



**The Big Catch-Up:
An Essential
Immunization
Recovery Plan**
FOR 2023
AND BEYOND

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The Big Catch-Up: An Essential Immunization Recovery Plan

FOR 2023 AND BEYOND

The backsliding of immunization coverage during the COVID-19 pandemic, combined with delayed catch-up efforts since 2020 has resulted in a large and growing immunity gap. There is an urgent need to close this gap, and enable millions of missed children to be vaccinated, thereby curtailing the impacts that are already apparent. The Essential Immunization Recovery Plan sets out a path to getting immunization back on track, framed by three key approaches – **Catch-Up, Restore and Strengthen**. This document serves as the joint strategic description of this coordinated effort by **WHO, UNICEF, and Gavi, the Vaccine Alliance, along with the Immunization Agenda 2030 (IA2030) Partnership**, to support countries to **plan and implement intensified efforts to bolster immunization programmes in 2023 and beyond.**



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Introduction

The COVID-19 pandemic years of 2020 and 2021 marked the worst continued backsliding in global immunization coverage in 30 years. This drop in coverage resulted in a nearly 40 per cent increase in the number of zero-dose (unvaccinated) children globally, from 13.3 million in 2019 to 18.2 million in 2021. This represents a major setback to immunization programming and an emergency of child survival globally.

As key partners in global immunization, we present an ambitious but vital strategy for catching up on missed children, restoring immunization, and strengthening progress towards global targets through this Essential Immunization Recovery Plan. We hope to catch up on vaccination of children missed since 2019 – working urgently to fill critical immunity gaps. We aim to restore immunization services – closing the gap between the current and at least 2019 pre-pandemic coverage, and we strive to strengthen immunization and primary health care (PHC) systems – helping countries to accelerate progress towards IA2030 and Gavi, the Vaccine Alliance 5.1 targets. All countries are urged to assess their specific contexts and to take steps, as needed, towards catch-up, restoring and strengthening of essential immunization. While the plan emphasizes urgent action specifically in countries with the highest number of zero-dose children to quickly achieve global impact, it is critical to take action in all countries.

The challenge



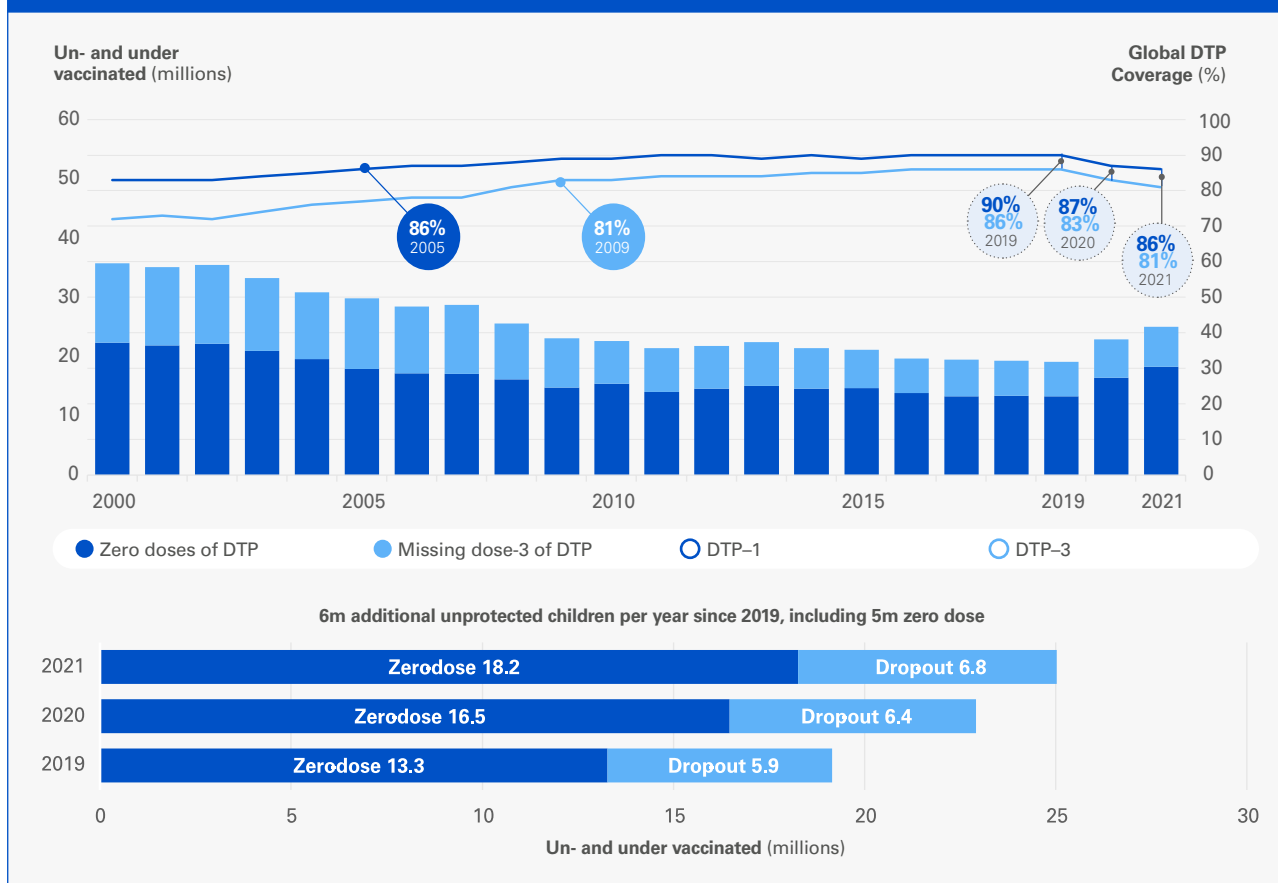
Decades of progress in immunization were reversed during the pandemic when, in 2021, coverage dropped to levels not seen since 2005, resulting in an alarming number of zero-dose children globally. While immunization services undoubtedly were affected by the pandemic response, other challenges such as increasing conflict, economic crises and natural disasters exacerbated already existing barriers to reaching all children and adolescents with life-saving vaccines.

