



Air Quality and Health Briefing

Objectives:

- Provide key information on air quality and health.
- Suggest a set of recommendations to improve air quality and health.
- Provide links to key resources.
- Provide information on relevant networks and steering groups.

Audience: Public health professionals working to improve air quality in London and other professionals and policy makers working in transport and urban planning, housing, environment and the NHS.

Key messages:

- Despite recent improvements, air pollution is still the biggest environmental risk to the health of all Londoners and disproportionately impacts certain populations.
- ADPH London endorses adopting a Health in All Policies (HiAP) approach to tackling poor air quality.
- We recommend prioritising action in the following areas: transport and urban planning, healthcare, education, housing and indoor air quality and working with local communities. This is explained in more detail in the 'Recommendations to improve air quality in London' section below.

Context - Air quality and health

- London has the largest number of deaths attributable to poor air quality out of any English region and air pollution is still the biggest environmental risk to the health of all Londoners. (1)
- Each year in London, air pollution contributes to approximately 4,000 premature deaths (2) and costs the city's economy an estimated £3.7bn. (3)
- In 2020, COVID-19, dementia, heart disease, stroke, lung disease and lung cancer were the most common causes of death in London. (4) Respiratory diseases and cardiovascular diseases and are all associated with air pollution exposure whilst more recent research has associated air pollution with affecting the brain causing dementia and cognitive decline. (5) Furthermore, air pollution is associated with prenatal developmental issues and impacts on lung development in children. (5)

Air quality and health inequalities

- Air pollution affects everyone in London, but it is also a health inequalities issue as it disproportionately impacts certain populations. This includes children, the elderly, deprived communities, those from ethnic minorities and people with underlying health conditions. (1)

Chief Medical Officer's Annual Report on Air Pollution, Dec 2022

- In December 2022 the Chief Medical Officer (CMO) for England, Chris Whitty, published his annual report for 2022, which focused on air pollution. (5) Prioritising air pollution as a theme for the CMO annual report, within the broader context of emerging from Covid-19, demonstrates the importance of air pollution as a public health issue. ADPH London has published a response to the report which is available on our website [‘ADPH London welcomes CMO’s air pollution report’](#).

Recommendations to improve air quality in London

These recommendations are based on key thematic areas identified in the CMO’s report but are adapted for the London context.

1. Transport and Urban Planning

Road vehicles are the single largest contributor to London's poor air pollution. TfL analysis from 2022 shows 21 per cent of London residents’ car trips could be assessed to have a ‘high likelihood’, with appropriate incentives, of switching from car to active, efficient and sustainable modes. This demonstrates the potential for change. (6) Public Health professionals can help reduce transport emissions by:

- **Making the case for current and well considered future Road User Charging schemes.** Current Road User Charging schemes include the Congestion Charge, The Low Emission Zone (LEZ) and Ultra Low Emission Zone (ULEZ) which have been shown to be effective in improving air quality in London. For example, NO₂ concentrations alongside roads are estimated to be 20% lower in inner London and 44% lower in central London than they would have been without the ULEZ. (7) Despite this more work is needed, especially in outer London as more deaths related to air pollution occur in outer London. (7) Read [ADPH London’s consultation response](#) supporting TfL’s expansion of the ULEZ London – wide from August 2023.
- **Encouraging walking, cycling and public transport use.** This can be achieved by advocating for interventions such as the ‘Healthy Streets Approach’ and prioritising road space for walking, cycling and public transport. (8) This has been shown to improve air quality (9) as well as having other co-benefits such as increasing physical activity levels and reducing collisions and carbon emissions. (10) Furthermore, prioritising Healthy Streets Interventions in locations where there is poor air quality and high deprivation will also help reduce inequalities in air pollution exposure observed in London. (11)
- **Making the case for investment in ultra-low emission and zero-emission vehicle fleets in both the private and public sectors.** Successful programmes to phase out vehicle fleets have been delivered recently in London. For example, a

phase out and retrofit of remaining diesel buses resulted in all 9,000 TfL buses meeting or exceeding the cleanest Euro VI emission standards by 1 January 2021, reducing bus-related NOx emissions by up to 90%. (12) The Local Government Association has provided a series of briefing notes on what local authorities can do to decarbonise transport and reduce emissions. (13)

