



NHS

England

London

#AskAboutAsthma asthma and air pollution webinar

NHS England – London

Babies, Children and Young People's Programme

Housekeeping



Attendees are automatically muted with camera switched off during the webinar.



Use the group chat feature to ask questions and please like any questions that you would like answered.



This session is being recorded. A link will be available after the webinar with the slides.

Agenda

#AskAboutAsthma Asthma and air pollution webinar

Monday 9 September 2024 13:00 – 14:00pm

[Click here to join the webinar](#)

Topic	Speaker
Chair: Abigail Whitehouse Paediatric Respiratory Consultant, Royal London Hospital, Barts Health NHS Trust	
Borough based approach to improving air quality: Helping CYP with asthma live their best lives	Tom Parkes Air Quality Programme Manager, London Borough of Camden
ACEing asthma in Walsall	Connie Jennings Director of Stronger Communities, Walsall Housing Group Viv Marsh Clinical Lead for Children and Young People's Asthma Transformation, Black Country Integrated Care Board
Merton children's asthma project (air quality and schools)	Rachel Tilford Senior Public Health Principal (Children and Young People), Merton Council Pearl Budy School Nurse and Lead School Nurse Lead for Asthma, Central London Community Healthcare NHS Trust (CLCH) Rashid Fagbemi Public Health Apprentice, London Borough of Merton Hayden Rickards Senior IT Analyst (GIS), London Borough of Merton Hanan El Aidouni Clinical Service Unit Manager, CLCH
Q & A	All

Helping CYP with asthma live their best lives

A borough-based approach to improving air quality

Tom Parkes, Air Quality Programme Manager, London Borough of Camden



Summary

- Local authorities have a **statutory duty to improve air quality** to protect public health
- People are **exposed to air pollution at home, at school, at work, and outdoors**
- Air pollution contributes to **health inequalities**: some people are more affected by it, even though they contribute less to poor air quality
- Children and young people have the most to gain from **breathing cleaner air in early life**
- There are **things we can all do to reduce air pollution** and our exposure to it, but **most people don't know about air pollution** or how to mitigate the risks
- Local authorities have an important role in **tackling air pollution** and working with health professionals to **raise awareness and empower people**

What is local air pollution?

- What we think of as ‘local air pollution’ has changed over time
- ‘Air pollution’ is gases and particles in the air that can **directly harm our health**, and in the 2020s that means:
 - NO₂
 - PM_{2.5}
- It is **NOT the same as CO₂** – but air pollution and CO₂ share many sources
- Air pollution **also exists indoors** in our homes, workplaces, schools and other public spaces



What is the issue?

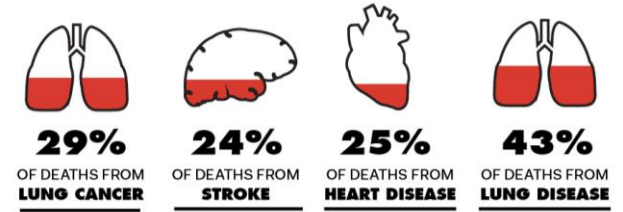
Air pollution is the **largest environmental risk for health**:

- 36,000 deaths every year (4,100) in London
- 7.7% of all mortality in Camden; long-term health impact

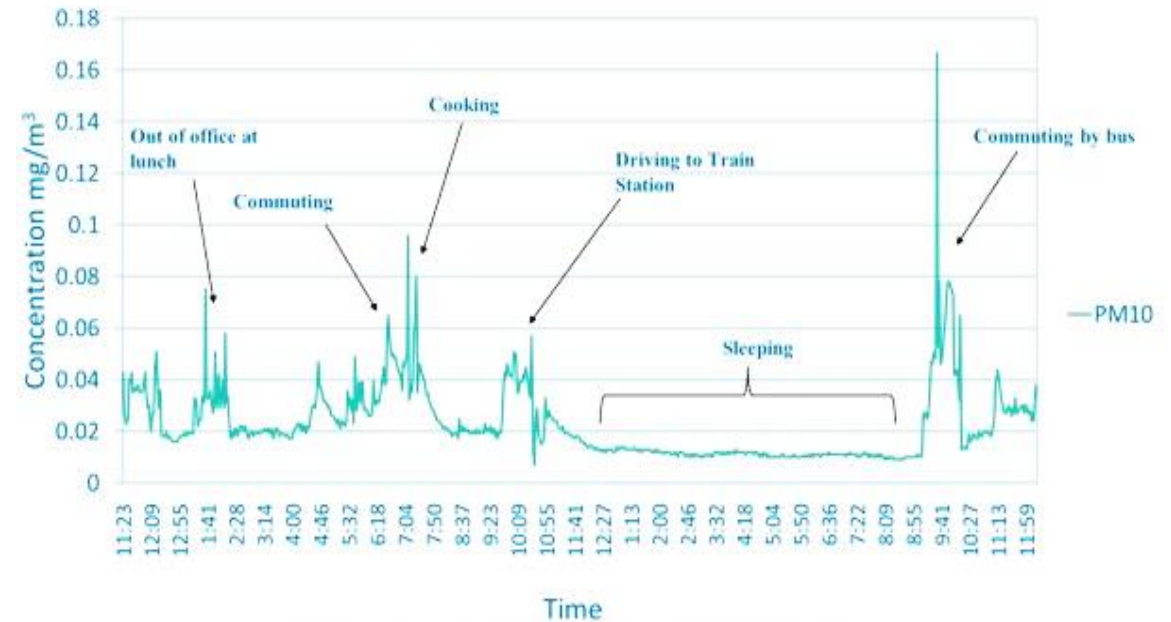
Air pollution affects everyone but **disproportionately damages the health** of lower-income households, minority ethnic groups, children, older people and people with existing health conditions

THE INVISIBLE KILLER

Air pollution may not always be visible, but it can be deadly.

