Leveraging the COVID-19 response to end preventable child deaths from pneumonia

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Pneumonia kills people, young and old. The world has been reminded of the toll of pneumonia as countries struggle to control the COVID-19 pandemic. COVID-19 has claimed more than 1 million lives so far in 2020,[1] but other infectious diseases have caused pneumonia-related mortality for decades. Although there has been a commendable 54% decline in pneumonia-related deaths among children younger than 5 years since 2000, pneumonia is still the leading infectious cause of child deaths and claims more than 800 000 children's lives every year (WHO Maternal and Child Epidemiology Estimation, unpublished).[2,3]

Although most children have less illness related to COVID-19 than adults,[4,5] the potential secondary impacts of the pandemic could cause a reversal in progress in child survival. Roberton and colleagues used a model to estimate that, depending on the degree of severity, service disruptions, reductions in access to care because of lockdown measures, and increased rates of wasting due to food shortages over 12 months could cause between 506 900 and 2 313 900 additional deaths among children younger than 5 years.[6] The data suggest that about a third of these preventable deaths could be from pneumonia and newborn sepsis. Review of routine health information and programme data across several countries indicate that since the onset of the pandemic there have been reductions in the numbers of children who attend outpatient services and who receive correct diagnosis and treatment of illnesses and immunisation services (UNICEF and Save the Children, unpublished). Drops in coverage of the pertussis, *Haemophilus influenzae* type b, pneumococcal, and measles vaccines, which all offer protection against pneumonia, put millions of children at risk of severe and potentially fatal infections.[7]

But there is reason for optimism. Measures put in place as part of the COVID-19 response can positively impact health outcomes in the medium and long terms. Mask wearing, physical distancing, and improved hand and cough hygiene will reduce circulation of not only severe acute respiratory syndrome coronavirus 2 but also other viruses and bacterial pathogens that cause severe infections, including pneumonia. Distribution of pulse oximeters and oxygen equipment, together with additional support to front-line health-care services, offers an opportunity to close the gap in access to these essential diagnostic and treatment tools for hypoxaemia, which is often associated with childhood pneumonia deaths.[8,9] The COVID-19 response is also an opportunity to invest in training of health-care staff to operate and maintain such equipment and safely administer oxygen to patients. The potential impact of these measures on child survival could be considerable, especially for the estimated 4·2 million children every year in low-income and middle-income countries who have pneumonia-related hypoxaemia and require oxygen therapy (UNICEF, Save the Children, and Clinton Health Access Initiative, unpublished).

COVID-19 has underscored why the commitments set out in the 2018 Astana Declaration on Primary Health Care must be implemented.[10] The pandemic has alerted all governments and communities to the importance of primary health care in controlling the

***Panel:* Six strategic actions to end pneumonia deaths**

1 Develop and implement pneumonia control strategies
Define clear targets, as part of wider child survival strategies and plans to strengthen primary health care and achieve universal health coverage. Pneumonia control efforts must be multisectoral, engaging the sectors of nutrition; air quality; social welfare; water, sanitation, and hygiene; and education. These efforts must take place at the community, national, regional, and global levels.

2 Prioritise vulnerable populations
Focus efforts on reducing exposure to poverty, malnutrition, air pollution, and conflict, and on increasing access to good-quality local health services, including in fragile and humanitarian settings.

3 Finance pneumonia control and treatment adequately
Provide adequate and well coordinated domestic and development spending.

4 Accelerate breakthrough innovations
Increase investment in research and development in areas where cost-effective technologies and systems increase efficiencies and prevent the most pneumonia deaths.

5 Track progress with transparency, accountability, and inclusiveness
Ensure easy access to good-quality and timely data and regular reporting on progress on child mortality, including on the pneumonia target of less than three pneumonia deaths per 1000 livebirths by 2025.[13]

6 Strengthen partnerships
Engage all relevant health and non-health, private, and public actors at global and country levels.

spread of respiratory infections. The world is now focused on the key role of vaccines in protecting lives, livelihoods, and economies. Countries are preparing to procure and distribute COVID-19 vaccines when they become available, and to shore up existing immunisation programmes—an opportunity to also reach the 52% of children globally who still require a full course of pneumococcal pentavalent vaccine (PCV).[11] The pandemic has also generated an urgent demand for better data to monitor the pandemic and its effects on the health-care system, including coverage of pulse oximetry, oxygen, and the recommended first-line antibiotics for child pneumonia.

In January, 2020, at the inaugural Global Forum on Childhood Pneumonia, in Barcelona, Spain, government leaders and representatives from UN and multilateral agencies, private companies, non-profit organisations, and academic institutions from over 55 countries endorsed a declaration committing to six strategic actions to accelerate progress in reducing child pneumonia deaths (panel).[12] On World Pneumonia Day, on Nov 12, 2020, it is time to take stock of the key actions the global health community should be taking to support country efforts to strengthen primary health care and health information systems to accelerate progress in preventing child pneumonia infections and deaths.

Routine paediatric health services need to be maintained during and after the COVID-19 pandemic. The global health community and governments must work together to ensure health facilities everywhere are equipped with the basics such as water, electricity, human resources, and essential drugs and supplies. An effective response to the pandemic should build on previous gains such as the rapid scale up of coverage of pentavalent vaccines and PCV.[11] The COVID-19 response provides opportunities to increase diagnostic and treatment services for respiratory infections. Those countries that ensure innovations and new technologies provided for COVID-19 respiratory care also meet the health needs of children during and after the pandemic are likely to make rapid progress in reducing child pneumonia deaths. Oxygen supplies can be redeployed to newborn and paediatric wards in health facilities and hospitals and pulse oximeters can be made widely available at primary health-care facilities, where their routine use could improve the diagnosis and treatment of a range of conditions.

The COVID-19 pandemic has garnered the world's attention, but pneumonia and other preventable illnesses, such as malaria, diarrhoea, HIV, tuberculosis, and other infectious diseases, kill millions of children every year. We hope that the way COVID-19 has galvanised immense public health actions in many countries will translate into stronger heath systems. We must continue to be a strong voice for children and keep our promise to accelerate the achievement of the Sustainable Development Goal target for child survival. We call on our partners to join us in an effort to use the investments made and lessons learned in the COVID-19 response to make sure everyone benefits, especially children.

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