Outdoor air quality in the UK - position statement

Health Policy team

Poor outdoor air quality is a major issue in the UK. Air pollution is linked to a variety of health conditions and contributes to a large number of deaths every year. It is also linked to climate change, which itself poses wide-ranging threats to health and wellbeing.

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Background and policy context

We strongly support national policies, practices and legislation that aim to improve outdoor air quality and advocate for sharing information and supporting the public to act. Our messages and recommendations in this statement are specific to the UK.

Key facts

- Air pollution is the single greatest environmental threat to public health. Many of the causes of air pollution are major contributors to climate change, which also impacts on the population's health1.
- Despite the Clean Air Act of 1956 and its subsequent revisions, emissions from transport, industry, agriculture, business and residential properties continue to contribute to air pollution23.

- Particulate matter and nitrogen dioxide are the primary pollutants causing concern today. In 2016, 86% of the UK cities in the World Health Organization's ambient air pollution database exceeded their recommended limits for particulate matter[4].
- It is estimated that, on an annual basis, approximately 40,000 deaths are attributable to outdoor air pollution in the UK. Air pollution has been linked to cancer, asthma, cardiovascular disease, diabetes, obesity and dementia[3].
- The effects of air pollution can start before birth and are shown to have a greater impact on babies, children and young people. These effects are particularly damaging because they can have a lifelong impact and those with existing health conditions are even more vulnerable[3].
- Across the UK, the most deprived communities experience the worst air quality, further driving health inequalities[5][6].
- Air pollution is a clearly modifiable and avoidable cause of morbidity and mortality and as such, action can and should be taken to reduce or remove this harm.
- The UK Government has started to take action against air pollution, including committing to end the sale of diesel and petrol cars by 2040[7]. These measures have significant co-benefits for health.

Key considerations

- Whilst there are actions to be taken at an individual level, many of the identified ways to improve outdoor air quality rely on national and societal change, led by Government[4][8]. This doesn't mean that the power of individuals and key influencers should be dismissed, but recognised as part of a bigger picture of required actions.
- The NHS and professionals working in the NHS can lead the change, both as role models and through their interactions with the public.
- Air pollution and climate change are inextricably linked, with many of the factors contributing to air pollution also driving climate change[9]. Climate change also poses a significant threat to health and the RCPCH recognises the importance of taking action on this issue, as a member of the UK Health Alliance on Climate Change[10] .

Economic impact

- It is estimated that by 2035, the UK health and social care costs of air pollution will reach up to £18.6 billion[11].
- The total UK societal costs of air pollution are estimated to total £22.6 billion per year[4].
- When it was launched in 2019, the UK Government estimated that by 2020 their Clean Air Strategy will save £1.7 billion every year, increasing to £5.3 billion annually from 2030[7].

Key messages for health professionals

We recognise that everyone has a responsibility for reducing air pollution, and strongly support action to improve air quality and inform the public of the issue. One of the six key actions outlined by the UK Health Alliance on Climate Change is to "better inform and support health professionals to take local action and provide advice to patients"[8]. Health professionals have a duty of care to inform their patients of the dangers of air pollution and how they can better protect themselves from it[3].

- Talk to children, young people and their families about air pollution and its effects on health, particularly if they have a condition likely to be caused or exacerbated by air pollution.
- Inform patients and their families of the changes they can make to reduce their contribution and exposure to air pollution[3][12]:
    - Choose to walk or cycle short journeys instead of taking the car. Not only will this reduce emissions, but air pollution is frequently higher inside a vehicle than outside it[3]. Active travel also has the added benefits of improving mental and physical health through increased physical activity.
    - Use public transport for longer journeys or where active travel is not feasible for other reasons.
    - When walking or cycling, choose quieter ‘back streets’ rather than main roads and walk on the side of the pavement furthest away from traffic.
    - When driving is the only option, try not to leave the car ‘idling’ when stopped in traffic or when stationary for other reasons.
    - Use electric vehicles rather than diesel and petrol vehicles where this is a viable choice.
    - Use air pollution forecasts to monitor levels of pollution and choose activities accordingly, such as reducing outdoor exercise when levels are high[13].
- Health professionals are considered role models by many and being seen to make individual choices to reduce air pollution (based on the above) can influence others to do the same.
- The NHS is one of the largest employers in Europe and health professionals can use their position to encourage their workplace to make changes to improve air quality, through raising the issue and suggesting actions that could be taken. NHS professionals can:
    - Embark on workplace quality improvement projects related to air pollution and sustainability.
    - Discuss air quality initiatives with local NHS trust management teams and advocate for positive change to improve air quality.
    - Become familiar with the Sustainable Development Management Plan for NHS England 2018-2020 and ensure their organisation is making progress against this in relation to air quality[14].

Roles and responsibilities of paediatricians

- All paediatricians should be aware of the this position on outdoor air quality, and use it to inform patients and their families of the health impacts and encourage and support them to make positive changes to improve air quality and reduce their exposure to air pollution.
- Paediatricians should act as role models for others and make personal changes to

reduce air pollution where possible. They should encourage change within their workplace and the wider NHS.
- Paediatricians should be aware of local and national initiatives to improve air quality and signpost families to relevant resources.

RCPCH recommendations

1. Further action on improving air quality

- The UK Government should go further than its current commitment to reduce greenhouse gas emissions to net zero by 2050 by bringing the target forwards[15].
- The NHS should reduce its direct contribution to air pollution and enable patients and staff to make choices that will reduce air pollution, such as supporting active travel to hospitals, clinics and appointments.
- The RCPCH supports the expansion of clean air zones in towns and cities and expanding the infrastructure to support active travel, travel by public transport and electric vehicles. This includes ensuring populations living in rural and remote communities also have adequate public transport links. We support giving local authorities the power to close or divert roads when air pollution exceeds set limits[38].

2. Data collection

- More detailed and more widespread monitoring is required to measure each population's exposure to air pollution, particularly in urban areas and near schools.
- Wearable technology could be used to assess individuals' exposure to air pollution. Monitoring needs to advance in line with our understanding of pollutants to provide an accurate picture of risk and inform action.

3. Further research

- More research is required on the health impacts of air pollution, including greater understanding of the risk to the developing baby and child.
- Further research is also required into the economic impacts of air pollution to support the accuracy of estimates and better predict potential savings.

RCPCH activity to promote outdoor air quality

We are committed to leading the way to adopt ways of working and policies that support improvements in outdoor air quality. The RCPCH is a member of the UK Health Alliance on Climate Change and will be working in partnership with others to advocate for responses to climate change that protects and promotes public health.

We are committed to working with relevant authorities and agencies across the UK to progress the recommendations listed in this position statement, with the aim of achieving steady improvement in UK outdoor air quality.

Please see our priorities for action for more information on the commitments the College is making towards tackling climate change, including our Paediatrics 2040 work, which is predicting and planning for future models of care and workforce needs.

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External links
UK Health Alliance on Climate Change (of which RCPCH is a member)