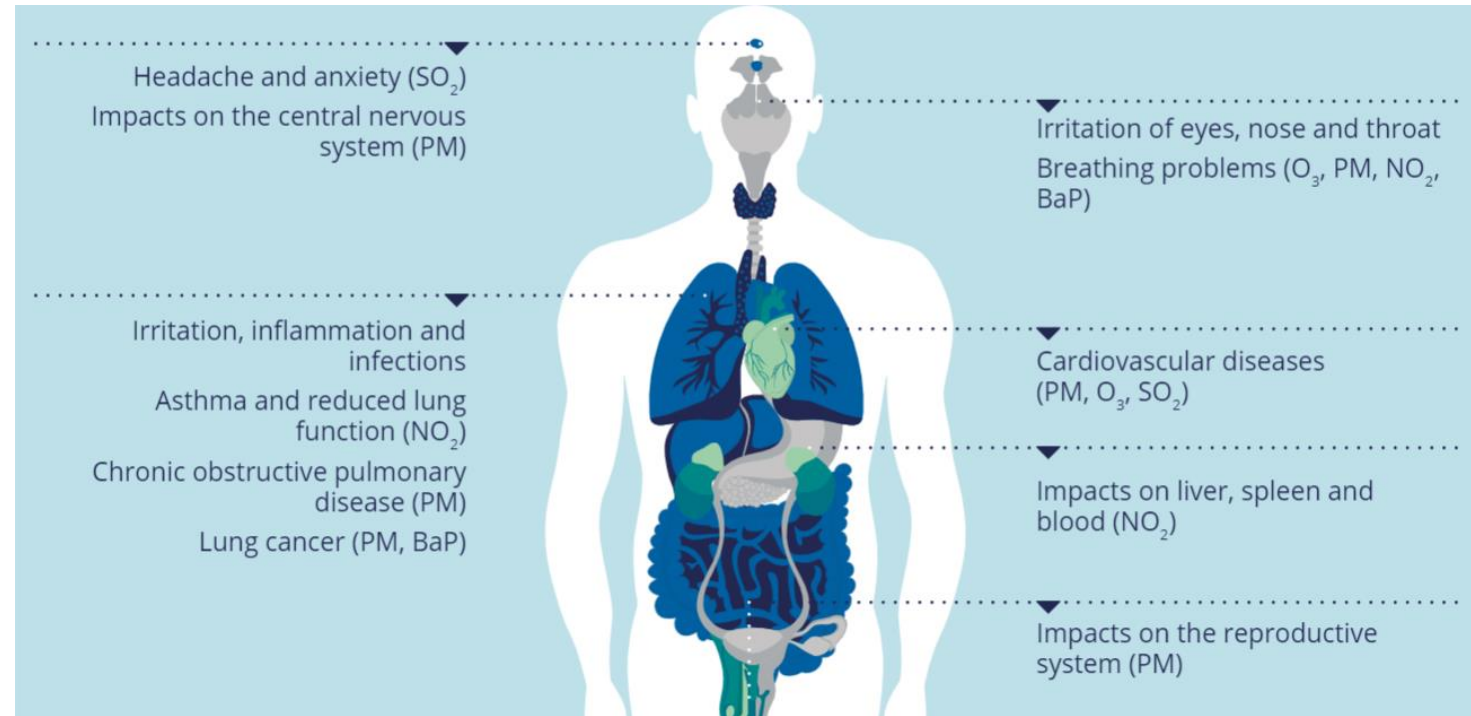
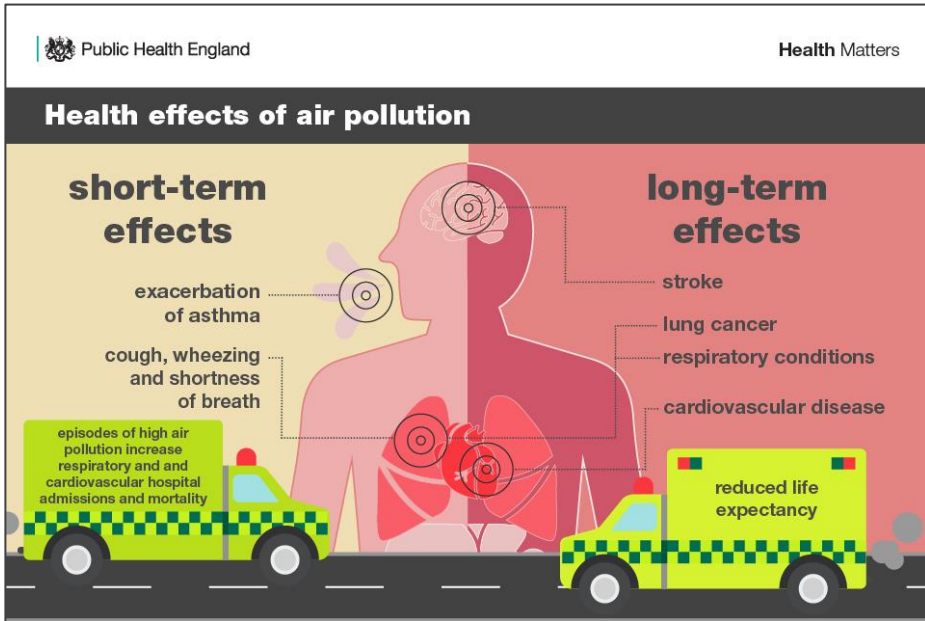


BREATHE LIFE.
Clean Air. Healthy Future.



Why does air pollution affect us?

- Respiratory inflammation
- Systemic inflammation
- Harmful chemicals (e.g. carcinogens such as BaP)

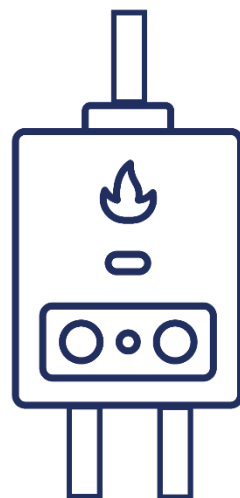


Where does outdoor air pollution come from?



Where does indoor air pollution come from?

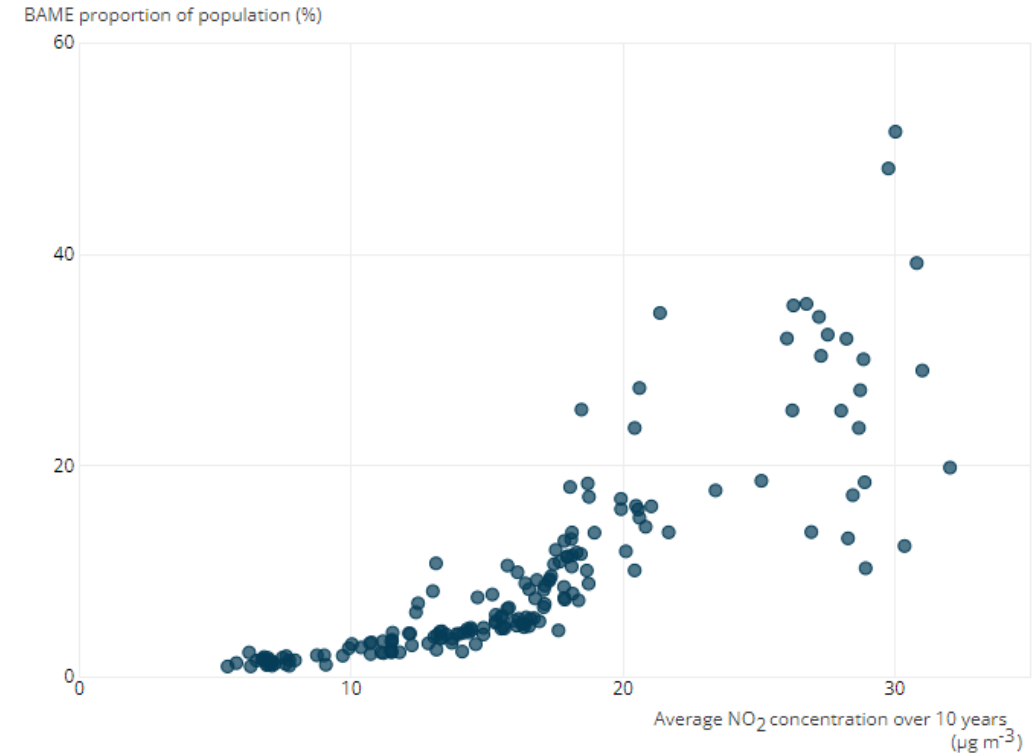
- Cooking
- Heating
- Smoking
- Chemical cleaning products
- Air fresheners, room sprays and fragrances
- Candles and incense
- Furniture, carpets and paint
- Black mould – moisture build-up