The 2022 World Health Organization and UNICEF Estimates of Immunization Coverage (WUENIC) revealed that a total of 25 million children were un- or under-vaccinated in 2021 (measured as first and third dose diphtheria-pertussis-tetanus vaccine, see Figure 1); this is 2 million more than in 2020, and 6 million more than in 2019. While the causes of the backsliding in 2020 and 2021 are varied, many factors affecting immunization programming were either caused or exacerbated by the pandemic. Through 2021 and 2022, countries delivered many more vaccine doses than ever before as part of the record-breaking COVID-19 vaccine rollout. However, unprecedented pressure was placed on immunization supply chains, PHC systems, health workforces and national budgets, due to both the pandemic response and the broader disruptions it created. Despite efforts to ensure continuity of routine immunization services, coverage of essential childhood and adolescent vaccines lagged. Communities continued to face a range of local barriers to access, including social, financial and geographic factors, along with influences from proliferating vaccine misinformation. Recent evidence

suggests that community trust and the belief in the importance of childhood vaccines fell through 2021 and 2022. Meanwhile, the increase in climate-related events and socio-political crises brings additional hurdles to reaching zero-dose children.

In many countries, children’s vaccination status is not tracked beyond 2 years of age. Often, reporting systems simply do not allow for the collection of data on children outside the target age-range, making it highly challenging to estimate the number of zero-dose children who are vaccinated after 2 years of age. Most older children fall outside the target age groups of national immunization programmes, and while some may be reached by vaccination campaigns such as supplementary immunization activities (SIAs), most will remain zero-dose as they grow up. In addition, health workers may hesitate to offer catch-up vaccinations to older children in routine settings because of non-permissive policies and practices. This means that, without programme adaptations to target older children, they will remain zero-dose and form growing population immunity gaps that will be increasingly harder to close.

Figure 1. Global DTP1 and DTP3 Coverage and Number of Children Missing DTP1 and DTP3, 2000 to 2021



The cost of inaction

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Already, we are seeing the cumulative effects of declining coverage and delayed catch-up activities, with spikes in vaccine-preventable disease (VPD) outbreaks, loss of substantial economic benefits, and millions of children and adolescents unnecessarily at risk of preventable disease and death.

