

## PERSPECTIVE

**Routine immunization services during the coronavirus (COVID-19) pandemic**Ranjitha Ranganathan<sup>1</sup>, Amir Maroof Khan<sup>2</sup><sup>1</sup>Postgraduate student, Department of Community Medicine, University College of Medical Sciences and GTB Hospital, Delhi; <sup>2</sup>Associate Professor, Department of Community Medicine, University College of Medical Sciences and GTB Hospital, Delhi

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**Corresponding Author**

Dr Amir Maroof Khan, Associate Professor, Department of Community Medicine, Room no 414, Fourth floor, Medical College Building, University College of Medical Sciences and GTB Hospital, Shahadra, Delhi - 110095

E Mail ID: [khanamirmarroof@yahoo.com](mailto:khanamirmarroof@yahoo.com)**Citation**

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Routine immunizations (RI) keep the infectious diseases under control in the community. However, during the coronavirus pandemic, to prevent the associated exponential rise in the number of cases, it became necessary to stop routine health services across the country. Routine Immunization also had to be discontinued. It is to be realized however that the risk of vaccine-preventable diseases is gradually increasing in direct proportion to the delay in administering vaccinations to eligible children. It's likely that we will face outbreaks of VPD if we keep RI halted for weeks together. Various dimensions of RI need to be examined from the perspective of the COVID-19 pandemic ranging from vaccine hesitancy to operationalization of services. In this article, we highlight this hidden problem, which has the potential to further challenge our already challenged health and healthcare-related situation. The domains which deserve careful consideration are discussed to supporting policymakers in making informed decisions in this regard.

**Keywords**

Immunization; COVID-19; Coronavirus; Pandemic; Child Health

Immunization is one of the most successful, most accepted, and most cost-effective public health interventions available in the world and saves 2 to 3 million children from vaccine-preventable diseases (VPD). (1) India has the largest Universal Immunization Programme in the world. According to National Family Health Survey-4 (NFHS) 2015-2016, 62 percent of children aged 12-23 months were completely immunized in India. (2)

An epidemic may not be considered a setback for continuing routine immunization services, considering the fact that vaccines have prevented the occurrences of many such epidemics in communities. In some instances, supplementary

immunization activities need to be initiated to interrupt the transmission of the virus in the community for example in Measles outbreak. (3) Interrupting the chain of infectious diseases to control it is the long-time battle of mankind. The World is struggling to deal with emerging and re-emerging diseases like COVID-19 pandemic while vaccine-preventable diseases continue to kill. For example, measles killed nearly 1.5 lakh children in 2018 worldwide. (3) India is listed as one of the top ten countries with the maximum number of measles cases in the world according to the WHO's latest measles-rubella update, provisional data of 2019.

The Ebola epidemic recently has some lessons for us regarding the effect on routine immunization services and its impact. Immunization coverage decreased more than 25 percent during the epidemic of Ebola in West Africa during 2016. (4) Breakdown in the health system, decline in health-care seeking behaviour during a public health crisis like the Ebola epidemic lead to epidemics of vaccine-preventable diseases. (5) According to the UNICEF report, while 2000 died of Ebola outbreak in the Democratic Republic of Congo, double of that number died of measles in 2019 as immunization services were affected. (6)

There are no clear evidence-based recommendations for postponing or delaying vaccination in the presence of infection in children. (7) Vaccination need not be deferred or delayed in children with minor illness. (8) The major contraindication discussed in various guidelines includes Live vaccines during pregnancy, severe adverse events following immunization in previous immunization, severe immunosuppression.

World Health Organisation's recently published guidance on routine immunization services during the COVID-19 pandemic warned any disruption of immunization services, even for short durations, will lead to the accumulation of susceptible individuals and increase the likelihood of VPD outbreaks. (9) VPD surveillance needs to be enhanced and maintained at all times. An increased burden to the health care system due to VPD outbreaks can't be tackled during the COVID-19 pandemic.

Ensuring Routine Immunization during a pandemic: [\(Figure 1\)](#)

Enabling awareness in the community: The first step in ensuring routine immunization is creating awareness through telecommunication by community workers and mass medias. During the period of the COVID-19 pandemic, it is crucial to sustaining the trust of the population in immunization and also in the health care system.