Health inequalities

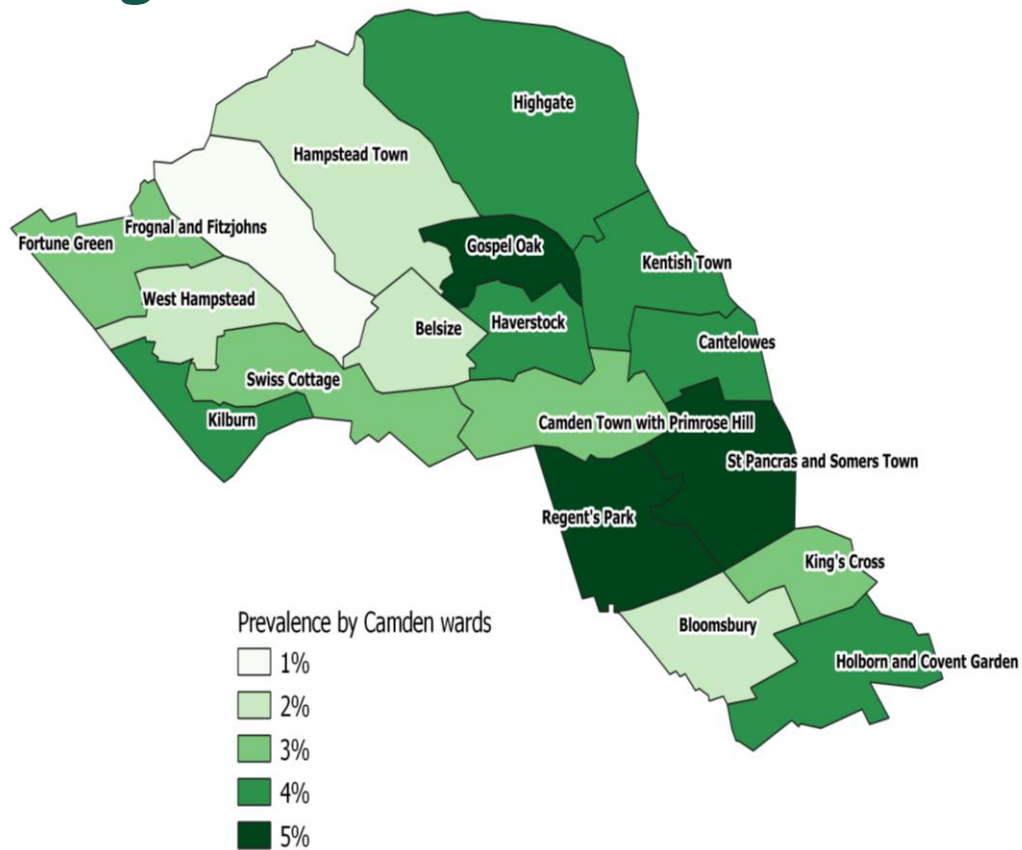
- Children are more vulnerable to air pollution – potential for lifelong impact
- Some people are more exposed to air pollution
 - Where they live (near to roads, construction, industry...)
 - Housing quality (overcrowding, ventilation)
 - Occupation
- Comorbidities
- **Air pollution is a driver of health inequality**

Percentage of the population of Black, Asian and Minority Ethnicity (BAME) compared with average 10-year exposure to NO₂, selected areas in England



Source: Office for National Statistics – Coronavirus and the effect of air pollution on mortality in England

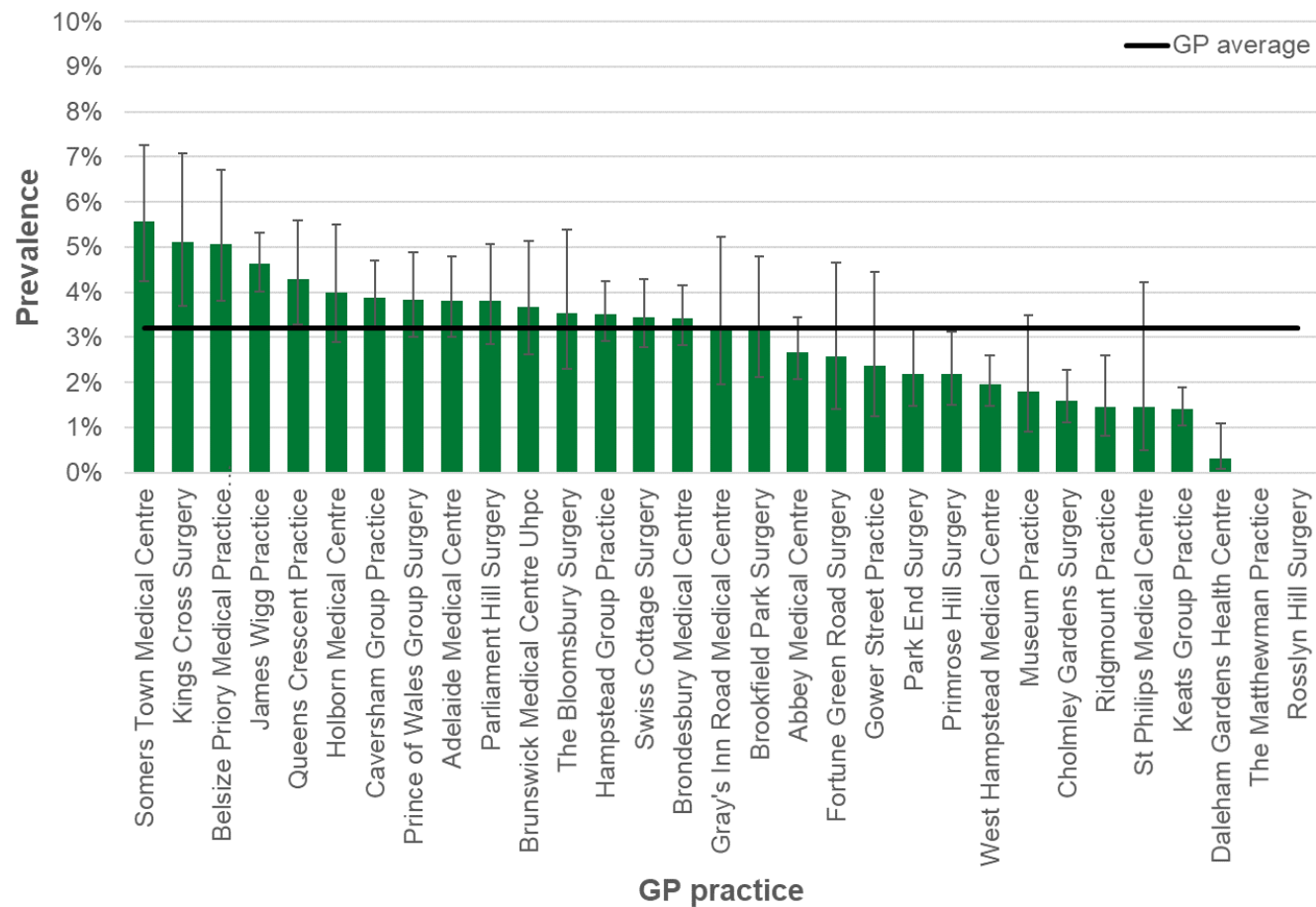
Unequal impact: Asthma prevalence for CYP 0-18yrs in Camden



