

Green primary care training session 4

How climate change affects north east London

[Click here to watch the webinar recording](#)

Presenters:

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NEL Net Zero Primary Care Leads
and

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Learning objectives

- NEL Green Plan and Primary Care
- Climate risk in London & Health inequality
- Effects of climate change locally
- Overheating
- Flooding
- Air quality and resources available

Every step we take together to reduce our carbon footprint is a step towards great health and wellbeing.

- Every time we reduce the use of fossil fuels from travel and transport operations, we help our patients, staff and residents breathe cleaner air and reduce carbon emissions.
- Every time we support locally produced, low-carbon diets through our supply chains, we improve access to quality and affordable healthy food for people in NEL.
- Every time we nurture green space around health and care facilities, we improve wellbeing for patients and staff, and strengthen local ecosystems that absorb carbon.
- Every time we provide climate literacy training for staff, we empower our people to act and help shape our journey.

Our NEL Green Plan embodies collaboration, urgency, support, empowerment and trust - we are shaping our partnership culture to enable everyone to act.

This is our journey to Net Zero and beyond - we welcome everyone to help shape the path.

“We need ALL staff across NEL Integrated Care System (ICS) making low-carbon decisions every day”

Zina Etheridge

The challenge

NHS is 5% of UK carbon footprint.

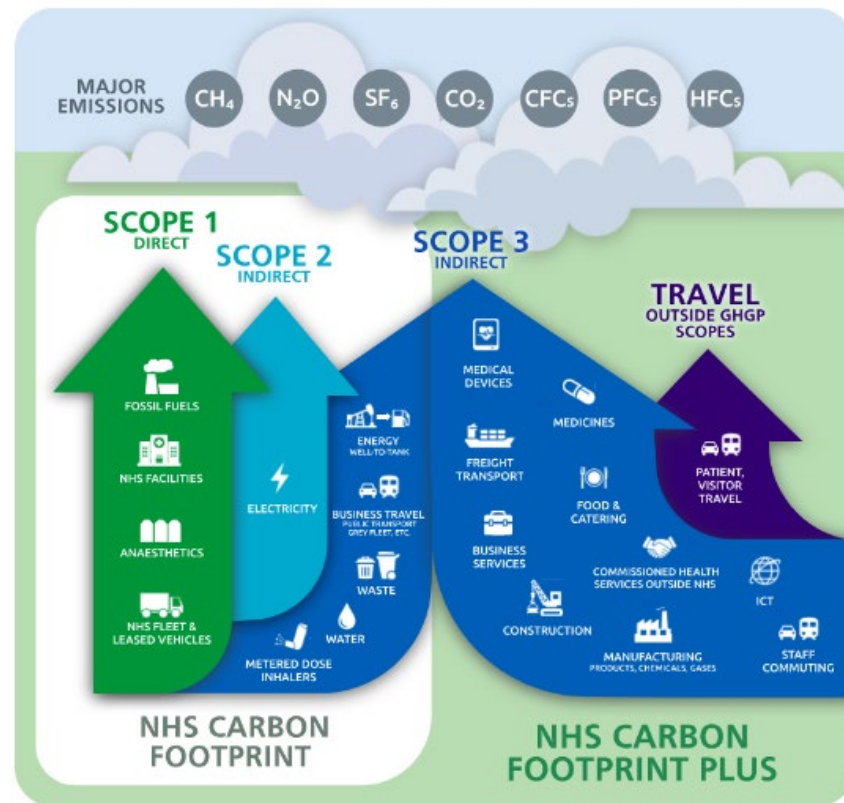
NHS Carbon Footprint- our direct emissions