In 2022, 33 countries reported large and disruptive measles outbreaks, compared to 22 countries in 2021. We also risk our ability to attain global eradication of polio, an achievement for which vaccination is a central tool and improvement in coverage is critical. The continued spread of wild type polio (WPV) and circulating vaccine-derived polio virus (cVDPV) is a troubling setback to the Global Polio Eradication Initiative. The two remaining endemic countries, Pakistan and Afghanistan, are reporting increasing numbers of cases, while WPV has been re-introduced and caused outbreaks in Malawi and Mozambique. Several countries in Africa continue to experience cVDPV outbreaks while cases and positive environmental detections were reported in the Americas and Europe in 2021 and 2022. Every case of polio, wild or vaccine-related, is caused by insufficient polio vaccine coverage. A resurgence in diphtheria has also been reported, with outbreaks in Bangladesh, Nepal, Pakistan, Venezuela and Yemen. These events remind us that no one is safe from VPDs until everyone is safe.

For children, adolescents and families, the benefits of immunization are undeniable; vaccination remains one of the world's most impactful public health tools. It is estimated that in 2021 infant mortality would have been 45 per cent higher without childhood vaccines.¹ Immunization will have saved an estimated 67 million lives between

2000 and 2030.² Declining immunization coverage also represents an important economic loss for families, communities and countries. Vaccinating a child averts treatment and transport costs for the family as well as losses in caregiver wages and productivity due to disability and death. The cumulative impact of these potential losses is large. Modeling indicates that vaccination can save 24 million households from falling into poverty between 2016 and 2030 by avoiding the medical costs of vaccine preventable diseases – the equivalent of 9 per cent of households living below the poverty line as of 2013.³ At country level, lower- and middle-income countries gain an estimated return of at least US\$21 for every US\$1 invested in vaccines, one of the largest returns on investment of any public health tool.

Furthermore, vaccination is often at the heart of responding to health emergencies and pandemics. Controlling outbreaks early depends on resilient immunization services and coverage capable of withstanding health shocks and rapid scaling of response. While recognizing the significant efforts and achievements of vaccination programmes in responding to COVID-19, the pandemic revealed systemic weaknesses in immunization systems. Failing to invest in health systems – which are essential for the reach and impact of vaccination – now will only leave us less-prepared for the next outbreak, epidemic or pandemic.

¹ Xiang Li, PhD et al. (2021). [https://doi.org/10.1016/S0140-6736\(20\)32657-X](https://doi.org/10.1016/S0140-6736(20)32657-X)

² Ibid.

³ Chang, A.Y., et al., 'The Equity Impact Vaccines May Have On Averting Deaths And Medical Impoverishment In Developing Countries', *Health Aff (Millwood)*, 2018 Feb;37(2):316-324. doi: 10.1377/hlthaff.2017.0861. PMID: 29401021.

The opportunity

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Today, as a global community, we have a unique opportunity for catalytic action on immunization. Through IA2030, we have defined a framework for action to rebuild immunization services, and we can accelerate the impact of this action by focusing our efforts where zero-dose children are concentrated. We can harness the momentum for immunization generated through the COVID-19 pandemic response and build on the steps countries have begun taking to address declining coverage and recover health systems under stress.

As the intensity of the initial pandemic response subsides, programmes are now able to focus more time, resources and attention to other immunization activities; notably there remain substantial financial resources in many countries, including unspent COVID-19 response funds. Countries may be able to redirect unspent funds towards essential immunization systems and work to leverage COVID-19 response investments, including those for COVID-19 vaccine integration, to simultaneously strengthen essential immunization programmes.

This momentum for catch-up also represents a unique opportunity for the standardization and integration of vaccinating older children within routine essential immunization systems and programmes. While global-, regional- and country-level recommendations to vaccinate children beyond 2 years of age, and other narrow target ranges, have long existed, the necessary commitment to adjust policies and programming has not. As countries work to ensure policy, planning, systems and programming are adapted to catch-up children missed during the pandemic, these changes will overcome many of the hurdles towards vaccinating older children even beyond this recovery period. Countries can build on these efforts to take the remaining extra steps in making catch-up of older children a routine element of overall efforts to reach zero-dose children and missed communities.

Many countries have already taken important steps to course-correct declining essential immunization coverage levels. By March 2023, 17 countries continued to experience delays conducting campaigns due to COVID-19, a substantial reduction from the 66 countries reporting delays in May 2020. These countries can further build on their progress. First, by integrating catch-up strategies to include multiple antigens in planned activities. Second, by expanding the ages of children targeted to achieve catch-up of children missed during the pandemic, implement catch-up of missed children into longer-term strategies and identify and invest in strengthening essential immunization to sustainably deliver. Many countries are also engaged in strategic planning and priority setting, by developing their National Immunization Strategies (NIS) and subsequently their applications to Gavi and planning processes to resource their NIS. These countries can incorporate and account for catch-up, restoring and strengthening strategies as integral elements of these documents.