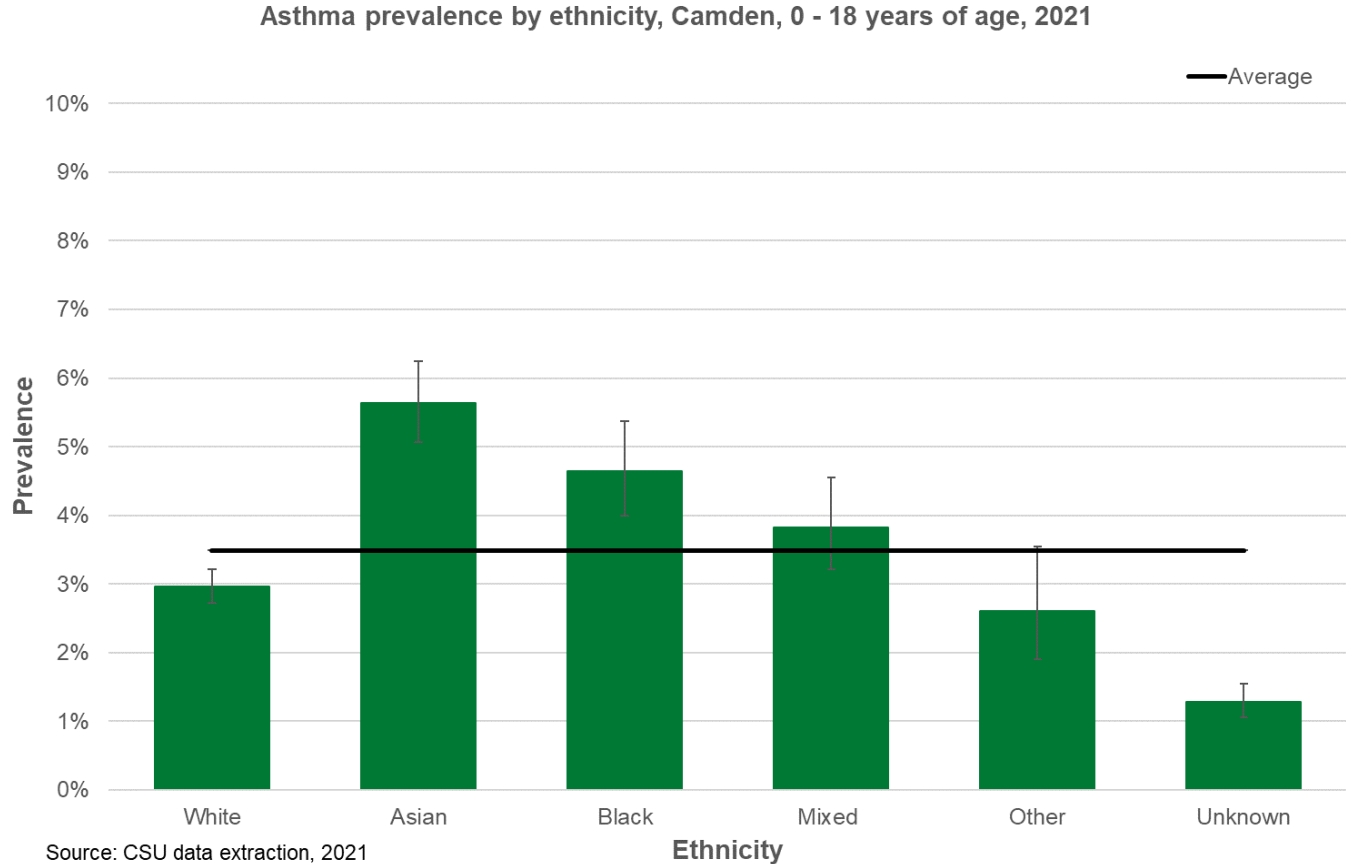
Source: CSU data extracted Jan 2021

Note: These figures have been calculated based on the sum values of the LSOAs in each ward. LSOAs are the smallest geographical areas in England and Wales where data is collected.

Diagnosed asthma by GP practice, Camden, 0 - 18 years of age, 2021



Unequal impact: Asthma prevalence for CYP 0-18yrs in Camden



Strategies for cleaner air and better health

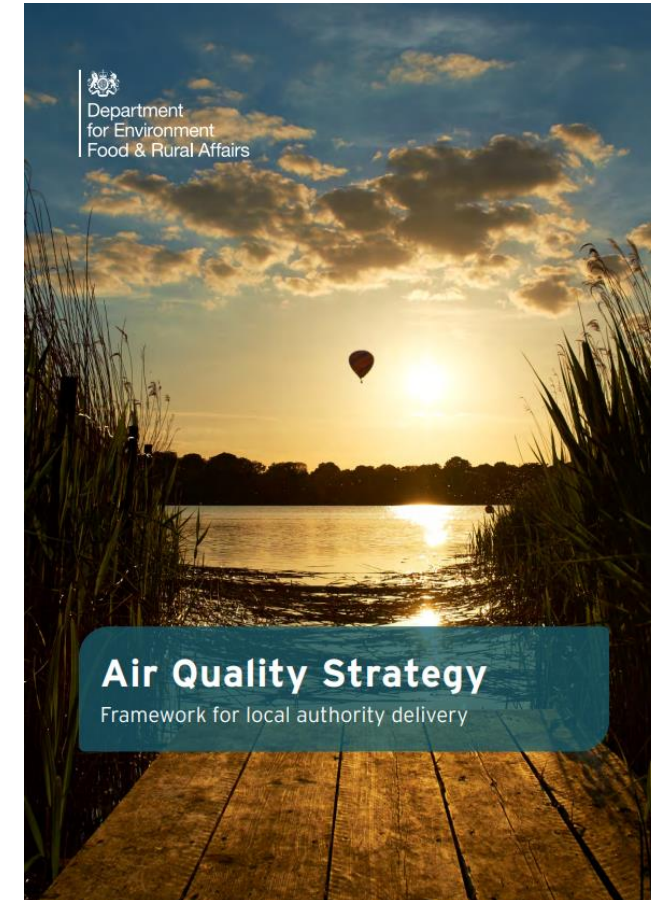
Local authorities have a **statutory duty to measure and improve air quality**

In Camden our approach considers how we should:

- Try to **avoid people becoming ill** in the first place
- **Reduce triggers** for people who already have illnesses
- **Reducing the severity of symptoms** and effects through better self-management of environmental triggers

By:

- **Reducing air pollution** outdoors and inside buildings
- Developing **local policies** and **advocating for regulatory improvements**
- **Building public knowledge** and awareness, to empower individual and collective action



Camden's clean air programme

Camden Clean Air Strategy 2019-2034

- Long-term vision for a borough *where no person experiences ill health because of the air they breathe*
- WHO-aligned air pollution limits
- Guiding principles and strategic commitments

Camden Clean Air Action Plan 2023-2026

- 4-year delivery programme to work towards the Strategic objectives
- Focus on 7 key themes with outcome-oriented commitments (reducing emissions from transport, development, buildings; reducing exposure through awareness and collective action)
- Participation, collaboration, and networks – local government in partnership with healthcare

Camden Clean Air Strategy
2019-2034

Camden Clean Air Action Plan
2023-2026



CLEAN AIR
FOR CAMDEN

 Camden

Some examples and planned activities

The ‘Year of Clean Air for Camden Schools’

A year of activities and support for schools in Camden to engage pupils and galvanise the ‘pester power’ of young people

Improving indoor air quality at home

Establishing a free home AQ sensor loan project, following a research project by LSE that found indoor AQ sensors helped people reduce pollution exposure at home

Working with NHS partners

Creating training resources and support for health professionals to speak with patients about air pollution

Reducing air pollution outside schools

Creating Healthy School Streets to reduce traffic pollution and to support and encourage sustainable, active travel



Challenges and opportunities



Councils are not generally trusted messengers

- Perceptions of ulterior motives
- Healthcare professionals may be more trusted when conveying the same key messages

Councils may not have good reach to the most vulnerable people

- Often constrained by resources and limited to people with a particular interest in sustainability or local matters
- Collaboration with primary and secondary care and local health services (pharmacy, antenatal/neonatal, health visitors, vaccine outreach etc.) presents an opportunity to improve self-management of triggers

Climate change brings new challenges for air quality

- The trend of improving AQ might not continue in the same way, e.g. increasing ozone. The combination of extreme heat and related pollution on mortality is ‘superadditive’
- Building knowledge and empowering action now will build more climate-resilient communities

Recap of the key points

- Local authorities have a **responsibility for improving air quality** and have *some* levers to achieve this in *some* environments
- Two-way **engagement between local authorities healthcare professionals and NHS services is so important** – it will be mutually advantageous.
- Reducing air pollution to reduce asthma in CYP **will also reduce risk factors linked to air pollution and other respiratory and CV illnesses** throughout life
- Improving outdoor and indoor air quality now, and building public awareness, will **better prepare us for the future environmental challenges** imposed by climate change