- **40% reduction by 2025**
- An 80% reduction by 2028-2032
- Net zero by 2040

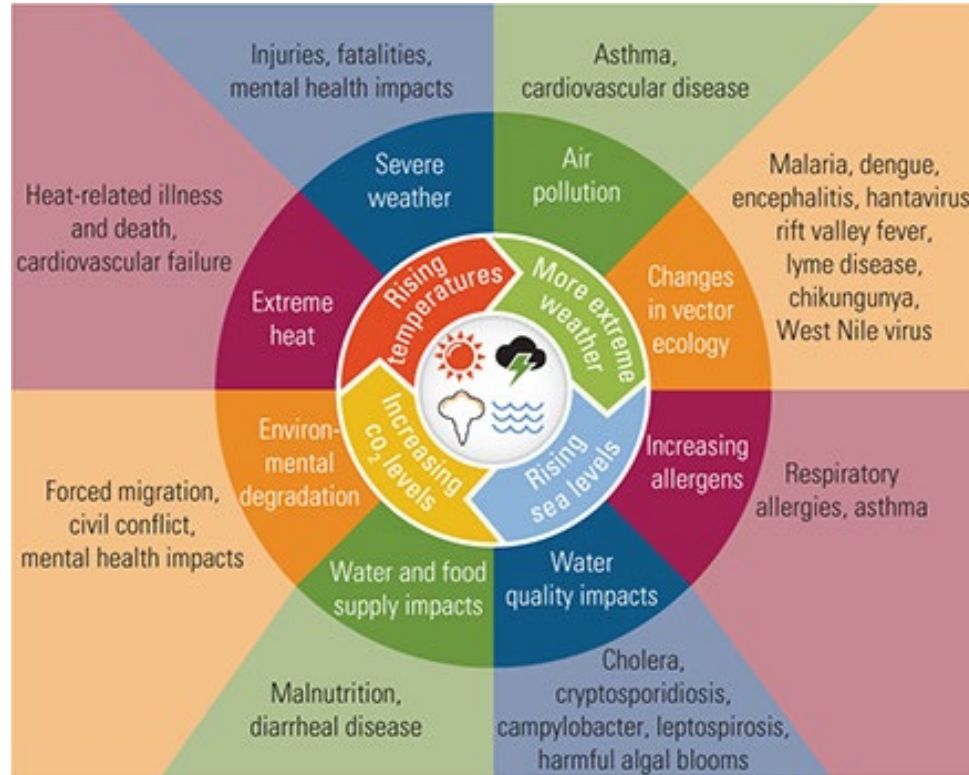
NHS Carbon Footprint Plus- entire emissions

- An 80% reduction by 2036-2039
- Net zero by 2045

(MtCO ₂ e)	November 2021	80% reduction by 2028 would bring us to
Carbon Footprint	136,420	27,284
Carbon Footprint Plus	847,450	169,490



The climate crisis is a health emergency





London and climate change

"In 2019, air pollution contributed to the deaths of 4,000 Londoners."



Source: Museum of London

Guest speaker:

Climate change as a public health issue

Dr Angelique Mavrodaris

Consultant in Public Health & Clinical Research Fellow

UK Health Security Agency



The impact of climate change on health

Direct impacts on health and health inequalities

Indirect impacts on health, affecting the wider determinants of health and health inequalities

Direct effects on the delivery of health and social care services (including those people working within the health and social care sector, and also the buildings and infrastructure required to deliver these services).

Source: [A Summary of Climate Change Risks for London 2012](#)

Worsening health inequalities

NEL has a high concentration of vulnerable groups, which are likely to be disproportionately affected by the impacts of climate change.

The impacts of climate change will not be equal or fair and are likely to increase existing inequalities unless we take action.

Implications affect public health, the continuity of health and social care services both within the NHS and beyond, the resilience of local emergency services, and the most socially vulnerable.

Source: [A Summary of Climate Change Risks for London 2012](#)

Population size & growth

In 2021, the total resident population of NEL was estimated at 2.02m, projected to grow by nearly 364,000 (18%) by 2041. This is equivalent to adding another place the size of Waltham Forest or Havering.

75% of this growth is going to be concentrated in 5 out of the 136 NEL areas (MSOA's).

In 2021, the GP registered population of NEL was 2.3m, 13% greater than the (estimated) resident population

NEL has a young population relative to England, with inner city places having a younger population than those in outer London. 60% of NEL are of working age, while only 15% are 60+.



Healthy life expectancy

Most NEL places have a life expectancy and healthy life expectancy similar or lower than England. This is the same for both men and women.

Ethnicity

Over half (53%) of NEL's population is of Black, Asian or mixed ethnicity compared with 11% across England overall

In **most** NEL places, more than 30% of the population is non-UK born.

25% speak a language other than English as their main language, with Bengali (4%), Urdu (2%) and Turkish (2%) being the largest.

