

## Pediatric vaccinations: Nepal's life-saving weapon

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One of the most successful and economical public health interventions ever developed, vaccinations have significant positive effects on social, economic, and health.<sup>1,2</sup> Pediatric immunization helps shield kids and adults from serious, curable, and occasionally fatal diseases. One of the key initiatives for Sustainable Development Goal 3 is ensuring universal access to vaccinations (SDG 3). But over 20 million kids under the age of five still lack all necessary immunizations. This is a particular issue in developing countries like Nepal.<sup>3</sup> Complete immunization of young children is a crucial component of a kid's health and well-being since it lowers newborn and child mortality rates and reduces the transmission of infectious diseases.

The UN Member States saw the necessity for coordinated action at the start of the COVID-19 pandemic to effectively address rising vaccine reluctance, declining vaccination coverage rates, and accompanying disease outbreaks. The epidemic has made these problems worse by upsetting regular immunization campaigns in the area and adding to the strain on vaccination programs.<sup>4</sup> According to reports from the WHO and UNICEF, the COVID-19 pandemic has sparked the most sustained decline in immunization rates in three decades, placing children at risk all around the world.<sup>5</sup>

Based on WHO protocols, children are considered to be fully immunized or have complete immunization after receiving a dose of Bacillus Calmette-Guerin (BCG), three doses of diphtheria-tetanus-pertussis (DPT), three doses of oral polio and a dose of Measles, Mumps, and Rubella (MMR) vaccination to protect them from mumps, measles, rubella, polio and tetanus.<sup>6</sup> Due to international childhood immunization efforts, infant and child mortality rates have fallen throughout the world including in sub-Saharan Africa and South Asia.<sup>7</sup> However, within targeted countries, including Nepal, immunization rates and child mortality rates are unevenly distributed across subpopulations.<sup>8</sup>

Any variation or fluctuation in vaccine coverage rates should raise alarm since it shows that the vaccination program is not resilient, dependable, or predictable. Any drop in vaccination rates is linked to a rise in the number of unvaccinated and under-vaccinated people, which raises the risk of outbreaks of diseases that can be prevented by vaccination .

### Purpose and scope

In order to promote effective pediatric immunization and prioritize vaccination as an essential health service, pediatric vaccination aims to give crucial recommendations

to support the development of robust and resilient immunization systems and specific crisis preparation plans in Nepal. Although there may be differences in workforce and infrastructure between different geography, these guidelines can and should be used everywhere.

### Call for Action

1. **Access:** Make sure that every child, regardless of where they reside, their economic situation, or how impoverished they are, has access to routine immunizations. To reverse the dangerous trend of routine immunization regressing and the resurgence of vaccine-preventable diseases, immediate action is required.
2. **Improve Primary Health Care:** By strengthening health systems, improve primary healthcare. That entails, among other things, providing health workers with training and support, fostering trust in community health organizations, strengthening supply chains, and expanding vaccination locations.
3. **Fight hunger:** As UNICEF has already noted, the unprecedented decline in vaccination rates is taking place against a background of sharply growing rates of severe acute malnutrition. A malnourished youngster already has low immunity, and because they may have missed their vaccines, common childhood infections may become fatal to them very fast. Experts have cautioned that the confluence of a hunger crisis and a widening vaccine gap threatens to set the stage for a child survival crisis.
4. **Data Monitoring:** Real-time, systematic immunization data collection and effective disease surveillance should be supported by public institutions as well as regional, national, and international organizations. In order to provide the government and other supporting agencies with high-quality data on immunization status, the Health Information and Management System (HMIS) must be reinforced and regular quality DHIS-2 reporting must be improved. This will not only assist in monitoring the progress but also improve the monitoring of kids who missed their scheduled immunizations by identifying their location.
5. **Communication:** To enhance immunization-related public communications and to promote the strengthening of immunization programs, the government should collaborate closely with various authorities and development partners. In order to generate demand for novel vaccines as well as routine and supplemental immunization programs, this support should include country communication reviews and tools:-

- a) to drive demand for new vaccines as well as routine and supplementary immunization activities.
  - b) to address vaccine safety concerns and crises.
  - c) to strengthen disease outbreak communication capacity; and
  - d) to boost advocacy platforms through both traditional and social media.
- 6. Ensuring Equity:** The uptake of vaccines is sparked by the ease and accessibility of vaccination. Increase the number of healthcare professionals who can administer vaccinations outside of the typical setting, develop outreach programs to provide easy access to vaccination, reduce the amount of time parents must miss from work to vaccinate their children, launch catch-up campaigns in hard-to-reach communities, and start automated vaccination reminder systems in urban settings to ensure vaccine equity.

The following steps must be taken to achieve vaccine equity:

- a) Guarantee more and equitable access to vaccines
  - b) Increase the workforce in the fields of healthcare, public health, and social protection.
  - c) Address the nation's spending priorities, particularly in relation to epidemics and pandemics.
  - d) Include all segments of society, including youth and young professionals, key stakeholders, and health professionals in the decision-making process and implementation.
  - e) Work with civil societies, community organizations, and the general public to address
- 7. Immunization supply chain and logistics (ISCL):** A widening variety of new vaccines and immunization schedules, a diversity of service delivery strategies, an expanding target population, increased cold chain infrastructure requirements and insufficient funding, are just a few of the new realities that will further stress priority for strengthening ISCL systems. The following key action recommended by WHO<sup>8</sup> for better Immunization Supply Chain and Logistics-
- a) Measure and monitor the health of the ISCL system
  - b) Prepare and implement improvement plans that address system weaknesses with pragmatic responses and introducing supply chain innovations that produce increased visibility and Recom flexibility to manage future changes in ISCL systems.
  - c) Increase funding to recruit, train and incentivize people and prioritize the collection and analysis of data needed to run national immunization programmes.
  - d) Take purposeful advantage of new vaccination initiatives, to build upon and strengthen an

- e) Highlight knowledge gaps, identify what is working, create learning opportunities and accelerate the spread of proven approaches
- 8. Crisis Preparedness:** The nation should make sure that it has a solid plan in place to promptly respond to any outbreak of a disease that can be prevented by vaccination. To assure additional immunizations when necessary, along with a mobile immunization unit, in particular for distant locations where regular immunization is challenging, this requires enough infrastructure and a qualified health work staff.

#### References

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