Contact

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<https://www.camden.gov.uk/air-quality>

ACEing Asthma in Walsall



Connie Jennings

Director of Stronger Communities
Walsall Housing Group

Viv Marsh

Clinical Lead for Children and Young People's Asthma Transformation
Black Country ICB

The Partners



- **whg** is a place based social landlord providing over **22,000** homes within **20** local authority areas
- **80%** of whg homes are located within a Core20 area
- whg are Board Members of Walsall Together ICP
- **NHS Black Country CYP Asthma Transformation Team** part of the BC ICS implementing the NHS Bundle of Care for CYP
- **Walsall Healthcare NHS Trust** provides hospital and community services for around 260,000 local residents
- **George Coller Memorial Fund** registered charity with an overall aim to raise awareness of **asthma** and improve healthcare for children



The Model



whg' s evidence-based **Community Champion** model
Proven **accelerator** to engage the **CORE20** population

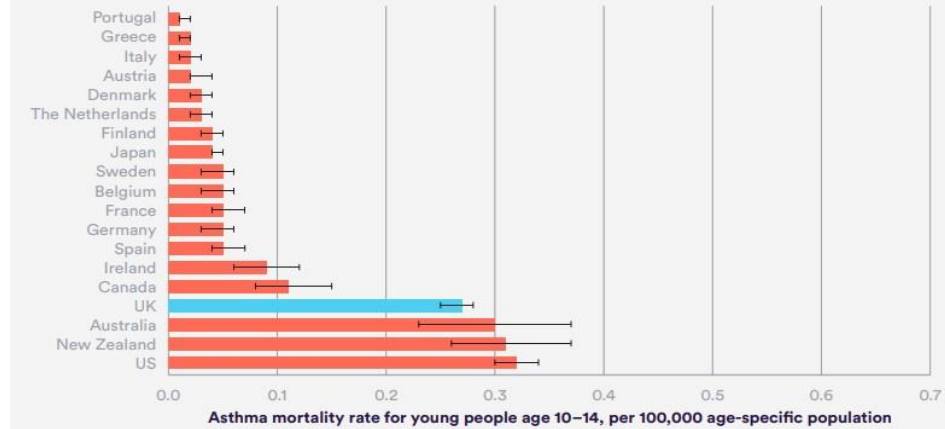
- Lived experience
- Theory of change
- Maslow hierarchy of needs
- Pied pipers - human bridge
- Clever conversations nudge
- Evidence based
- Model can be replicated and scaled lifted and shifted



Asthma in children in the UK

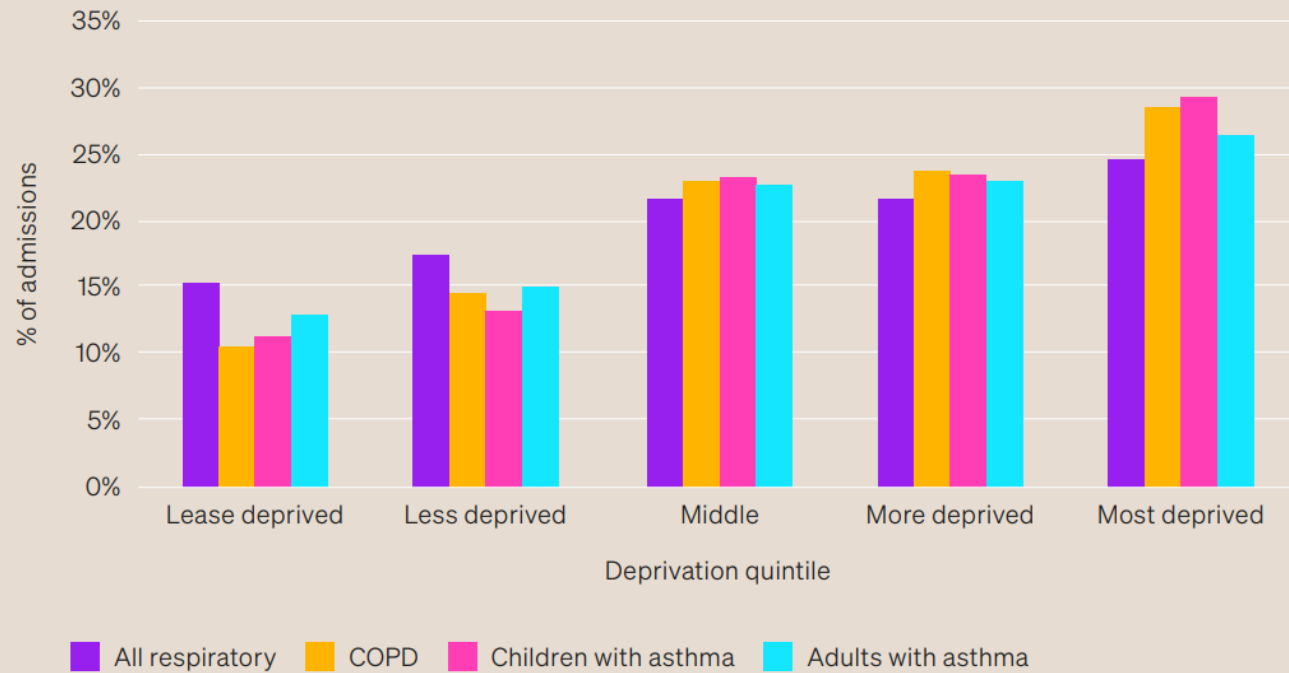
- 1 in 11 children and young people living with asthma. The UK has one of the highest prevalence, emergency admission and death rates for childhood asthma in Europe.
- Young people with asthma are more likely to have special educational needs for mental health reasons, perform worse in exams and leave school earlier than those without an asthma diagnosis.
- The impact of asthma, measured in disability adjusted life years, was highest in 5–19-year-olds and people over 60.

Figure 5.1: Comparison of asthma mortality rates for young people aged 10–24 per 100,000 age-specific population, 2016



Health inequalities – the greatest challenge in children’s asthma

Figure 12: Percentage of emergency admissions by condition and deprivation level



- Children in the poorest 10% are 4 times more likely to be admitted to hospital
- Poverty & related psychosocial/behavioural factors
- Ethnicity

REDUCING HEALTHCARE INEQUALITIES FOR CHILDREN AND YOUNG PEOPLE

CORE20
The most deprived 20% of the national population as identified by the Index of Multiple Deprivation



The **Core20PLUS5** approach is designed to support Integrated Care Systems to drive targeted action in healthcare inequalities improvement


PLUS
ICS-chosen population groups experiencing poorer-than-average health access, experience and/or outcomes, who may not be captured within the Core20 alone and would benefit from a tailored healthcare approach e.g. inclusion health groups





Target population


CORE20 PLUS 5


Key clinical areas of health inequalities

- 

1 ASTHMA
Address over reliance on reliever medications and decrease the number of asthma attacks
- 

2 DIABETES
Increase access to Real-time Continuous Glucose Monitors and insulin pumps in the most deprived quintiles and from ethnic minority backgrounds & Increase proportion of children and young people with Type 2 diabetes receiving annual health checks
- 

