

Asthma UK is dedicated to improving the health and well-being of the 5.4 million people with asthma in the UK

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The Rt Hon Sadiq Khan
Mayor of London
City Hall
The Queen's Walk
London, SE1 2AA

28 July 2016

Dear Mr Khan,

Response to Mayor of London's air quality survey

Asthma UK is the UK's leading asthma charity. We support people with asthma when they need us the most and fund world-leading research to find better treatments and ultimately a cure. Our goal is to stop asthma attacks, especially those that result in death and emergency hospitalisation. We welcome the opportunity to respond to your initial proposals to improve air quality within London.

Asthma is one of the most common long-term conditions, with nearly 600,000 people with asthma living in London. We believe that air pollution, in particular traffic pollution, plays a role in triggering asthma attacks and causing asthma in both children and adults. A key report by the Royal College of Physicians earlier this year found that there is compelling evidence in children and adults that air pollution exposure is associated with new onset asthma.¹

Our own research also shows that this is an issue that is a key concern of people with asthma. In April 2014 we polled more than 1,000 people with asthma and found that:

- Traffic fumes trigger symptoms in two thirds (66%) of people with asthma.
- 34% of people with asthma tell us that traffic fumes discourage them from exercising in the open air.
- 42% of people with asthma tell us that traffic fumes discourage them from walking/shopping in congested areas.

It is likely that long-term exposure to air pollution is linked to the development of asthma. For people who already have asthma, there's strong evidence that air pollution can make

¹ www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution

it worse.² We were therefore pleased to see your commitment to make cleaning up London's air a key priority and broadly welcome the bold proposals put forward within the first phase of your public consultation.

The Ultra Low Emission Zone (ULEZ)

Asthma UK wants to see urgent action on tackling air pollution. We welcome the planned introduction of the ULEZ but would like to see this come into place at the earliest opportunity and be potentially widened further in the future. In particular, we would like to see further consideration on expanding the ULEZ to encompass the existing London-wide Low Emission Zone (LEZ) for heavy vehicles.

The need for stronger London-wide action has been highlighted by the ineffectiveness of the current LEZ. A recent study funded by Asthma UK assessed associations between traffic-related air pollutants and respiratory/allergic symptoms amongst 8-9 year-old schoolchildren living within the LEZ. The research showed that traffic-related air pollutants are having adverse effects on respiratory/allergic symptoms in schoolchildren in London.³ The same study also highlighted that stronger action is needed to help reduce exposure to these pollutants, as London's LEZ as implemented in its first three years so far has had no beneficial effect on the symptoms of the schoolchildren assessed.

As highlighted by the study there was no evidence of a reduction of either nitrogen oxide or nitrogen dioxide in urban background or roadside locations assessed. Nitrogen dioxide is a harmful pollutant that exacerbates asthma symptoms. A meta-analysis of the effect of traffic generated air pollution and asthma in children, which included 19 studies, concluded that increased exposure to nitrogen dioxide is associated with new-onset asthma.⁴ We believe that stronger action needs to be considered given the lack of progress to date to reduce these pollutants.

Diesel scrappage scheme

The Committee on the Medical Effects of Air Pollutants also reported in November 2010 that, as well as exacerbating asthma in those already having the condition, air pollution might also play a role in the induction of new cases of asthma amongst those living close to busy roads with a lot of lorry traffic.⁵ We would like to see efforts to rapidly encourage diesel users to switch to cleaner vehicles where possible, and we encourage you to work with the UK Government to develop such a scheme.

Vehicle Excise Duty

² Dick S, Doust E, Cowie H, Ayres JG, Turner S. [Associations between environmental exposures and asthma control and exacerbations in young children: a systematic review](#). *BMJ Open* 2014;4:e003827 doi:10.1136/bmjopen-2013-003827

³ Wood HE, Marlin N, Mudway IS, et al. [Effects of Air Pollution and the Introduction of the London Low Emission Zone on the Prevalence of Respiratory and Allergic Symptoms in Schoolchildren in East London: A Sequential Cross-Sectional Study](#). Ding A, ed. *PLoS ONE*. 2015;10(8):e0109121.