Deprivation

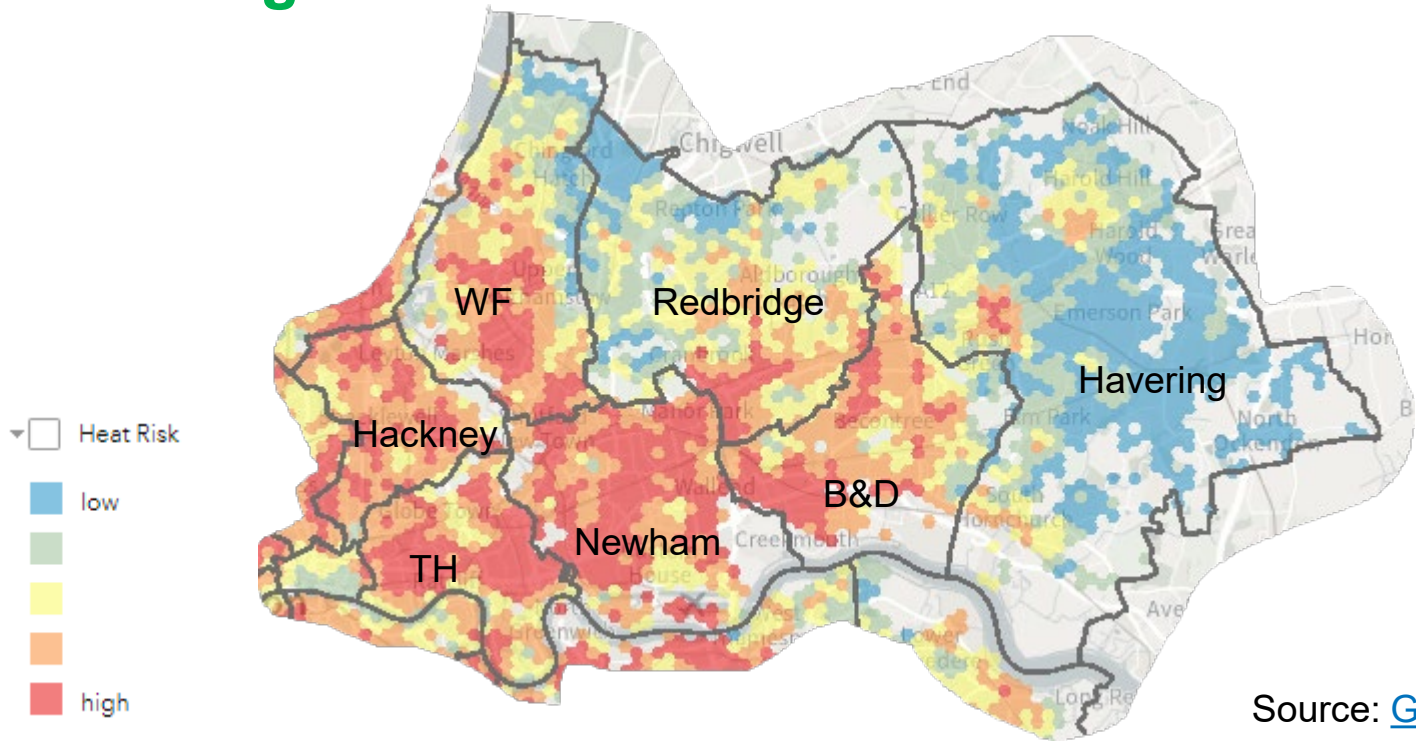
Across all of NEL, approx. 489,000 (24%) live in areas ranked in the most deprived 20% in England

Of all IMD domains, deprivation in the domain of Barriers to Housing and Services is experienced most acutely by the population of NEL

With the exception of Havering, all NEL places have a proportion of children in absolute low income families significantly higher than London and England averages.



Risk of overheating in north-east London boroughs



Source: [GLA climate risk metrics](#)



Wildfires in Dagenham in July 2022

- Several homes across five different residential Essex streets were completely destroyed after a huge fire spread out of control
- 15 fire engines and approx, 100 firefighters were called
- Two people were rushed to hospital suffering smoke inhalation
- 135 people were evacuated from surrounding properties
- An area of parkland (approx. eight hectares) was damaged
- 25 vehicles were destroyed.

Photo source: Essex news





Mortality and morbidity- Heatwaves

UKHSA data: over the 5-heat periods in the summer of 2022, there were 2803 excess deaths in England in people over the age of 65 (excluding deaths for covid-19).

In 2022 the day of the highest temperature was deemed a 1 in a 1000-year event.

