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Eat or heat: fuel poverty and childhood respiratory health

When people cannot afford to adequately heat their home, they are experiencing fuel poverty. The drivers of fuel poverty are socioeconomic: low household income, high fuel prices, and energy-inefficient homes. Fuel poverty hits households with children hardest, unsurprisingly, as this demographic is especially susceptible to socioeconomic difficulty. In 2019, 3.2 million households (13.4%) in England were fuel-poor; 40.3% of these included children. Lone-parent families have the highest rates (28% in 2019). When living costs are not met by income or benefits, the choice between necessities (“eat or heat”) is stark. Adequately sized accommodation, with sufficient bedrooms, is expensive and in high demand. It is a vicious cycle: the cheapest accommodation is poor quality and energy-inefficient, so families struggling the most get the least value for money on energy.

This winter brought a perfect storm, just as families are spending further periods of enforced time at home. Extreme weather has been frequent and severe, bringing colder homes and property damage. Home energy costs soared, reflecting increased global gas prices. To protect energy suppliers from folding, the UK Government raised the Energy Price Cap (a national regulatory price limit). This financial hit to families is on the backdrop of economic recession, high inflation, and austerity. Temporary increases in Universal Credit, instigated during the pandemic, are being rescinded, rendering households £1040 poorer per year.

Children in cold houses are at increased risk of asthma attacks, and respiratory infections including bronchiolitis, in a year of disrupted viral epidemiology. As the temperature drops, circulation of viruses increases (particularly in overcrowded homes), and immunity is impaired. Furthermore, to keep heat in, windows and doors stay closed, and subsequent poor ventilation causes damp, mould, and proliferation of house dust mites, contributing to chronic and acute respiratory ill health. Infants in the coldest houses expend calories trying not to be hypothermic and hypoglycaemic, rather than using energy for growth and organ development. Lung maturation takes a hit at a vulnerable stage, with risks of lifelong pulmonary function deficit.

The solution must be systemic. Current government schemes, including a £140 rebate from the Warm Home

Discount Scheme and cold weather payments of £25 for each 7-day period below 0°C, are insufficient. Housing agencies, councils, landlords, and health services must work to help families with children. The ultimate aim must be to end child poverty by reducing living costs, and ensuring families have sufficient income and housing rights; in the meantime, Universal Credit cuts must be halted. Health-care services, from bedside to boardroom, must also address socioeconomic causes of illness. Health professionals must be educated, informed by meaningful research around respiratory impacts of cold housing. Consultations should reflect that substandard accommodation is a modifiable factor in child mortality.

In the UK, the harms of fuel poverty to children remain unaddressed, because children are not considered a priority. Climate-emergency activists this year glued themselves to motorways to advocate for home insulation for environmental reasons—we have never fought this vociferously for warmer houses for children. Poverty kills children, and the substandard, cold housing in which they live is one reason for this.

We declare no competing interests. CB and ARL contributed equally and share first authorship. DBH and IPS are joint senior authors.

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Published Online
December 23, 2021
[https://doi.org/10.1016/S2213-2600\(21\)00584-1](https://doi.org/10.1016/S2213-2600(21)00584-1)

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Respiratory health and critical care concerns in Afghanistan

Afghanistan is currently battling its worst humanitarian crisis after the Taliban takeover on Aug 15, 2021, compounded by several public health challenges, including the COVID-19 pandemic which, as of Dec 10, 2021, has been associated with 7321 deaths.

With the freezing of foreign financial reserves and suspension of support from overseas organisations, the national health system is now on the verge of collapse. Political instability led to suspension of financial support from Da Afghanistan Bank, the International Monetary



Published Online
December 23, 2021
[https://doi.org/10.1016/S2213-2600\(21\)00583-X](https://doi.org/10.1016/S2213-2600(21)00583-X)

We declare no competing interests.

