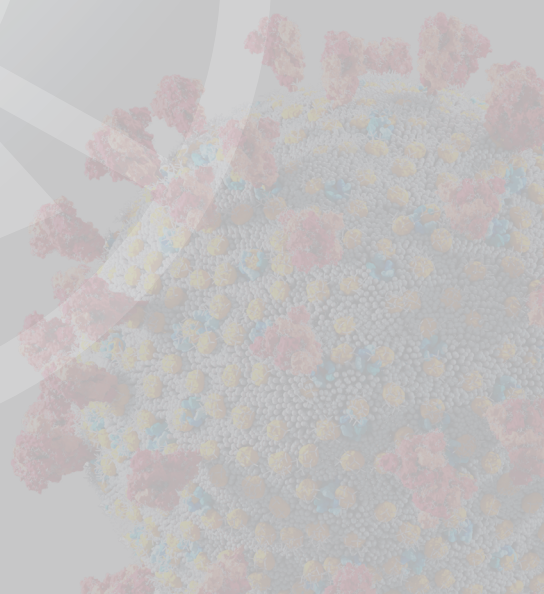


Guiding Principles for recovering, building resiliency, and strengthening of immunization in 2022 and beyond



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Background

A consequence of the COVID-19 pandemic and COVID-19 vaccine introductions has been the widespread strain on essential health services, including immunizations. COVID-19 related disruptions in 2020, particularly in the second quarter, led to a 3% drop in global DTP3 coverage and an increase of 3.7 million incompletely vaccinated children.¹ Over 95% of these were “zero-dose children”, meaning they did not receive any routine vaccinations. With outreach services and campaigns particularly vulnerable to the initial disruptions in 2020, the populations most dependent on these delivery platforms have been especially impacted.² Vaccination of adolescents and pregnant women has also been impacted by school closures and health system disruptions. Most countries began to restore immunization services in the second half of the year,³ but strains to the health system have continued in many countries in 2021 and 2022 due to multiple COVID-19 waves and the efforts to deliver COVID-19 vaccine.⁴ In many countries, large numbers of people across the life course who missed vaccination during these disruptions have still not been caught up on their needed vaccines and remain susceptible to vaccine-preventable diseases (VPDs). The Immunization Agenda 2030 (IA2030) and Gavi 5.0 priorities to leave no-one behind have become even more urgent.^{5,6}

As immunity gaps persist, and in some cases widen, the short-term risks of outbreaks, medical impoverishment and excess child morbidity and mortality will increase along with the burden on already strained health systems. In the long term, the gaps may have economic impact and lead to increased burden of vaccine preventable cancers and chronic disease (e.g., missed human papillomavirus vaccine (HPV) or hepatitis B vaccine doses).

In November 2020, after endorsement by the WHO Strategic Advisory Group of Experts on Immunization (SAGE), WHO published guiding principles on immunization activities during the COVID-19 pandemic and other times of severe disruption.⁷ Those guiding principles focused on the complexity of managing immunization programmes in the context of severe disruptions at a time when COVID-19 vaccines were not available. This document of guiding principles complements the 2020 document and similarly incorporates the IA2030 principles of being people-centred, country-owned, partnership-based and data-guided.⁸ These guiding principles intend to support countries in their decision-making and actions regarding immunization recovery, resiliency, and strengthening of immunization programmes in the context of the COVID-19 pandemic, including COVID-19 vaccination introduction and scale-up, and support efforts toward pandemic preparedness and building global health security. Countries are encouraged to urgently close immunity gaps and recover immunization services while capitalizing on the opportunities from the pandemic response and COVID-19 vaccine roll-out to strengthen routine immunization services and increase resiliency in primary health care.

National Immunization Technical Advisory Groups (NITAGs), supported by Regional Immunization Technical Advisory Groups (RITAGs), have a critical role in advising national immunization programmes and immunization partners by using local data to inform recommendations for **recovering, building resiliency, and strengthening** of immunization programmes. All such efforts should be continuously monitored by countries with plans for rapid course correction as needed.

¹ Muhoza P, Danovaro-Holliday CM, Diallo MS, et al. Routine Vaccination Coverage - Worldwide, 2020. *MMWR - Morbidity and Mortality Weekly Report*. 2021; 70(43):1495–1500.

² Shet A, Carr K, Danovaro-Holliday CM, et al. Impact of the SARS-CoV-2 Pandemic on Routine Immunization Services: Evidence of Disruption and Recovery From 169 Countries and Territories. *Lancet Global Health*. 2021; [https://doi.org/10.1016/S2214-109X\(21\)00512-X](https://doi.org/10.1016/S2214-109X(21)00512-X).