⁴ Gasana J, Dillikar D, Mendy A et al. Motor vehicle air pollution and asthma in children: a meta-analysis. *Environ Res* 2012;117:36-45.

⁵ COMEAP, Does Outdoor Air Pollution Cause Asthma? 2010

It is encouraging that you are proposing to seek greater control on Vehicle Excise Duty in order to go further than the Treasury has to date to encourage drivers to use cleaner vehicles in the city. We believe that this could be an effective measure to help increase the uptake of cleaner vehicles in London, while also potentially generating funds to better resource action aimed at improving air quality.

Pedestrianisation

A study published in the New England Journal of Medicine found that diesel exhaust fumes on polluted streets have a measurable effect on people with asthma.⁶ The study looked at the effects on 60 people with mild and moderate asthma of walking along the western end of Oxford Street in London and found that volunteers experienced increased asthma symptoms, reduced lung capacity, and inflammation in the lungs. We believe that pedestrianisation of areas where there is a particularly high volume of foot and vehicle traffic should be explored as a potential means of reducing exposure to pollutants, and we are encouraged to see this included.

High pollution alerts and mhealth applications

We welcome the proposals to increase alert systems in London to help people become aware of periods when pollution is high. Asthma UK raises awareness of high pollution episodes through its online channels and has also contributed to DEFRA workshops on how to engage people in 'at risk' groups.

We believe in addition to your proposals, there is an opportunity to build on existing technology used to communicate pollution information. The National Review of Asthma Deaths found that only half of people who died from asthma had any record at all of what triggered their symptoms.⁷ Very few people are getting the support and advice they need to identify and deal with asthma triggers like pollution. Apps such as [London Air](#), developed by King's College London, draws information from over 100 monitoring sites across London to measure air pollution levels, allowing people to potentially take preventative action to reduce their risk of exposure to high levels of pollution.

As we highlight in our new report, *Connected asthma*, Asthma UK believes that there is great potential in developing mHealth technology to help people with asthma to self-manage their condition.⁸ Users and healthcare professionals need to be at the heart of developing these technologies to ensure that these meet their needs and are intuitive in how they are used. We would like to see investment in innovative technology to facilitate the management and self-management of asthma, bringing together life sciences and tech companies in collaborations with multi-disciplinary academics and patients - for example, through DigitalHealth.London and other collaborative programmes.

Emissions Surcharge

⁶ McCreanor J, Cullinan P, Nieuwenhuijsen MJ et al. [Respiratory effects of exposure to diesel traffic in persons with asthma](#). N Engl J Med. 2007 Dec 6;357(23):2348-58.

⁷ Royal College of Physicians. [Why Asthma Still Kills: the National Review of Asthma Deaths \(NRAD\) Confidential Enquiry Report](#); 2014.

⁸ Asthma UK. *Connected asthma: how technology will transform care* [to be published August 2016]

In keeping with the need for urgent action on air pollution, we welcome your proposal to introduce a daily charge in 2017 aimed at reducing emissions from the vehicles that pollute at peak times in the Congestion Charge Zone. However, to be more effective we believe that further consideration should be given to including a greater range of diesel vehicles to ensure that those that in practice pollute the most are included. For example, by only targeting older diesel cars this may simply encourage people to switch to newer diesel models rather than cleaner options.

Overall, Asthma UK welcomes these proposals. We look forward to exploring these further as this public consultation continues. If you have any questions related to this response, please do not hesitate to contact my colleague Joseph Clift (Senior Policy Officer) at jclift@asthma.org.uk

Yours sincerely

A handwritten signature in black ink that reads "Samantha Walker". The signature is written in a cursive, slightly slanted style.

Dr Samantha Walker
Deputy Chief Executive *and* Director of Research and Policy