Encounter Vaccine hesitancy: Vaccine hesitancy (reluctance/refusal) is listed as one of the persistent threats for global public health by the World Health Organization. (1) Even in the accepted population, at this time of the pandemic, reluctance will increase due to inadequate information, lockdown restriction, traveling difficulties, anxiety to take their child to hospital during pandemic, and lack of confidence. (10) The correct address of myths and

misconceptions helps in relieving the fear of persisting in the community.

Effective Immunization delivery system: Determining the immunization service delivery system which is safe and suitable during the pandemic is the critical step. The availability of staff for routine immunization has to be assured even in times of crisis of pandemic as community workers also engaged in active surveillance of COVID-19. The alternative approaches of the immunization delivery system with the community available front-line workers aid the process. Capacity building, effective communication strategy and proper planning of vaccination session is needed for successful routine immunization during the pandemic.

End mass campaigns temporarily: The frequency of vaccination sessions should be increased rather than increasing the number of beneficiaries (pregnant mothers and children). Bundling medical examination with vaccination (routine antenatal check-up with Td immunization) is another strategy helps in increasing the coverage. (9) Adherence to Infection Prevention and Control (IPC) measures has to be ensured at every level.

Suggestions for preparing RI session during a pandemic:

1. Designated space and health care workers involved only in immunization is desirable.
2. Fixed session- Primary Health Care (PHC) setting with an assurance of segregation from the general OPD services is needed. Standard disinfection procedures should be followed before and after the RI session.
3. The involvement of community workers (ASHAs, AWWs) for mobilization of community is pivotal.
4. All health care workers should wear a mask, practice hand hygiene and strictly follow the infection prevention and control (IPC) measures.
5. Physical distancing should be maintained during the session. Pregnant mothers or caregivers accompany the children should also wear a mask.

Mobile session & outreach session: The front-line workers (ANMs, ASHAs, AWWs) in India were already trained in routine immunization delivery. The Utilization of community workers in the interim of the COVID-19 pandemic is essential. Mobile or outreach session (using vaccine carriers) with the

guidance of Medical Officer is the resort for ensuring routine immunization with reasonable coverage. Lockdown challenges for RI: A national-level lockdown was announced in India to interrupt the transmission of the virus during the COVID-19 pandemic. As the chance of impending financial crisis is increasing resource allocation to the health care system for RI (adequate stocking of basic vaccine) in addition to control, contain and treat COVID-19 infection is difficult. The decision regarding the operation of Routine Immunisation depends on various factors like susceptibility of VPD, COVID-19 transmission in that area, availability of manpower and resources, etc.(9) The reason for vaccine hesitancy during COVID-19 pandemic like fear of minor illness, parent's apprehension to take their children to health care setting for vaccination should be tackled by building on confidence. As the routine pediatric outpatient services were also closed, there will be a decrease in immunization coverage.

Suggested strategies in the post-pandemic phase: Immunization coverage need to be calculated and lacunae have to be addressed during the post-pandemic phase. World Health Organisation guidance recommends efforts should be made to bring the immunization coverage back on track by catch-up campaigns as done in the post-Ebola period (2,9) and additional outreach sessions after the Pandemic. Telecommunication strategy to ensure routine immunization during and after pandemic can aid in the process. Prolonged interruption of RI can lead to more risks than benefits, so a careful risk-benefit analysis is needed to decide and refine about RI strategy further in the face of the COVID-19 post-pandemic phase.

### Conclusion

Ensuring routine immunization during a pandemic is a significant role in the health care system even with perplexity. The insights gained from the Ebola epidemic cannot be neglected. Reiterating the importance of immunization and addressing the community's perturbation during the COVID-19 Pandemic and a structured post-pandemic strategy

(assessing the immunization coverage, maintaining VPD surveillance, scaling up vaccination) helps in avoiding undermined adversity.

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Figures

FIGURE 1 ENSURE ROUTINE IMMUNIZATION DURING CORONAVIRUS OUTBREAK LOCKDOWN