NHS pressures- direct effects- admissions for sun stroke and heat stroke and sunburn

Poor infrastructure in the UK to deal with heatwaves- improvements in housing/ insulation, awareness of risks, strengthening of primary care

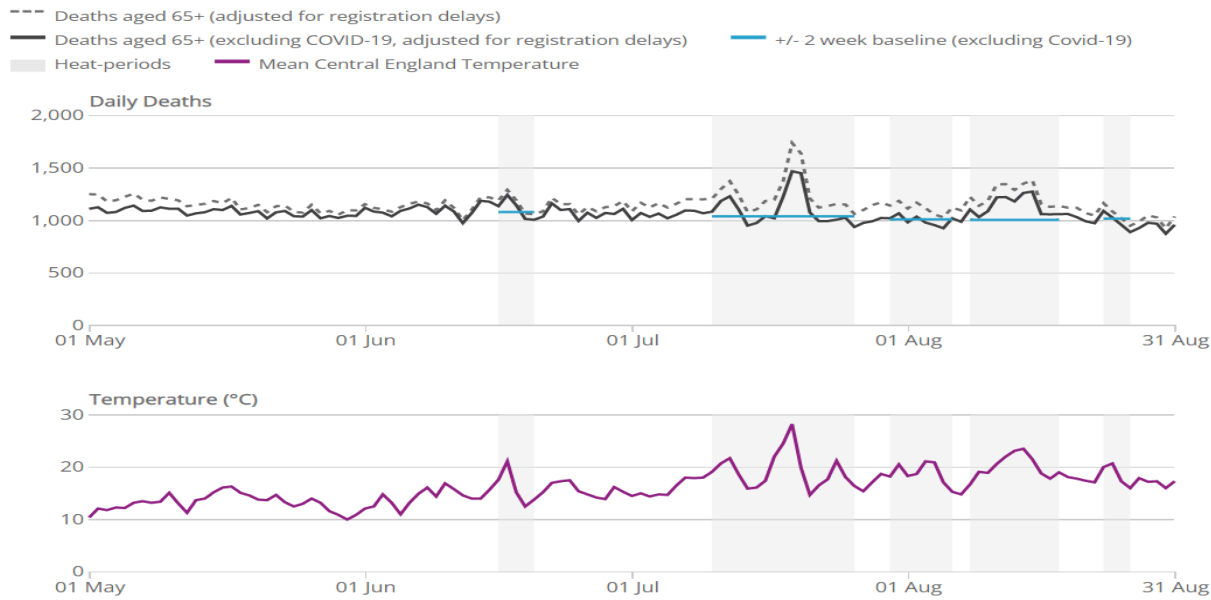
Number of deaths that occurred before, during and after heat-periods for the leading causes of excess death, June to August 2022 heat-periods, England and Wales

	Deaths before heat-period	Deaths during heat-period	Deaths after heat-period	% change during heat-period	% change after heat-period
Dementia and Alzheimer's disease	6,304	6,800	6,198	▲ 7.9%	▼ 8.9%
Symptoms, signs and ill-defined conditions	1,609	1,728	1,494	▲ 7.4%	▼ 13.5%
Heart failure and complications and ill-defined heart disease	955	989	796	▲ 3.6%	▼ 19.5%
Parkinson's disease	763	878	787	▲ 15.1%	▼ 10.4%
Cardiac arrhythmias	816	958	761	▲ 17.4%	▼ 20.6%
Septicaemia	390	391	350	▲ 0.3%	▼ 10.5%
Hypertensive diseases	792	789	698	▼ 0.4%	▼ 11.5%
Diabetes	689	778	653	▲ 12.9%	▼ 16.1%
Chronic lower respiratory diseases	2,686	2,990	2,449	▲ 11.3%	▼ 18.1%
Malignant neoplasm of colon, sigmoid, rectum and anus	1,699	1,755	1,676	▲ 3.3%	▼ 4.5%

Source: Office for National Statistics



Estimated excess mortality (excluding COVID-19 and adjusted for registration delays) for aged 65 years and over in 2022 compared to +/- two-week baseline deaths for each heat-period, England



Source: UK Health Security Agency

Top five most 'at risk' of overheating are Birmingham, Newham, Tower Hamlets, Hackney and Nottingham

Even if the world stays on track to meet the global goal to limit warming to 1.5°C, more than 3,000 of the most vulnerable neighbourhoods – more than **six million people** – will regularly be exposed to 'very hot weather' of 27.5°C for five or more days during the summer months.

If temperatures rise to 3°C, then the same areas will be regularly exposed to dangerously hot temperatures of over 30°C.

