# **Routine Vaccination Disruption in** Low-Income Countries: An Impact of COVID-19 Pandemic

Md. Moyazzem Hossain, MPhil<sup>1,2</sup>, Faruq Abdulla, MSc<sup>3</sup>, Md. Karimuzzaman, MSc<sup>2</sup>, and Azizur Rahman, PhD<sup>4</sup>

To the Editor:

The Expanded Program on Immunization was officially established in 1974, by the support of World Health Organization, keeping in mind as a major goal the immunization of every child against 6 vaccine-preventable diseases (VPD; ie, tuberculosis, poliomyelitis, measles and diphtheria, pertussis, tetanus) by 1990.1 However, the Expanded Program on Immunization set the priority for developing countries since higher prevalence and inadequate service delivery for immunization was observed in those countries.<sup>2</sup> The immunization program for children against VPD has been considered as one of the best cost-effective programs to reduce childhood morbidities as well as mortalities throughout the world.<sup>3,4,5</sup>

Over the past decades, a noteworthy improvement has been observed in developing the national immunization program. The prevalence of VPD has declined in many regions of the globe in the past few decades, but many children remain unvaccinated.<sup>6</sup> A recent report shows that 19.4 million children did not receive the routine lifesaving vaccinations in 2018.7 Vaccination against VPDs averts illness and disability, also saving millions of lives of children globally in every year.<sup>8</sup> However, the recent ongoing COVID-19 pandemic is disrupting the lifesaving immunization services all over the world, especially in low-income countries, which is one of the main reasons for pushing millions of children at risk of developing several diseases such as tuberculosis, pneumonia, measles, diphtheria, polio, and so on.

Several countries have temporarily and rightly suspended the preventive mass vaccination operations against diseases such as cholera, measles, polio, typhoid, and so on, due to risk of transmission as well as ensuring the physical distancing during the early periods of the COVID-19 pandemic. The Daily Star (leading English daily newspaper in Bangladesh) reported on July 12, 2020, that the national immunization day or other mass vaccination campaigns are suspended for the last 3 months.<sup>9</sup> In the context of Bangladesh, moreover, a recent report of the WHO mentions that the vaccination disrupted moderate-to-severe or a total suspension of vaccination services during March and April 2020 in more than half (53%) of the 129 countries.<sup>10</sup>

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Due to the lockdown measures taken by most of the countries and decline in the number of commercial flights as well as the other modes of transportation there is interruption of the supply chain of lifesaving vaccines. The failures or delays in the vaccination of children may lead to increase the morbidity and mortality in low-income countries. The disruption of ongoing immunization programs in different low-income countries due to the COVID-19 pandemic threatens to slow down the recent improvement against different VPDs. Therefore, the authors think that in order to achieve the ultimate goal of the global vaccine action plan 2011 to 2020, that is, universal access to immunization,<sup>11</sup> it is necessary to take the most appropriate or special efforts to continue immunization in low-income countries. Finally, a collaborative community health care with smart technology-based system<sup>12</sup> is necessary in many countries like Bangladesh to provide timely affordable health care and vaccination services through the current unprecedented COVID-19 era.

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MMH, FA, and MK wrote the draft manuscript with AR's guideline. MMH and AR initiated and conceptualized the manuscript. AR critically revised the manuscript for important intellectual content and supervised the whole study. The final version is approved by all authors for publication.

<sup>1</sup>Newcastle University, Newcastle upon Tyne, Tyne and Wear, UK <sup>2</sup>Jahangirnagar University, Dhaka, Bangladesh <sup>3</sup>Islamic University, Kushtia, Bangladesh <sup>4</sup>Charles Sturt University, Wagga Wagga, New South Wales, Australia

**Corresponding Author:** 

Azizur Rahman, School of Computing and Mathematics, Charles Sturt University, Boorooma Street, Wagga Wagga, New South Wales 2678, Australia.

Email: azrahman@csu.edu.au

## **ORCID** iD

Azizur Rahman (ip) https://orcid.org/0000-0002-7670-5192

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