**Child poverty and food insecurity exacerbated by Covid-19 are major risks to respiratory health**

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Eradicating poverty, and eradicating hunger: these top the list of global development goals adopted by United Nations Member States in 2015 1. Yet the World Food Programme estimates that, in the wake of the Covid-19 pandemic, acute food insecurity may double from 135 to 265 million people worldwide. In the absence of mitigating policies, poverty leading to food insecurity will damage the respiratory health of a generation of children.

Inequalities in lifelong respiratory health have their origins in childhood, when adequate nutrition is essential. Within adult lungs are concealed a fantastically elaborate and delicate gas exchange mechanism. This remarkable system starts to develop three weeks after conception, matures rapidly till three years of age, and continues to grow until adolescence. Disruption to this development in childhood contributes significantly to the early onset of adult illnesses such as Chronic Obstructive Pulmonary Disease (COPD)2. Exposures linked to poverty, including malnutrition, are important risk factors. Even in Cystic Fibrosis (CF), a classically inherited genetic disease, inequalities in growth related to social disadvantage appear early and track through to later life, influencing survival 3.

Poor nutrition is intricately bound up with other poverty-related risk factors for respiratory illness 4. Prematurity is linked to poverty and tobacco smoke exposure in pregnancy, and respiratory outcomes are worst for preterm babies with poor intrauterine or postnatal growth. Poor children are more likely to live in overcrowded, damp housing, less likely to be vaccinated, and more likely to catch infections that damage the respiratory system early in life. They have less access to green space for exercise and are more likely to breathe poor quality air whether indoors or outside.

From previous economic crises, we know that children are more likely to fall into poverty and suffer its ill-effects than any other age group 5. Even before the pandemic, rising poverty and food insecurity was an increasingly urgent problem in the UK. Welfare cuts over the past decade have pushed many more children into poverty, with one in three children currently affected 6. Prior to 2010, charities providing food aid hardly existed in the UK. In 2019, subsequent to austerity measures eroding welfare provision, the Trussell Trust, who run 60% of UK foodbanks, distributed 1.6 million emergency food supply parcels.

Unintended consequences of the lockdown will have affected poor children the most 7.

During the pandemic, many children who rely on school meals to sustain their nutrition have gone hungry. In the UK, in 2019, 1.3 million were eligible for free meals, and a further 1 million ineligible children were estimated to be living in food insecurity. In the US, rural counties have been hit hardest by restricted food access; during the Covid-19 pandemic, rates of food insecurity have doubled from 18% to 35%. Large observational studies suggest that living in food poverty increases the risk of developing childhood asthma 8, and in one US study, parents of children with CF were twice as likely as parents in the general population to be living in food insecurity 9. The impact of food insecurity on outcomes in children with asthma and CF, and other respiratory illnesses, are likely to persist for decades.

COVID recovery policies must ensure that no child goes hungry. So far, this goal has been elusive. In the US, the First Coronavirus Response Act, passed in March, provided additional funding to pre-existing food assistance programmes and enabled families to claim the cost of free school meals at grocery stores and certain online outlets. However, by mid-May, only 15% of eligible families were receiving the benefits. The UK government has continued to fund means-tested free school meals for children attending school during lockdown. Families of children remaining at home and deprived of their usual free school meal became eligible for free food parcels or online food vouchers, redeemable at national supermarkets. Professional footballer Marcus Rashford successfully lobbied for the extension of this programme over the summer months to tackle the recurring phenomenon of “holiday hunger”. But the government have made it clear that the one-off scheme will end in September, when schools reopen. Meanwhile, there have been reports of implementation challenges, causing distress and humiliation to families in need.

A far more efficient and sustainable solution to the problem of food insecurity, one that assures the dignity of families, is to directly address child poverty. Societal interventions to reduce child poverty are among the most cost-effective, with studies in the UK and the US showing huge cost savings across all sectors of society 10. In the UK, modelling has shown that adding a modest £10 per week per child to child benefit would reduce child poverty by 5%. In many countries the idea of a universal basic income is being debated, with evidence of increased support for such policies in the UK and US 11. One simple and urgent policy – increased investment in child benefit to reach every child – can powerfully address food insecurity and its consequences.

Access to an adequate food supply is a basic human right. Poverty denies children their right to a standard of living adequate to their physical, mental, spiritual, moral and social development. On moral, ethical, and medical grounds, we must ensure that children have enough food to eat. National programmes to reduce inequalities in respiratory health will not succeed unless we address these issues.

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