



The impacts of air pollution

WMCA Greener Together Panel, 3 June 2023

Who are we?

Asthma + Lung UK

- The leading lung health charity in the UK, representing the 1 in 5 people living with lung conditions.
- The main lung conditions are:
 - Asthma
 - Chronic Obstructive Pulmonary Disease (COPD)
 - Idiopathic Pulmonary Fibrosis (IPF)
 - Obstructive Sleep Apnoea (OSA)
 - Bronchiectasis
 - Long COVID
- As part of our prevention work, we fight for clean air for all, regardless of where you live or are born in the UK.



Air pollution

The biggest environmental threat to human health

What are the health impacts of air pollution?

Air pollution contributes to the deaths of up to 43,000 people every year in the UK.

Lung conditions

- Inflammation and irritation of the airways
- Asthma attacks, COPD flare-ups
- Increased risk of lung cancer
- Likely to cause new cases of asthma

Heart disease

- Damage blood vessels
- Cause abnormal heart rhythms
- Potentially cause small changes to heart structure

Growing links to dementia, type 2 diabetes, obesity



Who is most affected?

- People with lung conditions

Exacerbation of symptoms, severe asthma attacks

- Children

Take more breaths, can stunt lung development

- Pregnant women and unborn children

Increased risk of poor pregnancy outcomes

- The elderly

Aggravates pre-existing conditions



The West Midlands

How air pollution affects your communities

Air pollution levels in the West Midlands

- Air pollution in the West Midlands urban area is 4.9x WHO guidelines
- The West Midlands is the third most polluted region in the UK, according to the most recent annual data
- There was a reduction in air pollution between 2019 and 2021 - data skewed by COVID-19 lockdowns

Zone name	Maximum modelled annual mean concentration ($\mu\text{g}/\text{m}^3$)	No. times over WHO recommended level
Greater Manchester Urban Area	52	5.2
Greater London Urban Area	50	5
West Midlands Urban Area (includes Birmingham)	49	4.9

Impacts of air pollution in the West Midlands

Mortality

- Mortality attributed to particulate air pollution above UK average - particularly high in Sandwell and Birmingham
- 900 deaths each year in Birmingham alone and likely second biggest cause of premature death

Hospitalisations

- Hospital admissions for asthma higher than national average – particularly high in Walsall

Economy

- Economic costs of millions of pounds per year



Leah's story

Leah Ward lives in Birmingham with her four children, including Lucy, 6, who has asthma. In the last year she's been campaigning for clean air in Birmingham and urging politicians to go further.

Both of my daughters have asthma but Lucy's asthma is most severe. She started displaying symptoms at 18 months old and since then, she has been hospitalised 15 times, including six occasions where she was admitted to a ward.

It is heart breaking and distressing to see your child in hospital, terrified and gasping for air, as the doctors fight against time to find a tiny vein to inject medication into.

Lucy's condition has baffled many medical professionals, yet I think it's the toxic levels of pollution in Birmingham that have put my 6-year-old daughter in hospital 15 times and left her fighting for breath.

During lockdown, when air pollution was much better, we were in hospital much less.



Air pollution and inequality in the West Midlands

Air pollution is unfair and unjust.

People on lower incomes:

- Are more likely to live by a main road
- Are least likely to own a car
- Experience higher rates of lung disease

In the West Midlands:

- In 2020, the highest exposures to PM 2.5 were in the cities and towns of Birmingham, Coventry, Dudley, Sandwell, Solihull, and Walsall.
- These are areas with high levels of deprivation, and it is likely that air pollution will be contributing to health inequalities in the regions (*Health Profile for the West Midlands, 2021, Office for Health Improvement & Disparities*)



What you can do

Protecting yourself and your community

Protecting yourself from air pollution

On high air pollution days...

- 1) Check local pollution levels in your area
- 2) Limit outdoor activities and exercise
- 3) Go out earlier in the day when air quality tends to be better
- 4) Avoid areas of high traffic
- 5) Keep your car windows closed if you're driving

How to prevent high air pollution...

- 1) Walk, wheel, cycle, scoot
- 2) Turn off your engine
- 3) Hold decision makers accountable



The logo for Asthma+ Lung UK features a stylized cross shape composed of four overlapping rectangular blocks. The top and bottom blocks are a vibrant magenta, while the left and right blocks are a deep, textured blue. The text 'ASTHMA+' is positioned on the top block and 'LUNG UK' is on the right block, both in a clean, white, sans-serif font.

ASTHMA+
LUNG UK

THANK YOU

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