³ Pulse survey on continuity of essential health services during the COVID-19 pandemic. August 2020. Geneva: World Health Organization (https://www.who.int/publications/i/item/WHO-2019-nCoV-EHS_continuity-survey-2020.1).

⁴ Third round of the global pulse survey on continuity of essential health services during the COVID-19 pandemic. February 2022. Geneva: World Health Organization (https://www.who.int/publications/i/item/WHO-2019-nCoV-EHS_continuity-survey-2022.1).

⁵ Immunization Agenda 2030: a global strategy to leave no one behind. Geneva: World Health Organization; 2020 (https://www.who.int/immunization/immunization_agenda_2030/en/).

⁶ Phase V (2021-2025). Geneva: Gavi, the Vaccine Alliance (<https://www.gavi.org/our-alliance/strategy/phase-5-2021-2025>)

⁷ Immunization as an essential health service: guiding principles for immunization activities during the COVID-19 pandemic and other times of severe disruption. November 2020. Geneva: World Health Organization (<https://www.who.int/publications/i/item/immunization-as-an-essential-health-service-guiding-principles-for-immunization-activities-during-the-covid-19-pandemic-and-other-times-of-severe-disruption>).

⁸ Immunization Agenda 2030: a global strategy to leave no one behind. Geneva: World Health Organization; 2020 (https://www.who.int/immunization/immunization_agenda_2030/en/).

Closing immunity gaps and recovering immunization programmes

Strategies to close immunity gaps should aim to ensure every eligible person receives vaccines missed before or during the pandemic. To do so, countries should consider the following:

- Identify and prioritize the persons of all eligible age groups who missed vaccinations, particularly the most vulnerable and neglected population groups and communities. Disadvantaged groups, including remote rural, urban poor, and conflict-affected populations, are at higher risk of VPDs, their associated morbidity and mortality, and disease transmission toward outbreaks. Populations affected by natural disasters and climate change may also be at risk and should be considered for prioritization.
- Develop and implement targeted and locally tailored strategies with dedicated resources to rapidly close immunity gaps particularly for outbreak prone VPDs (*e.g.*, measles, polio, yellow fever), reduce inequities in vaccination coverage, and ensure long-term routine delivery of immunization services and other preventive health interventions.
- Review postponed or cancelled immunization campaigns with readjustment of planned target areas and target age groups to support integration and ensure immunity gaps, both pre-pandemic and those caused by the pandemic-related disruptions, are addressed. Integrated campaigns should be planned to the extent possible: every vaccination campaign should be considered for opportunity to deliver multiple antigens and other health interventions (*e.g.* Integrated Management of Newborn and Childhood Illnesses (IMNCI), deworming, vitamin A).
- Measure progress and regularly monitor impact on the numbers of missed children, adolescents and pregnant women to ensure they have been reached with the full range of vaccines. Some of the investments and innovations made for COVID vaccination roll-out can also support these efforts.

Strategies to recover immunization programmes should aim to facilitate catch-up vaccination at every opportunity across the life course. To do so, countries should consider the following:

- Revise policies and practices that impede vaccination at every opportunity. (*e.g.* upper age limits to vaccination, allowable interval between doses, reluctance to provide multiple injections, opening new vials).^{9,10,11,12}
- Vaccinate cohorts missed in existing school vaccination programmes, especially for HPV, and develop strategies to reach those no longer in school.
- Refresh knowledge and practice of health workers on catch-up vaccination policies, allowable interval between doses for interrupted series, infection prevention and control measures, immunization practices, and outbreak preparedness and response.
- Plan and conduct targeted communications and community engagement about the importance of catch-up vaccination, safety of multiple injections, and opportunities within the community to receive catch-up vaccinations, including through campaigns or routine immunization.

⁹ Leave no one behind: guidance for planning and implementing catch-up vaccination. August 2020. Geneva: World Health Organization (<https://www.who.int/publications/i/item/leave-no-one-behind-guidance-for-planning-and-implementing-catch-up-vaccination>).

¹⁰ Table 3: Recommendations for Interrupted or Delayed Routine Immunization - Summary of WHO Position Papers. September 2020. Geneva: World Health Organization (https://www.who.int/immunization/policy/immunization_routine_table3.pdf).

¹¹ Intervention guidebook for implementing and monitoring activities to reduce missed opportunities for vaccination. December 2019. Geneva: World Health Organization (<https://www.who.int/publications/i/item/intervention-guidebook-for-implementing-and-monitoring-activities-to-reduce-missed-opportunities-for-vaccination>).

¹² Establishing and strengthening immunization in the second year of life: Practices for vaccination beyond infancy. 2018. Geneva: World Health Organization (<https://apps.who.int/iris/bitstream/handle/10665/260556/9789241513678-eng.pdf>).