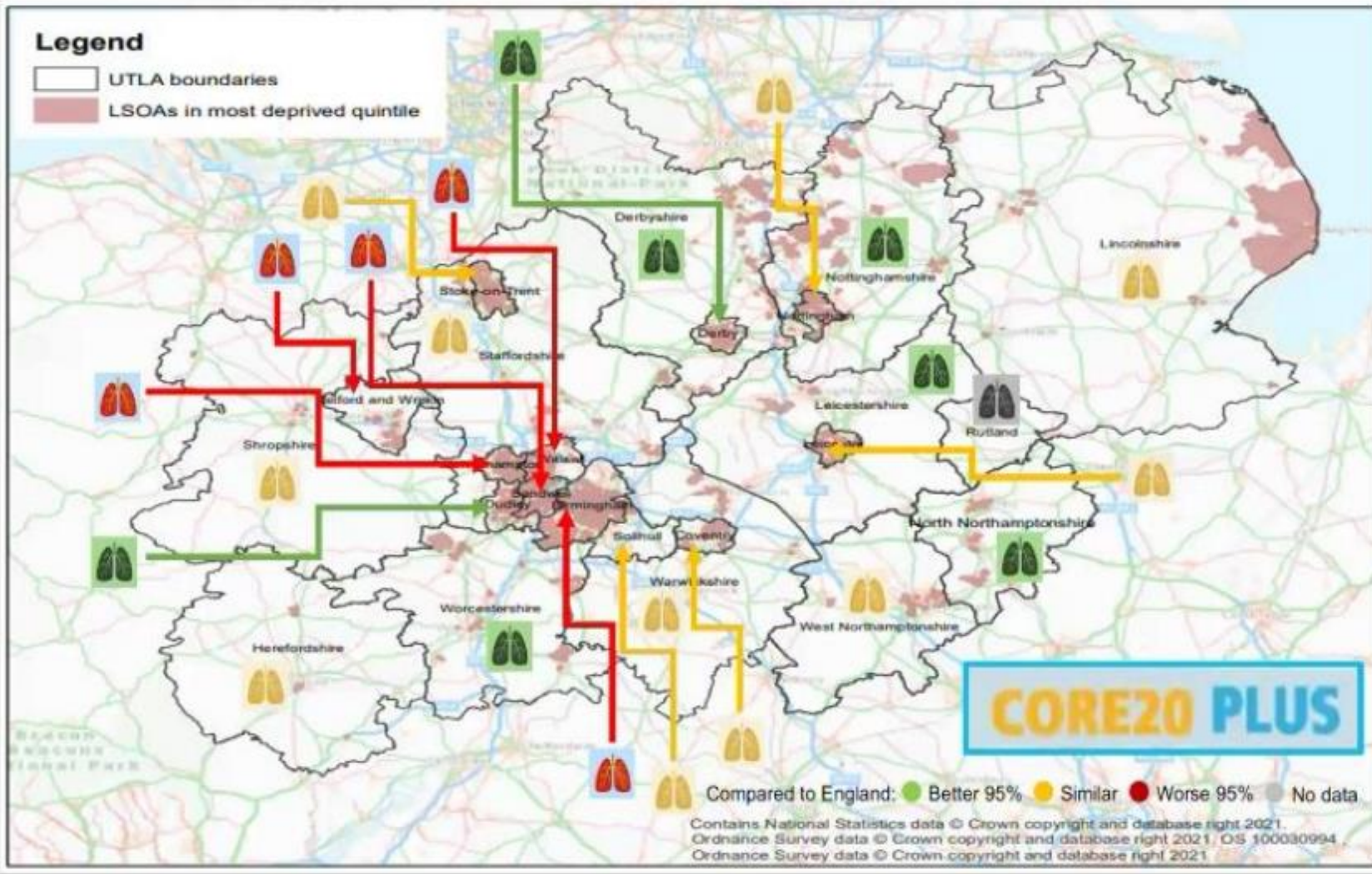
3 EPILEPSY
Increase access to epilepsy specialist nurses and ensure access in the first year of care for those with a learning disability or autism
- 

4 ORAL HEALTH
Address the backlog for tooth extractions in hospital for under 10s
- 

5 MENTAL HEALTH
Improve access rates to children and young people's mental health services for 0-17 year olds, for certain ethnic groups, age, gender and deprivation