Key findings by Friends of the Earth



Three of the five top five local authorities with the most 'at risk' neighbourhoods from extreme heat are in NEL

Those neighbourhoods that are high-risk neighbourhoods for heat **already exposed to hot weather**, will be exposed to **very** hot weather under 1.5 degrees, and **dangerous** hot weather at 3 degrees scenario:

- Newham 154
- Tower Hamlets 117
- Hackney 111
- Waltham Forest 75
- Barking and Dagenham 59



Extreme weather- Cold

The challenge

- Most vulnerable - homeless, low socioeconomic groups, poor housing, socially isolated, fuel poverty, pregnant women
- Winter viruses – flu and norovirus, covid 19
- Individual vulnerabilities- age >75, dementia/Alzheimer's
- Physical risks - snow and ice
- Systemic risks- access to health care and warm spaces
- Health inequalities

Source: UKHSA

Colder winter between December 2017 and March 2018 resulted in 24.8% excess deaths compared to other years.



Cold stress

- Direct effects- falls, injuries, hypothermia
- Increased presentations with heart attacks, stroke, respiratory infections
- Housing- cold/ damp/ mould, insulation, CO poisoning
- Mental health problems- depression

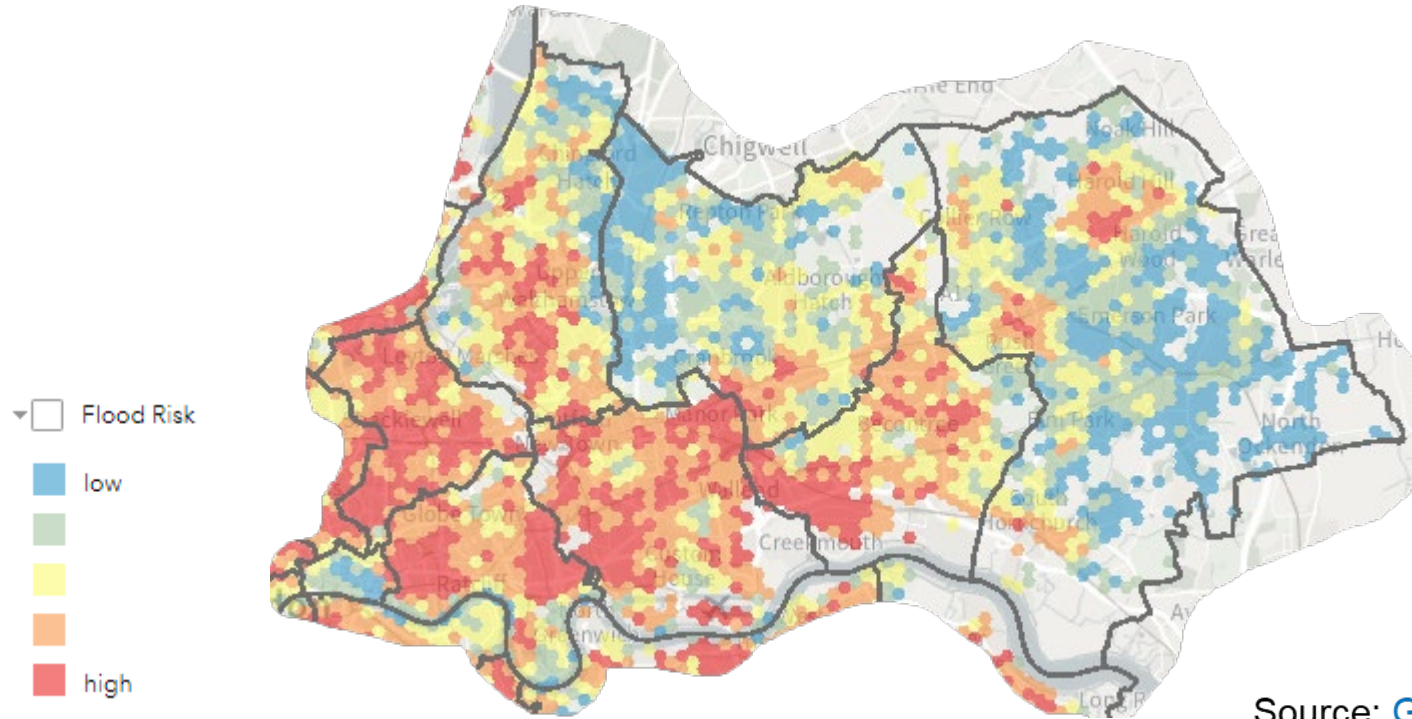


Case study – Waltham Forest Family and Community Health Centre

- Care co-coordinator
- Social prescriber
- Identifying patients early and contacting patients
- Hats/ gloves/ scarves offer- HEET
- Winter spaces map in WF



Flood risk in north east London boroughs



Source: [GLA climate risk metrics](#)



Extreme weather - Flooding

The challenge

The third UK Climate Change Risk Assessment (CCRA) in 2022, identified that in all future climate change scenarios flood risks are projected to **rise** over the course of the 21st century, as UK sea levels continue to rise.