For all countries, an important opportunity remains in the considerable political and donor attention on immunization that COVID-19 generated. Used well, this attention can be mobilized to drive support towards our collective objectives of narrowing immunity gaps, reaching zero-dose children, preventing large outbreaks, and saving lives. It is critical that we move ahead quickly while global momentum remains.

The strategy

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Our strategy is driven by three core objectives:

1

CATCH-UP

Reach children who missed vaccination during the period 2019–2022, which was partly due to the pandemic, and provide all missing vaccinations.

2

RESTORE

Restore vaccination coverage rates for the current birth cohort in 2023 to at least 2019 levels.

3

STRENGTHEN

Strengthen immunization systems within PHC approaches, to improve programme resilience and accelerate towards reaching zero-dose children in line with IA2030 and Gavi 5.1 goals and targets.

The first objective concentrates on action to reach the more than 86 million children who missed out on essential immunizations from 2019 to 2022, approximately 61 million of whom were zero-dose. Not all countries have resumed delayed activities, including campaigns, nor have all planned activities been implemented. This objective aims to urgently fill the remaining gaps in individual and population immunity of previous birth cohorts that have grown month-on-month since early 2020. To do so, we must intensify efforts through 2023 to rapidly reach these missed children using routine strategies wherever possible, and when necessary supplement those approaches with well planned and executed campaigns. The second objective will include an initial push in 2023 to rapidly restore coverage in current and future birth cohorts. This will double down on ongoing investment in recovering immunization services from pandemic disruptions over the following years to recover and maintain coverage levels. The third objective recognizes the critical role of PHC in building long-lasting connections with communities and health systems resilient against pandemic and other crises. This will rely on innovative and reimagined immunization programmes that deploy strategies tailored to the unique contexts of zero-dose communities.

To deliver these objectives, we are guided by seven key principles:

- **Urgency** – every child fully vaccinated and protected is a success.
- **Equity** – focus efforts in areas and communities with the most missed children, or that face persistent or acute barriers to access, align efforts with broader zero-dose programming, and ensure gender-responsive approaches.
- **Simplicity** – use simple strategies that are action-oriented, building on existing plans where available, and reprogramme existing funds.
- **Efficiency** – leverage every existing planned immunization activity (e.g., campaigns, periodic intensification of routine immunization [PIRI], outreach) and integrate with all essential health services across PHC to the greatest extent possible.

- **Sustainability** – build systems and capacity to provide on-going catch-up vaccination through the health system over the long term and rely only on campaigns where unavoidable, integrating and targeting them wherever possible.
- **Partnership** – engage expanded partners and stakeholders from within and beyond the health sector to contribute to promoting and delivering vaccination.
- **Community and user-centered** – tailor intervention to ease access and maximize uptake, working closely with communities and civil society organizations.

We underscore the importance of all countries working to ensure catch-up, and restoring and strengthening essential immunization. However, focus, particularly in 2023, is placed on the 20 countries that accounted for 78 per cent (over 14.2 million) of all zero-dose children worldwide in 2021 – Afghanistan, Angola, Brazil, Cameroon, Chad, the Democratic Republic of the Congo, the Democratic People’s Republic of Korea, Ethiopia, India, Indonesia, Madagascar, Mexico, Mozambique, Myanmar, Nigeria, Pakistan, the Philippines, Somalia, the United Republic of Tanzania, and Vietnam. At regional level, additional countries may be a focus of efforts, by using the same criteria of high numbers of zero-dose children or drawing on indicators such as national coverage levels.

Through this strategy we will return to the necessary trajectory to reach the annual and end of decade IA2030 targets, which call for halving the number of zero-dose children by 2030, based on the baseline number of 14 million zero-dose children. It will also position us to achieve other global targets. The Gavi 5.1 targets call for a 25 per cent reduction in zero-dose children by 2025, mid-way through the decade, and while not all countries are Gavi-eligible, the goal of strengthening health systems to reach under-immunized and zero-dose children is relevant to all countries. Immunization will make critical contributions to the Sustainable Development Goals by reducing child mortality and improving health access, educational attainment and poverty reduction.