Deprivation and hospital admissions asthma (<19 years) 2020/21

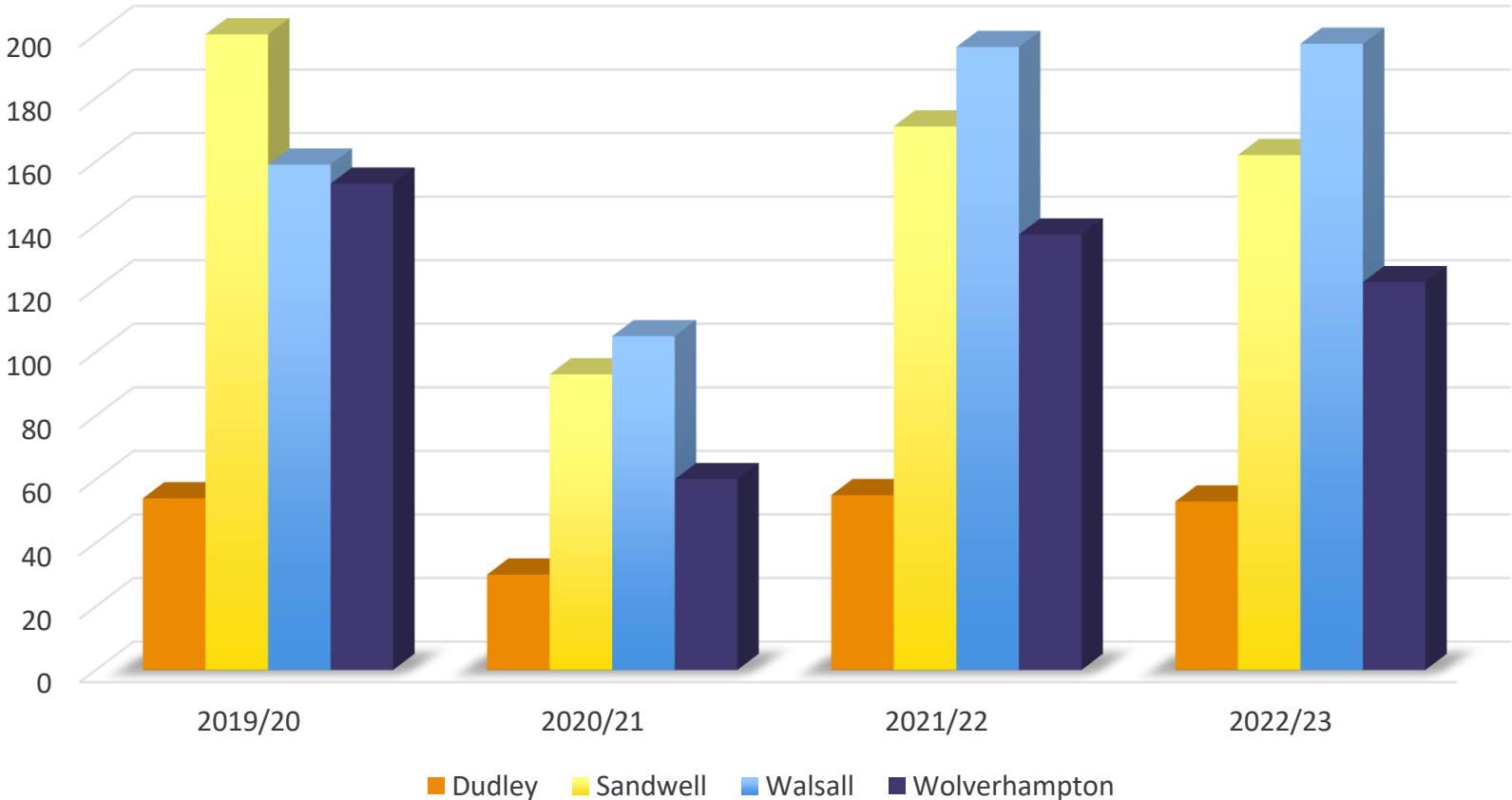


52% people in the Black Country live in the 20% most deprived areas nationally

1/3 of these are children

Black Country CYP Asthma hospital admissions

Non-elective admissions for asthma
0-19 years



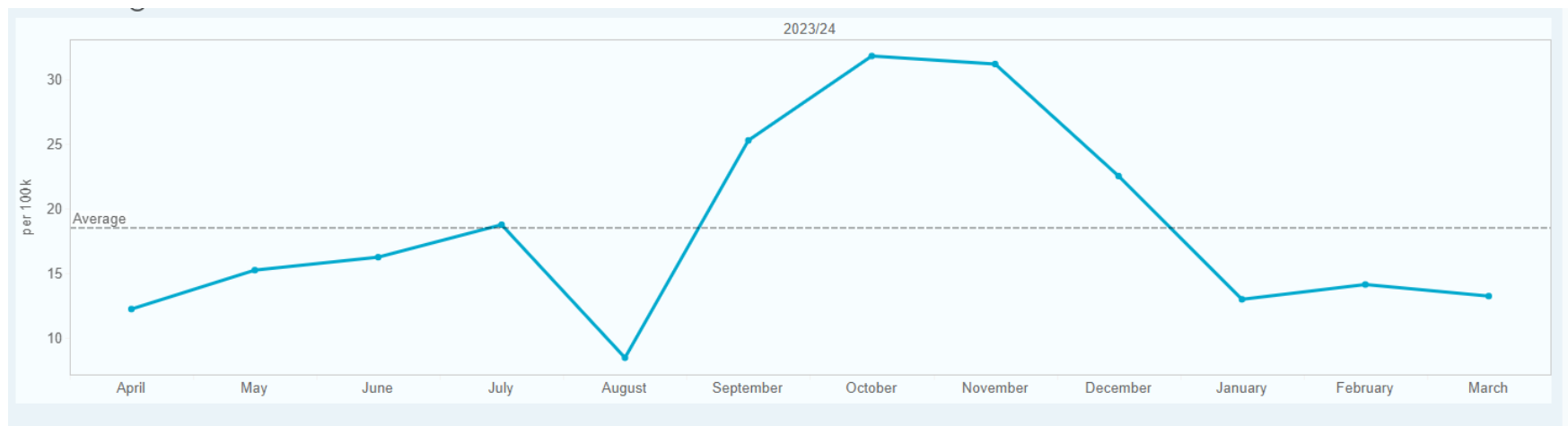
NHSE CYP Asthma Dashboard - Walsall CYP

Asthma admissions 23/24



Drivers for poor asthma control and asthma attacks include:

- Poor indoor and outdoor air quality
- Exposure to damp and mould
- Exposure to tobacco smoke and vapour
- Overcrowding
- Viral infections



Death of two-year-old from mould in flat a 'defining moment', says coroner

Awaab Ishak died in 2020, eight days after his second birthday, following 'chronic exposure' in Rochdale



ACEing in Asthma

A.C.E. - Assisting Children to Excel

- A health and housing proof of concept
- A system approach
- Identify children with asthma living in a whg home
- Connect with asthma services
- Deal with wider concerns such as fuel poverty, debt and child poverty



A.C.E – Assisting Children to Excel



April 2023 – March 2024 Performance;

- Supported **85** Families (**82** of these were receiving means tested benefits)
- **132** Children Supported
- **96%** of families met the threshold for child poverty
- **55** lone parents
- **75** children have an Asthma diagnosis and Asthma plan
- **33** families in rent arrears
- **47** surveyor visits completed
- **49** homes with damp/mould which has led to priority repairs
- **3** families relocated due to housing conditions



Move The Damp or Move the family



Initial discussions with National Housing Federation and CIH **Asthma Friendly Homes**

Promotion within housing sectors publication Inside Housing (A.C.E and Ask About Asthma campaign)

Year 2 programme now launched with learning from POC embedded

<https://www.insidehousing.co.uk/insight/insight/how-a-walsall-social-landlord-is-fast-tracking-damp-repairs-for-children-with-asthma-82319>



Merton Children's Asthma Project

September 2024

Hanan El-aidouni

Pearl Buady

Rashid Fagbemi

Hayden Rickard

Rachel Tilford

Tom Fiedosiuk



South West London



Central London
Community Healthcare
NHS Trust

Session contents

- Introduction to the project
 - Aims and objectives
 - Core components
 - Team members
- Where is the project now
 - Challenges
 - Learning
- What have we learnt so far
 - Feedback from the school nurses
 - Maps from the air quality monitoring
- Next steps



Aims and objectives of the project

- Identify sources of environmental impacts on pupils diagnosed with asthma – home, school, school journey, other, using mobile monitors
- Provide CYP a voice in describing their issues and what would help them
- Gain insights from school staff, school nurses, parents and carers, GPs, primary care staff, on the issues faced with CYP with asthma
- Use air quality monitoring to identify what would need to change and work with the child and their family to identify behaviour changes that would aid children's asthma management
- Devise and evaluate the impact of an intervention to support CYP with asthma based on the environmental, CYP, parent / carer insights and stakeholder insights

Core components and team members



Area of the project

Lead

Talking with children about their experiences of their asthma, their parent's views and capturing data about their clinical history. Presentations and consent forms for parents and children. Child asthma mood trackers. Clinical data from EMIS

Children and their parents
School Nurses – ideally placed because already working in schools

Recording the air quality surrounding the child at home, on the way to school and at school

Devices carried by the children, with data sent to the Council and shared with school nurses

Mapping the air quality data

Council mapping team

Supporting the parents with the devices
Guide to using the devices

Public Health apprentice

Project management support

PH and CLCH teams

Steering Group and Project advisory group

Various, ICB, NHSE, CLCH, LA

Funding

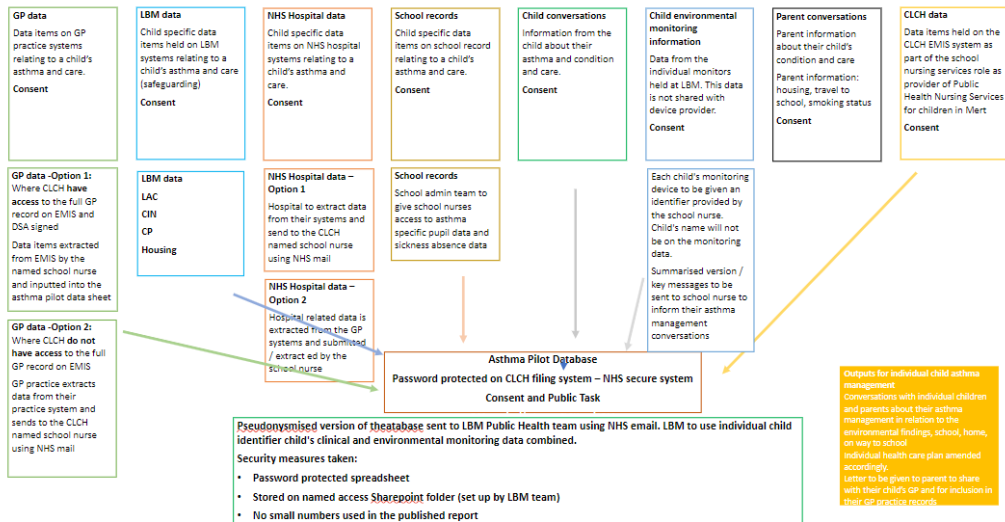
ICB £30,000/ LA Place funding for the devices



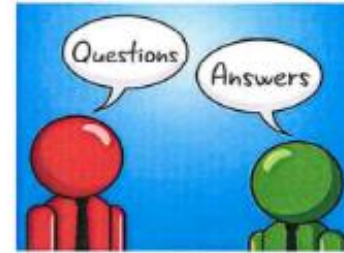
Examples of project documentation



MERTON ASTHMA PROJECT DATA FLOWS – CONSENT and PUBLIC TASK



WHAT WILL I DO AS PART OF THE PROJECT?