At risk populations: children, elderly, pre-existing MH disease including cognitive impairment, pre-existing physical health problems, homeless, language/ cultural vulnerabilities.

Floods and windstorms cause⁴

- Direct effects (drowning, injuries, electrocution, fire)
- Infectious diseases (GI infections from contaminated water, rodent borne disease)
- Respiratory disease from mould and damp
- Carbon monoxide poisoning due to inappropriate use of generators
- Long-term mental health problems,
- Indirect effects (temporary limitations on access to health and social care services, prolonged displacement, power outages).
- Other health effects (for example, heart attacks)



Local health impact

Whipps Cross Hospital patients evacuated after flooding

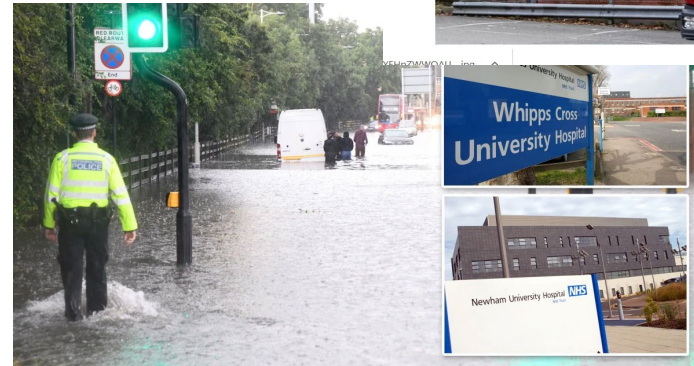
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London flooding: What happened when a month of rain fell in one go

Whipps Cross Hospital cancels operations after flooding

© 27 July 2021





Air pollution

- The estimated mortality burden of air pollution in England is between 26,000 and 38,000 a year.
- Improvements in air quality result in improved health outcomes – for example, reductions in air pollution in London have led to reduced childhood asthma hospital admissions.
- Further reductions in air pollution will lead to significant reductions in coronary heart disease, stroke and lung cancer.

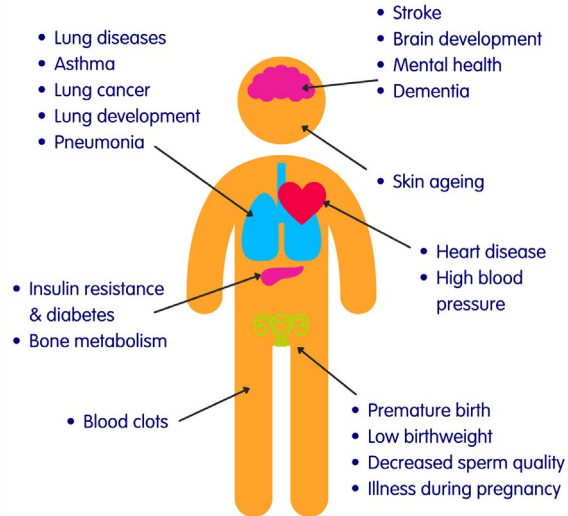
We have the highest number of deaths related to air pollution in the UK

Of the top 25 upper tier local authorities in England with the highest proportion (%) of deaths attributable to PM 2.5 in 2019, 24 were London boroughs

England	5.1	
Newham	7.0	
City of London	6.9	
Waltham Forest	6.9	
Westminster	6.8	
Barking and Dagenham	6.8	
Islington	6.8	
Kensington and Chelsea	6.8	
Hackney	6.8	
Tower Hamlets	6.7	
Redbridge	6.7	

Source: [Mayor of London](#)

Air pollution impacts every organ in the body



Take steps to improve your
health this #CleanAirDay
cleanairday.org.uk



Children exposed to air pollution showed significantly smaller lung volume (a loss of approximately 5% lung capacity) (Lancet 2018)



HOME > NEWS > ENVIRONMENT > UK's first air pollution clinic for children to open in Tower Hamlets

UK's first air pollution clinic for children to open in Tower Hamlets

by [Gabiella Wong](#) / November 5, 2022



The air pollution clinic will be based at the Royal London Hospital in Whitechapel. Pic: Chris L L/Wiki Commons

The UK's first environmental air pollution clinic for children is set to open in Tower Hamlets in early 2023.

