

Reducing air pollution exposure

Levelling up lung health briefing

24 May 2022



Air pollution is damaging public health. Short-term exposure to high concentrations of air pollution can cause asthma attacks and COPD flare ups, forcing people to take drastic action to avoid its worst impacts and leaving many in hospital. The result of this is that air pollution is costing our NHS up to £20 billion each year.¹

The impact of air pollution on people with lung conditions was brought into the public eye by the death of 9-year-old Ella Adoo-Kissi-Debrah. Ella, who died in 2013, is the first person in the UK to have air pollution written on her death certificate. This was after a coroner ruled in 2020 that air pollution from road transport near her home in London was a “significant contributory factor” in her death.²

While the UK does not currently monitor the number of people who are admitted to hospital as a result of exposure to air pollution, we know that it is causing a significant impact. A 2019 paper from Kings College London found that in every major city in the UK, children and adults were more likely to be hospitalised due to asthma on high air pollution days than on low air pollution days.³ Similarly, modelling by Imperial College London shows that air pollution across London caused 1,700 hospital admissions between 2017 and 2019.⁴

At Asthma + Lung UK, we hear from people with lung conditions that spikes in levels of air pollution are forcing them to stay indoors for fear of having an asthma attack or COPD flare up when they leave their home. This is not right. Everyone has the right to breathe clean air.

The change we need to see

By 2030, we need to see 20% fewer hospitalisations from lung condition exacerbations caused by air pollution.

Achieving this will help to ensure we meet the health and wellbeing missions set out in the levelling up white paper.

	By the end of 2022	By 2025	By 2027	By 2030
Reducing hospitalisations from air pollution exposure	<p>Work with NHSE to analyse the number of asthma and COPD hospitalisations each year caused by spikes in air pollution.</p> <p>Publish a national road pricing strategy.</p>	<p>All planned Clean Air Zones to have been implemented without delay.</p> <p>Areas with NO2 levels above WHO limits to pilot road pricing schemes in line with road pricing strategy.</p>	<p>No major city to have annual NO2 levels above the annual and daily WHO guidelines of 10µg/m³ and 25µg/m³ respectively</p> <p>Road pricing to be rolled out.</p> <p>A clear reduction in hospitalisations from lung condition exacerbations caused by air pollution.</p>	<p>20% fewer hospitalisations from lung condition exacerbations as a result of spikes in air pollution.</p>

Traffic reduction

We know how to tackle this problem: we must reduce the number of vehicles on the road.

Road transport is the biggest single source of Nitrogen Oxide (NOx) pollution, causing 28% of emissions in the UK. Other forms of transport (aviation, rail, shipping) account for an additional 13%. It is Nitrogen Dioxide (NO₂), one of the bi-products of NOx, which causes such adverse health effects.

Much of the fluctuation in air pollution levels at the roadside can be explained by the fluctuation in transport activity.⁵

Clean Air Zones

Clean Air Zones (CAZs) are currently one of the few policy interventions that have been tried and tested. We know that they reduce levels of air pollution, particularly NO₂. CAZs charge vehicles for entering certain areas if they do not meet emissions standards. Currently they are 3 cities in the UK – Bath, Birmingham and Portsmouth – that have implemented CAZs, whilst London has been running an Ultra-Low Emissions Zone (ULEZ) since 2019. This operates in the same way as a CAZ. Only Birmingham and London's zones include private cars; it is these zones which are having the most impact on tackling toxic air pollution.

After just six months, Birmingham's CAZ reduced NO₂ levels by 13%.⁶ London's central ULEZ, which covered just a small portion of central London, reduced NO₂ levels by 36%.⁷ The ULEZ has since been expanded across inner London, up to the North and South Circular roads, with plans to expand it across the whole of Greater London in 2023. The initial expansion of the ULEZ saw 92% compliance within the first month.⁸ Both of these examples highlight that charging the most polluting cars from entering our cities lead to fewer polluting cars on the road and less air pollution overall.

Despite their effectiveness, the government has failed to work with local authorities to implement CAZs as planned. Just one of the five cities outlined in the 2015 UK Air Quality Plan and none of those local authorities required by DEFRA to implement CAZs by 2020 have implemented a Zone. The current strategy is clearly not working.⁹

The government must be ambitious about implementing CAZs. Plans to launch zones in Bradford, Newcastle and Bristol, in 2022, and in Liverpool in 2023, must be implemented in full and without delay. All areas with plans for a CAZ should be implemented by 2025 at the latest.

Road Pricing

The government needs a long-term plan for reducing road traffic which is efficient, fair and can be rolled out at pace. Road pricing offers one solution to this.

Road pricing would charge vehicles a flexible fee depending on how far they are going and how polluting their car is. This charge would not only replace CAZs but could also replace current vehicle taxes such as Fuel Duty and Vehicle Excise Duty which bring in £35bn per year.¹⁰ This sum is due to reduce as we transition to electric vehicles (EVs), as EVs are exempt from these charges.

A recent Transport Select Committee inquiry found that road pricing could be the most effective and efficient method for replacing these duties, but it noted that changes had to be made soon and in such a way that had a neutral impact of people's finances.¹¹

During the inquiry, Caterina Brandmayr, Head of Climate Policy at Green Alliance, highlighted that a well-

designed road pricing system could deliver “a wealth of benefits, including reducing congestion, improving air quality and improving health through greater walking and cycling”.¹²

In order to reduce air pollution to the extent that we are seeing 20% fewer hospitalisations from lung health exacerbations by 2030, we need a national plan to reduce traffic to be rolled out by 2027 at the latest. As such, **we need the Department of Transport to publish a Road Pricing Strategy before the end of 2022**. This should be in line with commitments made in its Road to Zero strategy. In this strategy, all places with NO2 levels above WHO guidelines by 2025 should be prioritised for pilot road pricing schemes.

Just as CAZs can be politically sensitive, so will implementing road pricing. This is why any road pricing strategy should be implemented alongside the national awareness raising campaign on air pollution, and a proliferation of monitoring in every community, as set out elsewhere in our plan to level up lung health.

Public Transport

Mission 3 of the Levelling Up White Paper highlights that “By 2030, local public transport connectivity across the country will be significantly closer to the standards of London, with improved services, simpler fares and integrated ticketing.”¹³

Improved public transport is essential for delivering the required modal shift away from cars towards clean air. People need the option of travelling via bus, tram or train and for that to be as simple and cheap as travelling by car. This will be vital to reducing air pollution and improving healthy life expectancy.

We welcome the commitments in the National Bus Strategy, Bus Back Better, to ensure no bus in England is older than Euro 6 diesel or Euro 4 petrol, making them all CAZ compliant. Areas with planned CAZs should be prioritised for fleet upgrades. We also welcome the commitment to spend £120m on zero emission buses in 2021/22, which should deliver 4,000 buses in total.¹⁴

However, if this is going to have an impact on public health before 2030, we need to go further, faster. At the next spending review, we need additional annual funding commitments to include £2.2 billion for buses and cycling in England, £1 billion for trams in England, and £4.4 billion for trains across the UK.¹⁵ Without this, we will not level up left behind areas or provide people with the opportunity to switch from cars to public transport. This will have a knock-on effect of failing to reduce air pollution sufficiently to level up health and wellbeing by 2030.

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