Children have a right to clean air, and we must fight for it to become a reality

Air pollution is complex—but the WHO air quality targets are clear, writes Camilla Kingdon

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“Legally binding targets based on WHO guidelines would reduce the number of deaths from air pollution in the UK.” This was the clear conclusion from the coroner following the death of nine-year-old Ella Adoo-Kissi-Debrah in 2013 following an asthma attack. Ella was the first person in the UK to have air pollution listed as a cause of death. As paediatricians we are committed to learning from this very tragic example—no other child in the UK should be allowed to suffer the way that Ella did.

In the UK, air pollution is the largest environmental risk to public health. Children are especially vulnerable to air pollution, which can lead to asthma in childhood, and lifelong health issues. Exposure to air pollutants during pregnancy and early childhood can have harmful and irreversible effects on the development of the lungs and other organs, with potential long term health effects such as COPD well into adulthood. Children breathe faster, so they inhale more airborne toxins in proportion to their weight, than adults exposed to the same amount of air pollution. Their organs and immune systems are still developing—therefore toxin-induced damage is far more likely to have an impact.

Polluted air is also known to impact the health of children even before they are born, correlating strongly with miscarriages, premature births, low birth weight, and brain development. It is extremely concerning to see new research published this month showing the impact of toxic air pollution particles on the lungs, livers, and brains of unborn babies—confirming the direct harm caused to the fetus by dirty air.

The WHO Global guideline limits aim to achieve the lowest concentrations of pollutants possible, recognising that there is no safe level of air pollution. For children in particular, there is no “safe limit.” As paediatricians, we see the impact of poor air quality on our patients every day. Clinically there is no escaping this harsh truth—the UK has one of the highest prevalences of asthma in Europe and tragically unacceptably high rates of emergency admission and death in childhood.

We also see the broader impact of air pollution on children’s lives—whether from missed schooling or in combination with other social determinants of health like poor housing. Climate change and air pollution are likely to be significant drivers of poverty and of widening health inequalities. The environment in which we live is a key determinant of our health.

We know that more deprived communities in the UK are typically exposed to higher levels of air pollution, and pregnancy outcomes related to air pollution are worse among low socioeconomic and ethnic minority groups. Emergency admissions for asthma are strongly associated with deprivation and poverty, and asthma outcomes are worse for children and young people living in the most deprived areas.

The United Nations Human Rights Council declared at COP26 in October 2021 that a healthy environment is a basic human right. However, around the world, countries are disavowing this right now. Globally, more than 90% of children are exposed to ambient fine particulate matter (PM2.5) levels above the World Health Organisation’s Global Air Quality Guidelines. The close relationship between air pollution and poverty is why this is a social justice and child rights issue and the reason why paediatricians and all healthcare professionals who work with children are so galvanised to raise awareness about this.

Time is not on our side and yet we are confident that we can tackle this globally—just as nations came together to fight the effects of the pandemic. In the UK we have solutions within our grasp. The UK Government must be more ambitious in its legally binding targets for fine particulate matter. Evidence clearly shows us that a PM2.5 target of 10 µg per cubic metre can be met by 2030 if current and proposed policies are fully implemented. The same research highlighted clear economic and health benefits of meeting this target, including children across the UK suffering an average of 388 000 fewer days of asthma symptoms per year. Stronger air quality targets are key to safeguard the health of current and future generations. Children have a right to clean air, and we must fight for it to become a reality.

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