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For more on **WHO estimates of air pollution** see <http://www.emro.who.int/afg/programmes/eh.html>

For more on **prevalence of smoking** see *Int Health* 2021; **13**: 3–12



Image from Pixabay

Fund, and the World Bank, contributing to an acute shortage of medical equipment in the context of divided donorship. However, timely intervention from the United Nations Development Programme and the Global Fund now supports health-care workers' remunerations and helps resource health supplies. However, the Taliban has yet to announce a plan for sustaining Afghanistan's health-care system, and hence the future of health care hangs in the balance.

The country's largest health project, Sehatmandi, is a 3-year multidonor-funded project with a total cost of US\$600 million. The project was initiated by the World Bank and implemented by the Afghanistan Ministry of Public Health in 2018, with the objective to strategise as well as increase the quality and utilisation of health resources, nutritional needs, and family planning services in Afghanistan. Sehatmandi is currently stalled with only 17% of all health facilities fully functional, and nine of 37 COVID-19-dedicated hospitals have shut down due to cuts in donor support.

The collapse of health services has led to burnout among health-care workers with chronically uncompensated salaries, resulting in a severe shortage of skilled professionals. Moreover, the emergency response has been incapacitated, with a lack of oxygen supply and ventilators, shortage of available beds, and stock-outs of medical supplies; all of which adversely impact critical care management of patients with COVID-19 and other life-threatening ailments. The health-care needs of Afghanistan are dependent on international support and importation of medical equipment, drugs, and consumables. However, even the main access routes, which are routinely used to receive life-saving medical aid, such as coagulation factors and other blood products for transfusions in children with haematological disorders, have been restricted or blocked.

The impact of this crisis on the prevention, treatment, and management of respiratory illnesses should not be underestimated. Lower respiratory tract infections have the highest burden of mortality in children younger than 5 years, and respiratory illness is the second leading cause of death in girls aged 5–14 years. Tuberculosis poses its own set

of challenges for the Afghan population, as it is the second most common cause of death among women aged 15–49 years, with a clinical prognosis that is even worse with its drug-resistant forms. Without full access to treatment, the respiratory disease burden will continue to be a serious cause for disquietude.

Air pollution is one of the main environmental risk factors for increased mortality in Afghanistan, according to WHO estimates. Household air pollution causes approximately 27 000 deaths per year, whereas ambient or outdoor air pollution causes over 11 000 deaths annually. Although most of the population are unaware of the risks of air pollution, the increasing levels of PM_{2.5} have contributed to an increase in disease burden of asthma, chronic obstructive pulmonary disease, pneumonia, and lung cancer. During winter seasons, the prevalence of respiratory diseases further worsens as most inhabitants from low-income strata rely on non-sustainable practices to generate heat due to recurrent electricity shortages. Long standing military conflict might also have led to increased exposure to particulate matter from military armaments and practices.

Prevalence of smoking tobacco in Afghanistan is high (21.9% of men and 3.4% of women), and is greater than in other sociopolitically volatile countries, such as Yemen and Somalia.

Access to health care has been a long-standing challenge in Afghanistan. People living in remote areas are devoid of accessible health services. This gap is further widened due to ongoing conflict and inoperable health clinics, resulting in a frail support system to address the critical care needs of regionally isolated populations. Trauma and injuries due to war and conflicts are an increasing public health challenge with the health system dependent on a limited number of available trauma centres in the country. In addition, emergency transport services are inadequate to aid in the transfer of critical cases to existing medical and trauma facilities. This challenge is apparent with just 29 ambulances providing support to the 4.6 million residents in Kabul.

The abysmal situation in Afghanistan has inevitably shed light on the regions' worst food crisis. According to the Integrated Phase Classification, it is projected that 14 million people in the country are experiencing food insecurities. The ramifications of which have deeply affected adolescents and young children. Over 3.2 million children are suffering from acute malnutrition, while more than a million children are at risk of death by starvation. The health care, political, and regional adversities are further impoverished by Afghanistan's deteriorating climate in recent years. In a country where the agricultural sector accounts for about 25% of the gross domestic product, famine and drought will most likely have had a devastating impact on the country's economy and the

population's nutrition status. If immediate interventions are not effectively deployed, the imminent food scarcity is bound to worsen critical care demands resulting in escalating mortality rates.