2. Schools and Education

Children are particularly vulnerable population to the impacts of air pollution. This is highlighted by the tragic death of Ella Kissi-Debrah following an asthma attack who became the first person in the UK to have air pollution listed as a cause of death. Working with schools can help protect children and young people from poor air quality and public health professionals can help by:

- **Implementing the recommendations in the ‘Mayor’s school air quality audit programme’.** The recommendations can be implemented at the local level and include the installation of green screens and air filtration systems, building equipment upgrades and behaviour change campaigns. (14)
- **Making the case for traffic restriction schemes, such as ‘School Streets’ and ‘School Superzones’.** Traffic restriction schemes have been shown to reduce nitrogen dioxide by up to 23 per cent during the morning drop off. (15) TfL has produced guidance to help with School Streets implementation. (16)
- **Encouraging all schools in London to register for TfL’s ‘STARS behaviour change’ accreditation scheme.** STARS accredited schools can expect to see an average 6% reduction in the number of trips made by car to your school; gold and silver accredited schools can see up to 12% reduction. (17)

3. The NHS

The NHS is committed to improving air quality by cutting business mileage by 20% by 2023/24; ensuring that at least 90% of the NHS fleet uses low emissions engines (including 25% ultra-low emissions) by 2028; and phasing out primary heating from coal and oil fuel on NHS estates. (18) Public health professionals can help the NHS achieve this by:

- **Supporting the delivery of local ‘NHS Green Plans’.** This includes encouraging staff and patients to walk, cycle or use public transport where possible. The GLA has produced a toolkit entitled ‘Making the case for social prescribing of active travel’ which can be used to help healthcare staff encourage more less polluting modes of travel. (19)
- **Implementing the findings and recommendations of the ‘Clean Air Hospital Framework’.** This is based on work conducted at Great Ormond Street Hospital for Children and advocates for action on travel, procurement and supply chain design and construction, energy generation, local air quality, communication and training and hospital outreach and leadership. (20)
- **Implementing the recommendations in the ‘Patient and public information about air pollution’ section of the CMO’s Air Quality report.** This includes providing training for healthcare professionals and investigating how air quality alerts could be disseminated to healthcare professionals to help protect clinically vulnerable populations.

4. Housing and Indoor Air Pollution

Indoor air pollution is important as 80% of a typical adult day is spent indoors. The CMO's report on air quality placed a renewed focus on indoor air quality. This is of particular significance in the context of the cost-of-living crisis where energy bill rises could discourage people from sufficiently heating and ventilating their homes or switch to other more polluting forms of heating such as using wood stoves and other solid fuel heating. This could further increase lung health inequalities as deprived communities are disproportionately likely to experience fuel poverty, have poor lung health and live in poor quality housing. Public health professionals can help to improve residential and indoor air pollution by:

- **Implementing the recommendations made in the 'Indoor air pollution' and 'Wood stoves and other solid fuel heating' sections of the 'Chief Medical Officer's Air Pollution Report'**. This includes providing effective indoor ventilation and adhering to the rules in smoke control areas.
- **Implementing the recommendations in the National Institute for Health and Care Excellence (NICE) 'Indoor air quality at home' report**. This includes recommendations such as prioritising indoor air quality in local strategy or plans, housing assessment referrals and awareness raising. (21)
- **Working across organisations and departments to address the impacts of mould and damp**. The tragic and shocking death of Awaab Ishak after prolonged exposure to mould acted as a catalyst for the Secretary of State to write to council leaders and social housing providers in November 2022 calling for action on housing conditions. (22)

5. Working with Local Communities

In some cases, initiatives to improve air quality have received a mixed response, therefore engaging communities is essential. Public health professionals should seek to:

- **Support a shared narrative and provide advice and information for the general population**. This will increase motivation for individual behaviour change whilst building support for policies that address poor air quality. In July 2022, 'The Health Foundation' published a communications toolkit for public health professionals entitled 'How to talk about the building blocks of health' which could be considered by public health communication teams. (23)
- **Work with local community networks such as 'Community Champions' to help build support for action on air quality**. Community networks can use their social networks and life experience to address barriers to engagement and improve connections between local authorities and disadvantaged communities. (24) Numerous boroughs are in the process or have recruited air quality champions including Wandsworth, Hackney and Newham.
- **Listen to the concerns of local communities and co-design interventions with their input**. This will improve the effectiveness of interventions whilst making them more acceptable to local residents. TfL has provided some examples of how this has worked in street environments. (25)

