bring the councils homes up to a standard higher than that demanded by the Government's decent homes standard. The works began in June 2012 and will finish in 2018-19, and includes renovations to kitchens, bathrooms, electrical installations, **heating**, external works and **energy-efficiency improvements**.

What support & services do we currently have in place locally in Kingston?



Winter Night Shelters

Kingston Churches Action on Homelessness (KCAH) run the **Haven**, a winter night shelter open in Kingston **every night** from October 2018 until at least March 2019.

In April 2014, The Joel Community Trust opened up a permanent night shelter at St Peter's Church in Norbiton. KCAH clients can be referred to the Joel Night Shelter by The Housing Crisis Intervention Service (HCIS) at KCAH.

KCAH also provide emergency clothing, sleeping bags, backpacks, a mailbox, simple mobile phones and food for people who are living on the streets or with no home to call their own.



Home Improvement Grants

are a council scheme that provides interest-free grants of up to £10,000 to make properties safe and improve their condition, which includes works to **improve energy efficiency**.

Contingency planning & incident response

Local Resilience Forums were introduced in 2004 in the **Civil Contingencies Act** to provide the means for those involved in emergency preparedness to collaborate at a local level.

The **London Resilience Forum** ensures London's preparedness in the event of emergencies & provides the link between emergency preparedness at the local and national levels.

The **Kingston Borough Resilience Forum** meet quarterly to discuss emergency preparedness & coordinate the activities of a wide range of organisations, including public health, the police, the ambulance service, environmental health, social services and local hospital trusts. This is chaired by the council's contingency planning manager, who is also responsible for producing the **RBK Severe Weather Plan**, which is updated every 2 years & complements the national plans for severe weather from PHE.

Health & Wellbeing Boards (HWB) are a formal LA committee charged with promoting greater integration between NHS bodies, public health & local government. They have a statutory duty, with CCGs, to produce a joint strategic needs assessment & a health & wellbeing strategy. They have very limited formal powers & are a partnership forum rather than a decision-making body.

Strategic Coordinating Groups (SCGs) take overall responsibility for the multi-agency management of a severe weather incident. Its objectives (based on guidance from JESIP - see glossary) are to: protect & preserve life, mitigate and minimise its impacts & maintain critical infrastructure and essential services.

Recommendations

Overriding emphasis on a year-round multi-agency approach to improve the resilience of vulnerable groups.

The Royal Borough of Kingston Council should:

- 1 - Identify people at risk of ill health from living in a cold home and improve awareness of this cohorts' benefit entitlement, in order to increase uptake to **national affordable warmth initiatives**.
- 2 - Promote and continue to commission schemes, such as **'Thinking works'**, to increase access to national and local initiatives that aim to tackle fuel poverty in vulnerable groups.
- 3 - Support the Kingston **VCS** (voluntary and community sector) to continue to provide advice on tackling fuel poverty to vulnerable groups.
- 4 - Improve the advice and assistance available to private homeowners in the borough, regarding improving the **energy efficiency** of their home.
- 5 - Liaise with providers of emergency **shelter** to agree plans for severe weather.
- 6 - Ensure that **multi-agency severe weather plans** are updated (in line with PHE guidance) and reviewed regularly at the Borough Resilience Forum.
- 7 - Support and encourage improved energy efficiency within **new building designs**.
- 8 - Support local agencies, including the **VCS** in mobilising **community emergency action plans**, when severe winter weather is forecast.
- 9 - Review **safety of public events**, and ensure organisers are aware of and take measures to mitigate the risk posed by severe weather.
- 10 - Encourage the incorporation of **environmental action** (e.g. more green space, reflective surfaces) into local infrastructure plans, to mitigate the impact of the 'urban heat island' effect.

The RBK Severe Weather Plan should:

- 11 - Set out a detailed **framework for strategic management** of severe weather events, both cold and warm, ensuring a co-ordinated multi-agency approach.
- 12 - Detail the procedure for activation of the local severe weather plan, with regards to Met Office alerts & the subsequent **communications cascade**.
- 13 - During and following a severe weather event we recommended that the aforementioned communications cascade be **audited**, to ensure that with each relevant agency, alerts are being received and appropriate actions are being taken.
- 14 - Ensure **lessons are learnt** from previous severe weather events, and that these are **incorporated into future plans**.
- 15 - Ensure **key agencies** are aware of the alert system and their responsibilities.

Kingston Council's Public Health Team should:

- 16 - **Raise awareness** among health care professionals and the public about severe weather related health issues.
- 17 - Raise the profile of **fuel poverty** in the borough, in order to increase the uptake of benefits by eligible residents.
- 18 - Ensure **key public health messages** reach vulnerable groups and those who care for them, through working closely with RBK communications team and the media.
- 19 - Ensure **key partners** are taking appropriate action & winter plans are in operation, when severe weather is anticipated or forecast by the Met Office.
- 20 - Ensure **institutional establishments** (e.g. care homes, prisons & schools) are aware of specific guidance for severe weather periods.

Kingston CCG should:

- 21 - Employ strategies to **increase influenza and pneumococcal vaccination uptake**, following guidance from NHS England.
- 22 - Commission services to prevent **falls**.
- 23 - Ensure front-line **healthcare professionals** are offered and encouraged to receive the **influenza** vaccine.
- 24 - Explore new opportunities for funding & administering **fuel poverty intervention schemes** in vulnerable households (e.g. Boilers on Prescription scheme operating in Sunderland).

Kingston Hospital should:

- 25 - Ensure vulnerable patients are **discharged to a warm home**, through facilitating referral to fuel poverty initiatives, prior to discharge.
- 26 - **Train** health and social care practitioners, in particular **discharge coordinators**, to provide advice and make referrals to appropriate winter warmth initiatives, for eligible people whose homes may be too cold.

Front-line health care professionals should:

- 27 - Identify people at risk of ill health from living in a cold home & include this information in the **person's records**.
- 28 - Make every contact count by assessing the heating needs of people who access primary care and home care services on at least an **annual basis**.
- 29 - Facilitate assessment for **appropriate assistive technologies**, e.g. alarm pendants to call for help in the event of a fall, for vulnerable individuals.
- 30 - Provide **advice** and make **referrals** for people whose homes may be too cold.
- 31 - Implement **personalised brief health interventions plans** that include advice and support to stop smoking, drink sensibly, eat healthily, hydrate adequately and keep active.
- 32 - Provide **medication reviews** every six months for people taking 4 or more medicines.



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Further reading

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3. [PHE heat wave plan for England \(updated July 2018\)](#).
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