Moreover, the maternal mortality rate in Afghanistan is considered to be one of the highest in the world. Unsafe abortions, sepsis, and peripartum haemorrhage are major causes of maternal mortality in the region. Awareness of contraceptive measures and family planning practices is another considerable barrier in promoting and safeguarding female health.

Another perturbing matter is that COVID-19 vaccination rates have been poor, despite 1.8 million vaccine doses remaining unused in the country. Additionally, routine vaccination programmes deployed in Afghanistan have been largely underwhelming because of long-standing sociopolitical turmoil. A 2018 national health survey reported that merely 51.4% of the Afghan children were fully vaccinated. The Taliban takeover has further hampered routine vaccination efforts, increasing the risk of contracting vaccine-preventable infectious diseases. However, in a recent turn of events, the Taliban-led government recently re-instated nationwide house-to-house polio vaccination efforts, which were previously halted for 3 years. A positive move, most welcomed by WHO and UNICEF. A report from the 2018–19 influenza season highlights influenza poses a significant health burden in Afghanistan, with cases the highest they have been in January, 2021; however, no influenza vaccination programme currently exists in Afghanistan, even for the high-risk population. Given the emergence of new SARS-CoV-2 variants of concern during the flu season, the latest of which is Omicron, we caution clinicians in Afghanistan not to dismiss Omicron as the common cold, despite some similarities in symptoms. Further new longitudinal studies are necessary to better understand and help accurately quantify the potential long-term health consequences associated with the recent developments in Afghanistan.

Poor respiratory hygiene in addition to crowded living conditions, partially the result of a largely displaced

population, are serious matters for concern, especially in the context of a primarily unvaccinated population, while the pressure on critical care services intensifies. The demands on health care are substantial and stretch the already limited resources of a collapsing system, leading to delayed patient treatments and higher mortality rates. Critical care in Afghanistan lacks integration within the larger health-care system, including emergency care, so critically ill patients around the country often have to travel long and unsafe distances to receive necessary life-saving interventions. Telemedicine in Afghanistan might help ameliorate current gaps in clinical care. TelemedAF is the first free telemedicine service in Afghanistan. Just launched last year, the team of volunteer physicians at TelemedAF have served more than 14 000 patients and aim to ensure all Afghans receive continuous medical care.

Blighted by regular discord, political and administrative instability in the background of an overwhelmed health-care system and the COVID-19 pandemic, there is an urgent need for collective action to help alleviate the ongoing humanitarian crises in Afghanistan. Steps must be taken by all relevant stakeholders, the international community, and non-governmental organisations to mitigate the systemic challenges at hand by increasing funding, collaborations, and research on the needs across the Afghan's health-care landscape.

Epidemiological research investigations that aim to characterise burden of disease and disparities in health services must be integrated into the national health-care plan, along with both short-term and comprehensive respiratory and critical care education programmes. International and local health policy makers must adopt a shared vision for equitable and high-quality respiratory and critical care in Afghanistan to prioritise the Sustainable Development Goals and improve both national and global health security.

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Why has the incidence of tuberculosis not reduced in London during the COVID-19 pandemic?



The rate of tuberculosis in London, UK, has not reduced during the COVID-19 pandemic. This might be surprising given that tuberculosis is airborne, and suggests important lessons about the transmission and treatment of the disease.

Although tuberculosis has been declining in the UK since 2011, incidence before the COVID-19 pandemic remained relatively high in London at 16 cases per 100 000 residents in 2020, double the UK average, and as high as 43 per

100 000 among residents of the deprived and ethnically diverse borough of Newham in east London. WHO considers a country to have a high incidence of tuberculosis if more than 40 people per 100 000 per year are diagnosed with tuberculosis.

When non-pharmaceutical interventions and lockdowns were introduced to limit COVID-19 in March, 2020, tuberculosis cases were expected to reduce. Other

Published Online
January 12, 2022
[https://doi.org/10.1016/S2213-2600\(22\)00012-1](https://doi.org/10.1016/S2213-2600(22)00012-1)