SDGHI Perspectives Essay Series - **COVID-19 A Year Later**

Vaccines in Southeast Asia

Routine childhood immunisation during COVID-19 in Southeast Asia: important as ever

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More than one year into the global COVID-19 pandemic, a great deal has been learned regarding the effects of COVID-19 on children. They are less likely to become infected, get sick and transmit the SARS- CoV-2 virus relative to adults and make up a tiny fraction of COVID-19 deaths worldwide [1,2,3].

While children may not be the face of the pandemic, they remain particularly vulnerable to COVID-19's indirect effects. These result from the pandemic's potential to exacerbate health system vulnerabilities and reduce access to essential child health services [4]. Early estimates projected a 10 to 45% increase in child deaths per month among low- and middle-income countries including those in Southeast Asia [5].

Experience from previous pandemics, including the Ebola crisis, have demonstrated how reductions in access to life saving interventions including routine immunisation can result in major increases in child deaths [6,7]. Emergencies often take critical staff and resources away from routine programs, with gaps in service delivery persisting long after the outbreak has ended [8].

Indonesia, the country in Southeast Asia with the highest number of COVID-19 cases and deaths, is a case in point. National surveys of primary health care facilities suggest routine immunisation services were among the first affected and the hardest hit by the pandemic [9]. Service disruptions were identified in 84% of facilities, with immunisation coverage declining by a third in just three months.

Several factors contributed to reductions in availability and access to immunisation services. Strict adherence to physical and social distancing protocols resulted in closure of village health posts where mothers and children normally come together to receive vaccines each month. Guidance on safe service resumption were slow to be implemented, compounded by shortages in personal protective equipment for health staff. Communities were reluctant to access health services due to fear of contracting COVID-19. Health staff and resources dedicated for immunisation programs were re-directed towards the COVID-19 response. Finally, supply chain disruptions resulted in critical commodity shortfalls.

This experience has been echoed elsewhere. A global pulse survey conducted across 82 countries reported widespread disruptions in routine immunisation services since the onset of COVID-19 – with similar supply and demand side challenges identified [10]. In 24 countries, major measles immunisation campaigns have been postponed [11]. These challenges are by no means restricted to low and middle-income countries in Southeast Asia. In Singapore, a 25 to 73% reduction in Measles-Mumps-Rubella uptake was observed in the initial months of the pandemic, threatening critical thresholds for herd immunity [12].

In Southeast Asia, the COVID-19 pandemic is threatening to reverse hard-fought gains towards universal immunisation coverage. Prior to COVID-19, the state of vaccine coverage across the region was promising but tenuous [13]. Just half of countries had reached and sustained the 90% target for Diphtheria-Pertussis and Tetanus vaccination while Measles immunisation coverage averaged 93%, which is below global targets. No country can afford further declines in coverage and vaccine preventable diseases (VPD) outbreaks will carry serious consequences for sickness and death among children.

Just as COVID-19 can contribute towards immunity gaps, so do VPD outbreaks undermine our ability to respond to the pandemic. Many countries are embarking upon ambitious COVID-19 immunisation campaigns. While the target population for COVID-19 immunisation will initially be older adults and those with pre-existing conditions, mobilising the full pool of skills and resources from routine childhood immunisation programs will be essential for the COVID-19 response. These include vaccinators, health facilities, supply and cold chains, and monitoring systems alongside wider institutional experience. Outbreaks of VPD concurrent to COVID-19 will create a battle with many fronts. For countries struggling with basic health system resilience, the cost and consequences of these indirect effects have the potential to be severe.

A number of immediate steps are required to reduce vaccine preventable sickness and deaths in the wake of COVID-19 [14]. First, is the safe resumption of basic childhood immunisation services with 'new normal' protocols in-place. This should include protective equipment for health workers and their early prioritisation for COVID-19 vaccination. Second, is the need for 'catch-up campaigns' in response to immunity gaps related to the pandemic. These should include multiple vaccines and outreach to vulnerable groups who may not easily access services. These efforts require solid cooperation between governments, agencies such as the United Nations Children's Fund and the World Health Organization and non-governmental organisation partners. Third, is the need for detailed supply and cold chain inventories to take place. These should include improvement plans for expanding routine childhood immunisation alongside requirements related to the COVID-19 vaccine. Finally, given emerging concerns regarding vaccine hesitancy, visible political leadership with a clear national communications strategy on the safety and effectiveness of all forms of immunisation will be essential to ensure community demand.

The COVID-19 pandemic is a wake-up call on our interconnectedness and to the wider social, political and economic consequences of public health challenges. Efforts to enhance the long-term resilience of national systems to prevent, detect and respond to VPD including COVID-19 are important now more than ever. Improved global and regional coordination mechanisms for health systems and pandemic preparedness are essential. No single country in the region will be fully protected until all countries are safe.

About the author

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Dr Paul Pronyk is a physician and global health specialist. He recently joined SDGHI as Visiting Professor and Deputy Director, Global Programmes and Research. Previously, he has directed major cross-disciplinary research efforts for the London School of Hygiene and Tropical Medicine and the University of the Witwatersrand in rural South Africa; and The Earth Institute at Columbia University where he supported MDG-acceleration efforts across 10 African countries. Dr Pronyk was the global technical lead for the UN Commission on Life Saving Commodities, providing technical and financial support for access to essential medicines and health systems strengthening in 23 countries in Africa and Asia. Most recently, he was the Chief of Child Survival and Development for UNICEF Indonesia. Dr Pronyk has published widely across a range of disciplines including health systems, data and analytics/digital health, communicable disease control, gender-based violence, child health and nutrition, water and sanitation, social capital and public health ethics.

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Following a year of global uncertainties, shifting national policies and unprecedented scientific breakthroughs, the inaugural theme for SDGHI Perspectives is COVID-19 A Year Later. The first essay series under this theme delves into different dimensions of COVID-19 Vaccines in Southeast Asia, including issues related to vaccine supply, confidence, delivery, distribution and beyond. Visit the SDGHI website to read the other essays in the series.

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