How we will deliver

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WHAT WILL BE THE FRAMEWORK FOR ACTION?

Building on good practice and lessons learned in managing global health initiatives and reflecting core principles of the Gavi Vaccine Alliance, the planning and implementation of the Essential Immunization Recovery Plan will support the principle of **national ownership and the centrality of governments** in coordinating the process, identifying and managing bottlenecks and mobilising partners. These principles will be extended to frameworks in all countries, including those who are not Gavi-eligible. The planning and implementation process will therefore be supported by a **'One Plan, One Budget and One Team' approach**, with a central focus on in-country operational action.

- **One Team:** With governments at the centre of strategy and planning, the partners will transparently support the country ambitions and plans to restore immunization. **In eligible countries, Gavi provides a framework and structure for action, with UNICEF and WHO providing technical, policy, coordination and advocacy support according to their areas of expertise and responsibility.** The Gavi Secretariat, the Bill & Melinda Gates Foundation, US CDC and World Bank, as core partners, and a range of expanded and local partners will join in the **coordinated support to countries for developing their plans**, based on each organisation's remit and capacity. In both Gavi-eligible and non-eligible countries, **UNICEF and WHO technical capacity will support governments to coordinate the design, implementation and monitoring of the plan**, and bring all the relevant partners together, to capitalize on and enhance existing coordination mechanisms including Immunization Interagency Coordination Committees, Immunization Technical Working Groups and National Immunization Technical Advisory Groups (NITAGs).
- **One Plan:** Partners will support priority countries to **integrate catch-up, restore and strengthen activities** beginning in 2023 as a component of National Immunization Strategies, where possible, and Annual Operational Plans. Where relevant, country-level planning and implementation will leverage ongoing Gavi Full Portfolio Planning, World Bank applications and other relevant planning process, including alignment with National Health Plans and Strategies. **Integrating with existing planning and programming** is critical to ensure efficient use of resources and effort.
- **One Budget:** The plans will be costed, and the budget will be **mapped to in-country funding, both domestic and external.** Governments will be supported to leverage existing resources, such as Gavi Health System Strengthening, Gavi Equity Accelerator Funds, COVID Vaccine Delivery Support, unspent World Bank COVID-19 funding, and other donor funding that can be leveraged, reprogrammed or repurposed for the recovery activities. Any funding gap will be estimated to inform advocacy and resource mobilisation.
- **Global and regional level support:** UNICEF, WHO and partners, at global and regional level, will provide **supplementary country-level technical assistance where relevant and requested**, and technical assistance for country-level planning, implementation and monitoring. IA2030 mechanisms will be used for coordination of global level advocacy, resource mobilisation support and concerted technical assistance.
- **Political Leadership Engagement:** UNICEF, WHO and partners will seek to **engage the highest levels of political leadership at country and regional organization level** for immunization programme recovery investment. This political leadership is also needed from donor countries, which have shown strong, unwavering solidarity and commitment during COVID-19 vaccine efforts.

WHAT ARE THE KEY ACTIONS FOR COUNTRIES TO TAKE?

Each country needs a **tailored, country-specific response** focused on catch-up, restoration and strengthening of immunization programmes, via a **systems-strengthening approach and acute action**, as necessary. This means countries considering both short-term efforts with action to tackle immediate problems, and on-going approaches to overcome systemic barriers and constraints to programme performance. While there is an urgent need to close immunity gaps accumulated since 2019, emphasis must not be only on short-term solutions. It is critical that better, resilient systems are built to enable immunization programmes to sustainably reach missed communities and zero-dose children and withstand any inevitable future shocks and interruptions, by better tracking defaulters and enabling catch-up vaccination, even for older children as part of regular immunization programmes.

Countries will need to determine the balance of action that their situation demands. Some countries may have taken sufficient steps in the previous two years to restore coverage levels for new birth cohorts. However, missed children may not yet have been caught, and on-going efforts to strengthen systems towards IA2030 targets will be relevant to all countries.

Moreover, **too few countries have enabling policy and programmatic environments that allow for vaccinating children once they age out of a standard age-cohort**. Global engagement and efforts for catch-up are a unique opportunity for countries to regularize and integrate this practice within their routine immunization programmes.