It will be based at the Royal London Hospital in Whitechapel and aims to improve the health of

Resources for health professionals

Air Pollution



Air pollution

Air pollution is in the air that we breathe in, and there are lots of different types of pollution in the air around us. Different types of pollution are caused by different things, and can affect you in different ways as they are inhaled and absorbed into the body.

Pollution can come from lots of sources, including: fires, cleaning products, car fumes, air fresheners and smoking.

Downloads

Air pollution and you checklist
[PDF:1.15 mb]

Air pollution toolkit
[PDF:0.24 mb]

Air Pollution training
presentation for professionals
[PPTX:6.16 mb]

Asthma housing support letter
[PDF:0.77 mb]

Asthma stop smoking support
letter
[PDF:0.18 mb]

Air pollution screensavers
[PPTX:2.93 mb]

Available on the NEL HCP website

www.northeastlondonhcp.nhs.uk/air-pollution

GP intranet resources article

[Air pollution resources to support children with asthma | Coronavirus GP updates \(sitekit.net\)](#)

Time for Change | A Spotlight and Poplar HARCA film

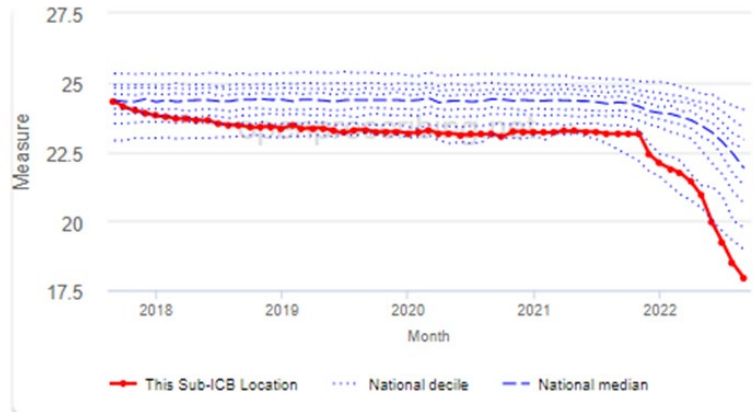


Take 15 minutes to watch this after the webinar

Inhalers achievement

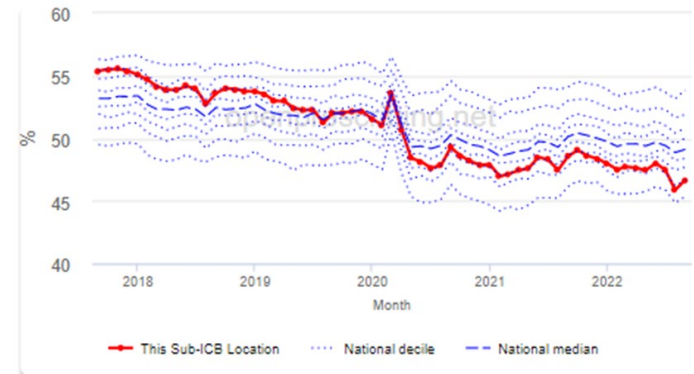
Environmental impact of inhalers - average carbon footprint per salbutamol inhaler

Mean carbon impact (kg CO₂e) per salbutamol inhaler prescribed



Short acting beta agonist inhalers

Prescribing of short acting beta agonist (SABA) inhalers - salbutamol and terbutaline compared with prescribing of inhaled corticosteroid inhalers and SABA inhalers



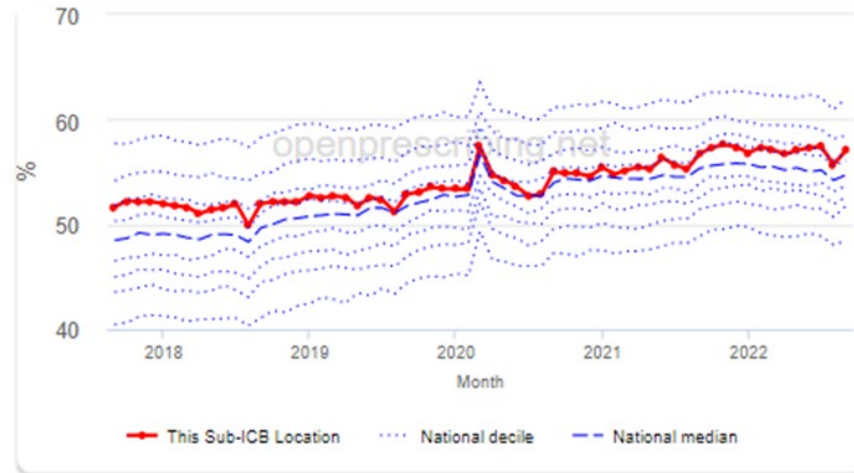
[Download data](#) ↓



But...