Key London Networks and Steering Groups

- **ADPH London Climate and Health Community of Practise London.** The purpose of this network is to support public health professionals, operating at the borough or pan-London level, to collaborate and act on climate and health issues. Air quality is a key feature of this network despite it having a broader remit. Glenn Stewart, Director of Public Health at the London Borough of Enfield, is the ADPH Air Quality Lead (glenn.stewart@enfield.gov.uk) and is one of the leads for this network. Please contact office@adphlondon.org.uk if you would like to request a copy of the Terms of Reference or to be added to the distribution list.
- **ADPH London also feeds into the ‘London Air Quality and Health Delivery Group’ as well as ‘The London Air Quality Steering Group’.** The purpose of The London Air Quality and Health Delivery is to coordinate, steer and take forward pan-London joint work on air quality across the health and care system. The purpose of the London Air Quality Steering Group is to take a strategic overview of air quality policy across London and consider London’s response to new regulatory proposals and guidance. It also aims to promotes best practice; a consistent approach to air quality policy; advises relevant agencies of issues affecting London’s air quality, and to liaise with other environmental / public health networks across London.

List of key useful resources

- [WHO Global Air Quality Guidelines](#)
- [Air pollution: applying All Our Health - GOV.UK \(www.gov.uk\)](#)
- [Chief Medical Officer’s Annual Report 2022 \(Air Quality\)](#)
- [Pollution and air quality | London City Hall](#)
- [Air quality in City of London: a guide for public health professionals \(London City Hall\)](#)
- [Air quality - Transport for London \(tfl.gov.uk\)](#)
- [Overview | Indoor air quality at home | Guidance | NICE](#)

References

1. https://www.london.gov.uk/sites/default/files/col_air_quality_for_public_health_professionals.pdf
2. http://erg.ic.ac.uk/research/home/resources/ERG_ImperialCollegeLondon_HIA_AQ_LDN_11012021.pdf
3. https://www.london.gov.uk/sites/default/files/asthma_kings_report_april_2019_final.pdf
4. <https://fingertips.phe.org.uk/static-reports/health-profile-for-england/regional-profile-london.html#physical-activity>
5. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1124738/chief-medical-officers-annual-report-air-pollution-dec-2022.pdf
6. <https://content.tfl.gov.uk/travel-in-london-report-15.pdf>
7. <https://tfl.gov.uk/corporate/about-tfl/air-quality>
8. <https://content.tfl.gov.uk/streetscape-guidance-2022-revision-2.pdf>
9. Waltham Forest_Kings Report_310718.pdf (cycling-embassy.org.uk)
10. <https://www.sciencedirect.com/science/article/pii/S2214140520301626>
11. https://www.london.gov.uk/press-releases/mayoral/bame-and-poorer-londoners-face-air-quality-risk?__cf_chlTk=ziUF5ddl2ssbrVfg89ObgodIrm9APyPmzaEOmpETYI4-1673975680-0-gaNycGzNB70
12. London's buses now meet ULEZ emissions standards across the entire city - Transport for London (tfl.gov.uk)
13. <https://www.local.gov.uk/decarbonising-transport>
14. https://www.london.gov.uk/sites/default/files/20180523_saq_master_project_report_inc_append_-_final_v6.0_gla_frmt.pdf
15. <https://www.london.gov.uk/press-releases/mayoral/school-streets-improve-air-quality>
16. appx8-school-streets-guidance (tfl.gov.uk)
17. <https://stars.tfl.gov.uk/About/About>
18. <https://www.longtermplan.nhs.uk/online-version/chapter-2-more-nhs-action-on-prevention-and-health-inequalities/air-pollution/#:~:text=While%20wider%20action%20on%20air%20pollution%20is%20for,to%20non-communicable%20diseases%20specifically%20attributed%20to%20air%20pollution.>
19. https://www.london.gov.uk/sites/default/files/social_prescribing_active_travel_toolkit.pdf
20. <https://www.actionforcleanair.org.uk/health/clean-air-hospital-framework>
21. <https://www.nice.org.uk/guidance/NG149>
22. <https://www.gov.uk/government/publications/secretary-of-state-calls-for-action-on-housing-conditions>
23. <https://www.health.org.uk/publications/how-to-talk-about-the-building-blocks-of-health>
24. <https://www.gov.uk/government/publications/community-champions-programme-guidance-and-resources>
25. <https://content.tfl.gov.uk/streetscape-guidance-2022-revision-2.pdf>