Short-term activities:

Establish catch-up vaccination policy and schedule(s).

Intensify catch-up vaccination efforts and vaccination of zero-dose children through RI delivery (e.g., mass call backs, intensified defaulter tracking and expanded outreach).

Conduct targeted and selective multi-antigen vaccination intensification campaigns (PIRI).

Conduct necessary SIAs for single and multiple antigens, irrespective of individual vaccination status.

On-going efforts to build a system of continuous catch up:

Implement and integrate catch-up vaccination policies and schedules into routine activities.

Ensure robust newborn and defaulter tracking.

Review vaccination history at every health visit (immunization and other health services); refer or provide catch-up doses (i.e., implement strategies to reduce missed opportunities for vaccination (MOV)).

Conduct PIRI activities that screen for eligibility and record doses.

Build in catch-up opportunities at other contact points (e.g., daycare and school-entry vaccination checks).



DEVELOPING A **TAILORED PLAN**

As countries consider how they will undertake catch-up, restore, and strengthen efforts, they should not duplicate existing activities and strategies that may support catch-up and recovery. For example, countries with developed plans for intensification activities in 2023 should consider how these plans will serve their catch-up agenda, which may include adapting the plans to cover older children rather than developing parallel plans. Where countries are engaged in significant activities around a particular vaccine, such as the Relaunch for HPV vaccine, they are unlikely to need or find benefit in creating additional activities through their catch-up and recovery plan for that vaccine, but special efforts for other antigens and age groups may be warranted.

Most countries can adapt the steps listed in Table 1 to enable development of their tailored Catch-up and Recovery Plan. Except for the first and sixth steps, countries will lead on developing plans. WHO and UNICEF Country, Regional and Headquarters teams will provide support throughout the planning and implementation processes. Close country engagement will be a key part of steps one and six, for which WHO and UNICEF will be responsible.

The level of support and the specific activities each agency will support will depend on areas of comparative advantage and country context. In Gavi-eligible countries, the Gavi Secretariat will provide guidance on how it can support catch-up and recovery plans in line with each country's eligibility status.

Suggested country-level measures to support a tailored plan for catch-up, and recovering and strengthening immunization programmes

1



Advocacy & consensus

WHO and UNICEF (country representatives) to jointly inform and consult with the MoH.

Explore the ambition of the government to intensify efforts in 2023 for immunization and encourage a high-level political agenda to speak to this during a major national event.

2



Set-up oversight & management team

MOH to establish and lead an oversight mechanism (task force or leveraging existing mechanisms such as ICC, HSCC) to coordinate, map and mobilize resources, and monitor progress with in-country partners.

3



Determine strategies for catch-up of missed children

Develop strategies to provide catch-up vaccination to children who missed vaccine from 2019–2022, by:

Formulate a catch-up vaccination policy (if not yet available) through the NITAG and implement this policy and recommended antigen-appropriate catch-up schedules for vaccination beyond 2 years (per WHO guidance), drawing on support from WHO for technical guidance as needed.

Review available data to establish targets and reach a sufficient number of children missed during the pandemic to build population immunity to forestall VPD outbreaks.

Modify data recording and reporting systems to facilitate catch-up vaccination, especially for children >2 years old, including looking at opportunities to use innovation for more accurate and timely data reporting.

Select indicators and specify a plan for monitoring progress.

Incorporate multiple strategies to identify and reach missed children, including through intensified immunization activities (e.g., PIRI), and by systematic efforts to reduce missed opportunities for vaccination (MOV) at all health contacts – see FAQs.

Adjust vaccine forecasting and stock monitoring at national, sub-national and health facility level to ensure availability and supply of vaccines for intensified catch-up activities, and for regular long-term provision of catch-up vaccination through routine immunization, especially for children >2 years old.

Build health worker knowledge capacity to plan and deliver catch-up vaccination per national policy.

Explore enhancements to service delivery strategies at fixed sites, with user-centered focus on access (e.g., new and extended vaccination sessions), and foster cross-sectoral collaboration to support identification of zero-dose children.

Adapt communication and community engagement to build support for catch-up vaccination.

4



Determine strategies to restore & strengthen immunization programmes

Develop strategies to restore the performance of the immunization programme to at least 2019 levels, and to strengthen programme performance to reach and fully vaccinate zero-dose children.