Environmental impact of inhalers - prescribing of non-salbutamol Metered Dose Inhalers

MDIs prescribed as a proportion of all inhalers in BNF Chapter 3, excluding salbutamol



[Download data](#) ↓



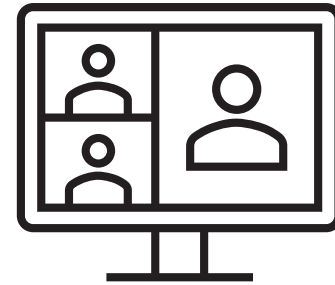
In summary

Health Outcome	Known Effects of Weather/Climate
Heat stress, cold stress	Deaths from heart- and lung-related diseases increase with hotter and colder temperatures. Heat-related illnesses (heat cramps, heat exhaustion and heat stroke) and death increase during heatwaves.
Air pollution related morbidity and mortality	Weather affects air pollution concentrations. Weather affects the distribution, seasonality and production of air-transported allergens.
Morbidity and mortality resulting from weather disasters	Floods and windstorms cause direct effects (deaths and injuries), infectious diseases, long-term mental health problems, and indirect effects (temporary limitations on access to health and social care services).
Vector-borne diseases	Higher temperatures shorten the development time of pathogens in vectors and increase the potential transmission to humans.
Water- and food-borne diseases	Risk of bacterial pathogens increases with rising temperature. Increases in drought conditions may affect water availability and water quality due to extreme low flows. Extreme rainfall can affect transport of disease organisms into water supply.
Cataracts, skin cancers and sunburn	More cloud-free days and higher temperatures may encourage potential risk of over-exposure to UV radiation.

Table 4 - Health effects of weather/climate 2011 (LCCP/GLA)



Q & A



Making net zero business as usual

PRIORITY ASK

- **We ask that all** staff complete the short [Greener NHS online modules](#)

GOING FORWARD, HOW CAN YOU CONTRIBUTE?

- **Interact** with the Net Zero Clinical Leads for Primary Care
- **Reflect on** how your team can contribute to the delivery of the NEL ICS Green Plan
- **Remember** that the NHS is a paper lite organisation
- **Prioritise active travel** to commute and for business
- **Consider low carbon options** in the services that you design and the programmes that you deliver
- **Feedback loops** - identify opportunities to innovate and share examples of good practice

GOING FORWARD, HOW CAN NEL SUPPORT YOU?

- **Seek resource and expertise from the NEL team** to support delivery and innovation at scale
- **Provide training on how taking climate action** increases health equity

FUTURE PROOFING THE SYSTEM

- Taking climate action is essential to protect the population and **reduce pressure on the NHS**
- **Improve staff retention**, making our organisation one that takes the climate crisis seriously.

What you can do today

Check out how you are helping deliver the [NEL ICS Green Plan](#)

Complete the short [Sustainable Healthcare Module](#)

Email nelondon.nelgreenteam@nhs.net to [join the Green Team](#)


Join our [Greener NHS Community](#) and connect with likeminded people across the NHS

Follow the campaign on social media: www.twitter.com/GreenerNHS

Sign up for the national Ebulletin: <https://www.england.nhs.uk/email-bulletins/greener-nhs/>

Anyone working with/in primary care can join the [Greener Practice North London Network](#)

Next sessions

 **19 Jan.**

Session 5: Saving money by becoming a greener NHS.

 **16 Mar.**

Session 7: Best of Net Zero in Primary Care.

 **16 Feb.**

Session 6: How to measure the carbon footprint in Primary Care.

Local authority climate action plans

- [Climate change | London Borough of Waltham Forest](#)
- [Climate emergency \(towerhamlets.gov.uk\)](#)
- [Climate emergency declaration | Hackney Council](#)
- [Our plan to address the Climate Emergency – Newham Climate Now – Newham Council](#)
- [Barking and Dagenham Council declares climate emergency | London Borough of Barking and Dagenham \(lbbd.gov.uk\)](#)
- [The Havering Climate Challenge | The London Borough Of Havering](#)
- [Redbridge - Climate Change Action Plan Overview](#)

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