You will be asked some questions about how asthma makes you feel, what medicines you take and a few more questions.



You will be given something called a Ghost and a 'phone' in a mesh bag to attach to your school bag. This will measure pollution wherever you go.

Asthma project device guide

Items you will find in the asthma bag include:

- 'Ghost' air pollution monitor
- iPhone with restricted access
- Chargers for both devices
- Password list



WHAT WILL YOUR CHILD DO AS PART OF THE PROJECT?



Record how their asthma feels each day and meet with the asthma nurse to talk about it



Email their air quality monitoring information once a week
This will be for 3-4 weeks this term and 3-4 weeks in the autumn term



Where is the project now?

- Information governance signed off in February 2024
- Air quality monitors delivered February 2024
- Produced parent and child project information and consent forms
- Met with parents at two Primary schools in May (5 parents /children signed up – target is 40)
- Ongoing child recruitment over the summer
- School nurses have been supporting the children
- PH apprentice has been responding to queries from parents about the devices
- Mapping the data received from the gadgets

Challenges / Learning from setting up the project



Challenge / Learning

Solutions

Information Governance

- Multiple IG partners – takes quite a time to organise

Information Governance

- Meeting with the different IG leads – CLCH, LMC, GP federation, LA

Data management

- Only CLCH school nurse can identify the child but we need to be able to reconcile the clinical and air quality monitoring data

- Each child has a unique identifier.
- Each device has an identifier which is added to the school nurse's data base. LA sends Air Quality summary data to school nurses using the device code

Devices

- The original suggested device was taken off the market
- (also would not have been fit for purposes)

Devices

- Sourced a US device (no data leaves the UK)

Challenge / Learning

Devices continued

- The device has its own app to track your location but needs a phone to enable full functionality
- Need to simplify getting the data off the devices; the emailing takes too long and puts parents off

Schools

- Need to reach 40 participants
- Identified four schools to work with initially but two unable to join.
- Not every parent with asthma will want to join

Solutions

Devices continued

- Georgie Herskovits put us in touch with a supplier of reconditioned phones
- Taking the data straight off the SD cards

Schools

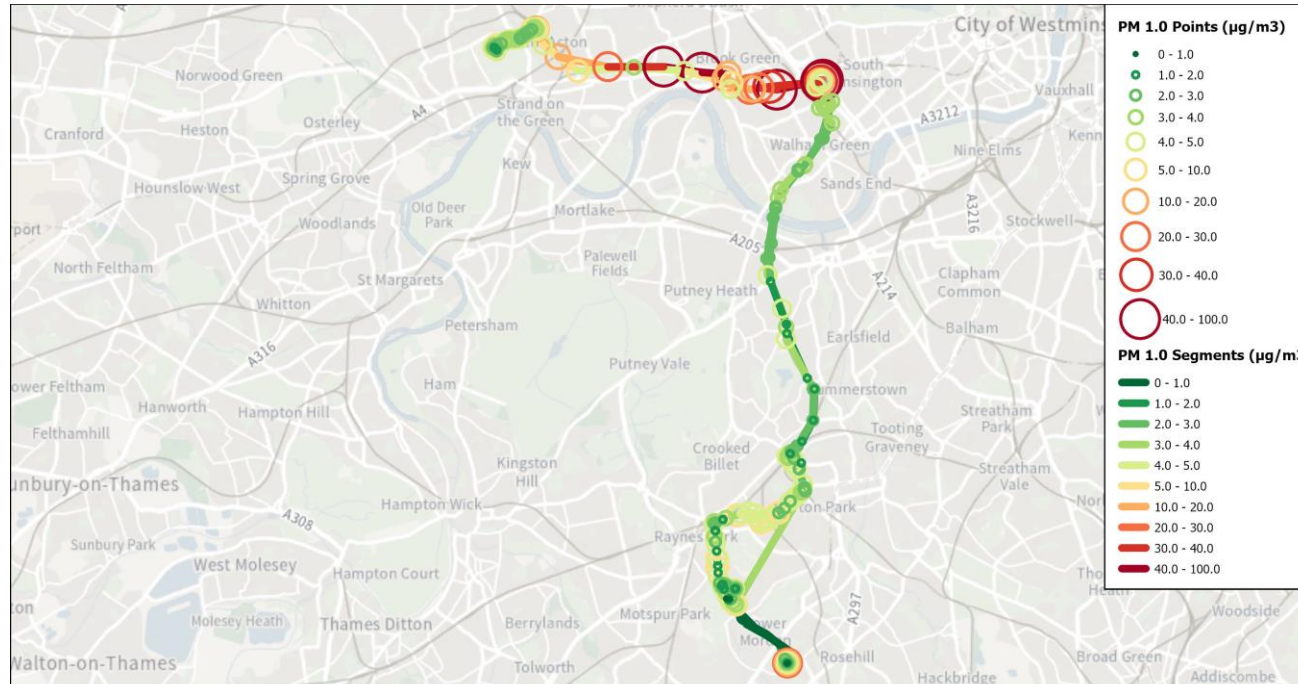
- Widen the catchment area to any child in a Merton primary school in asthma prioritising those schools in areas of deprivation and poor air quality
- Extend to secondary school pupils



What have we learnt from the participants so far

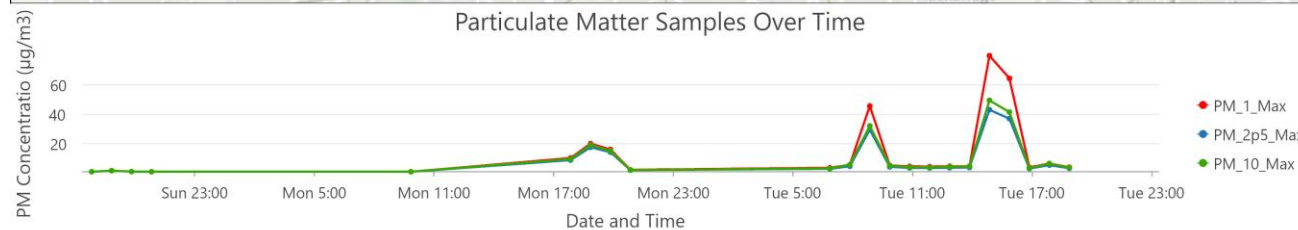
- Engagement of active enrolled participants' parents has been positive
- Good return of mood trackers and ease of communication
- Clients have appreciated the time and have found it useful
- More likely to join the project if they have a concern about their child's asthma – e.g using inhalers to enable taking part in sport, concerned about damp in the home
- Review of participants' records from EMIS indicate that most of them presented to either their GPs or A&Es with viral infections such as colds, flu, coughs, tonsillitis, wheezing and finally diagnosed with asthma.

What does the air quality monitoring data tell us?



Measurements Recorded

- PM 1.0 (micrograms per cubic meter)
- PM 2.5 (micrograms per cubic meter)
- PM 10.0 (micrograms per cubic meter)
- Date and Time
- X and Y Co-ordinates
- Temperature
- Relative Humidity



Immediate Next steps / Discussion / Questions

- Roll out to more schools in the new academic year
- Update all the guides to reflect learning so far
- Implement the new way of downloading the data from the devices