Leverage ongoing national planning efforts when possible – such as NIS development processes and related national workshops – to ensure multi-stakeholder support.

5



Identify and resolve financial & human resource gaps

Cost the catch-up, restoration and strengthening components of the plan, or the existing plans into which they have been integrated.

Explore the financial needs and review how underutilized funds (e.g., domestic, World Bank, Gavi, Global Fund) can be reprogrammed for restoration, strengthening and catch-up. Seek additional resources if necessary.

Review, in coordination with the Gavi Senior Country Manager (SCM), when applicable, how Gavi resources can be used to support these ambitions.

Estimate gaps in resources (HR and finances) to implement the plans and communicate them to WHO and UNICEF Regional Offices/RWG and to the SCM.

6



Engage Regional & HQ support

Identify action for Regional and HQ level that will help implementation (e.g., political advocacy, data monitoring support, progress and indicator tracking, coordination through Regional Working Groups).



WHICH **AGE RANGES** SHOULD BE THE FOCUS OF THIS INTENSIFIED EFFORT?

The **zero-dose and under-immunized children from 2019–2022 will be between 1 and 5 years old in 2023**. Therefore, national policies should ensure catch-up vaccination of **all children under at least 5 years of age** for recommended vaccines, and intensified efforts should focus on quickly reaching these children to close this gap.

We also acknowledge that there remain children from the 2018 cohorts and earlier who are still un- or under-vaccinated and continue to be at risk of disease, even though they are aged over 6 years. These children form the older age immunity gap that contributes to outbreak pathogens including measles, yellow fever, diphtheria and polio. When feasible, and where resources permit, catch-up efforts can include older children and should be considered as an ongoing part of essential immunization delivery, tailored to country data and epidemiologic status.

PRIORITIZING VACCINES FOR CATCH-UP AND RECOVERY?

While WHO recommendations are clear that for most antigens, with some exceptions, it is better to vaccinate late than never, countries will need to prioritize and tailor their catch-up strategies.

1. To address the growing risk of outbreaks, the most urgent antigens of concern are measles/rubella, polio, diphtheria, yellow fever and meningococcal A.
2. Tetanus, hepatitis B, and HPV are critical to future risk as children age and must also be addressed urgently in order to reach and protect individuals before exposure.

Therefore, programmes should consider prioritizing strategies to quickly reach children with MR, Polio (OPV/IPV), Pentavalent, HPV, YF and MenA vaccines (where applicable).

For HPV, many countries are engaged in a separate ambitious agenda of revitalization of vaccination efforts. This involves countries with suboptimal HPV vaccine coverage, including those with backsliding during the pandemic years, countries not yet vaccinating that are moving to introduce the vaccine and, for all countries, the consideration of a one-dose schedule. Countries engaged in such HPV revitalization efforts through Gavi or other independent mechanisms should seek to continue HPV catch-up through those channels, including MAC catchup to 18 years of age in some cases.

For all of the above, as well as other antigens (e.g., rotavirus, pneumococcal), and in addition to any mass or targeted activities where needed, all countries should include opportunities to catch-up on these vaccines through routine service delivery in line with national policies, and ensure that clear catch-up schedules are developed, where not already in place.

Further details on recommendations for catch-up vaccinations are available in the WHO 'Recommendations Interrupted or Delayed Routine Immunization – Summary of WHO Position Papers'.⁴ For guidance on strategies for catch-up vaccination, countries may consult WHO's 'Leave no one behind: guidance for planning and implementing catch-up vaccination'. We recommend that countries engage their NITAGs to consult these tools, review their national EPI policies, and develop national EPI antigen-based catch-up schedules.

For countries experiencing or at risk of humanitarian emergencies emerging from conflict, natural disasters or other reasons, policies and implementation of vaccine recovery and strengthening are critical to protect populations. The WHO resource '[Vaccination in Acute Humanitarian Emergencies: a Framework for Decision Making](#)' outlines an evidence-based approach that can be adapted to help prioritize vaccines and strategies for catch-up, which should include:

- Epidemiological risk assessment (population immunity, burden of disease).
- Consideration of vaccine logistics and operational factors (e.g., supply availability, financing).

Although this resource was developed for use in emergency settings, the prioritization framework can be adapted for decision-making.

⁴ <https://www.who.int/publications/m/item/table-3-who-recommendations-for-routine-immunization>.



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