- Build competency to address vaccine-related mis/disinformation by engaging communities including youth and women groups and training health workers through job aids and on-job support from mentorship or supportive supervision.

VPD surveillance should be urgently restored and strengthened with capacity for laboratory confirmation to rapidly detect and respond to VPD outbreaks, particularly in high-risk areas. Countries should also consider the following:

- Implement activities to identify any missed transmission in communities (e.g. retrospective record reviews in health facilities for time periods of diminished surveillance)
- Introduce and optimize the use of more effective diagnostics tools.

Strengthening routine immunization and building resiliency

Building from the learnings and experience from the COVID-19 pandemic, countries are encouraged to leverage every possible opportunity to strengthen routine immunization and build resiliency by considering the following:

Governance and Advocacy

- Advocate with political leaders, community leaders, and civil authorities, particularly at subnational level, for their support of the immunization programme.
- Develop partnerships with private sector and trusted civil society organizations (CSOs) including women organizations across all aspects of the health system to deliver immunization and other health services, train health workers and support logistics.

Financing

- Prioritize essential health services, including immunization, in government budgets and leverage COVID-19 investments to strengthen routine immunization (e.g. cold chain equipment) especially in countries at risk of downsizing government expenditures on health because of economic strain.
- Advocate use of allocative efficiency tools in prioritizing funding of essential health services, including immunization

Supply chains

- Closely monitor and address gaps in the supply chain (e.g. procurement and distribution delays, suboptimal supply and stock management practices, insufficient cold-chain capacity and equipment failure).
- Promote innovative solutions for timely immunization supplies including use of electronic logistic management information systems (e-LMIS) down to health facility levels, out-sourcing vaccine delivery to private providers to free up immunization programme resources, and expansion of drone delivery to inaccessible health facilities..

Service delivery

- Seek synergies with COVID-19 vaccination delivery to strengthen immunization and primary health care across the life course (e.g. school-based vaccination; adolescent and adult vaccination programmes, including health workers, pregnant women, and the elderly; integrate with other immunizations and health services, when feasible).
- Analyze, identify, and address human resource and training needs for responsive and human-centered immunizations services, and for improving equity for immunization over the life course in the context of increasing program complexity.
- Address fatigue, motivation, competing priorities and the need for supportive supervision and continued professional on-the-job training.

Demand generation

- Identify and support strategies to address the major drivers and barriers to immunization in each context such as political context, behavioral and social determinants, gender-related barriers, and limited community involvement in program development.
- Strengthen the skills, preparedness and knowledge of community and frontline health workers to build trust in the community and overcome vaccine hesitancy.
- Broaden engagement with communities, civil society organizations (CSOs), local governments, and other stakeholders to co-create immunization programmes that are responsive to the needs of parents and communities they live in.
- Increase the capacities for social listening and response to rumors and disinformation related to immunization.

Health information systems

- Invest in robust data systems including expansion of digital solutions and electronic information systems for immunization programming, including innovations that have proved useful during the pandemic and COVID-19 vaccination introduction for use toward real-time monitoring, recording doses, defaulter tracking, microplanning, mapping of underserved communities, supply and cold chain management, supportive supervision, and outbreak detection and response.
- Update national immunization indicators to better reflect the increased complexity of programmes today (*e.g.* updating country definitions of fully immunized child to include all nationally recommended vaccines; more attention to coverage on vaccines given beyond first year of life, including MCV2 and drop out between MCV1 and MCV2).

Summary of methods

This document was developed by the WHO Department of Immunization, Vaccines, and Biologicals based on existing WHO guidance documents (e.g. Leave no one behind: guidance for planning and implementing catch-up vaccination ⁽¹³⁾, Establishing and strengthening immunization in the second year of life: Practices for vaccination beyond infancy, Intervention guidebook for implementing and monitoring activities to reduce missed opportunities for vaccination) with feedback solicited through a broad consultative and iterative review process. Inputs from immunization partners (e.g. UNICEF, Gavi, Immunization Agenda 2030 working groups) and subject matter experts at WHO regional offices and headquarters, including the Department of Integrated Health Services and Department of Maternal, Newborn, Child and Adolescent Health & Ageing, are reflected within. The document was endorsed by the WHO Strategic Advisory Group of Experts on Immunization (SAGE) in April 2022. SAGE members and contributors from immunization partners were assessed for potential conflict of interest.¹³

¹³ Strategic Advisory Group of Experts on Immunization (SAGE) - April 2022. https://www.who.int/news-room/events/detail/2022/04/04/default-calendar/sage_meeting_april_2022.

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