
UNICEF IMMUNIZATION ROADMAP TO 2030



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for every child





UNICEF'S mandate on immunization is derived from the Convention on the Rights of the Child

UNICEF has more than 75 years of experience working for children and is the only organization specifically named in the Convention on the Rights of the Child as a source of expert assistance and advice. UNICEF's immunization mandate derives from the interpretation of immunization as a right guaranteed by the Convention on the Rights of the Child in Article 24, which obliges states to make every effort "to ensure that no child is deprived of his or her right of access to such health care services" by providing them with "necessary medical assistance and health care" and "appropriate pre-natal and postnatal health care for mothers", among others. Article 2 of the Convention requires that "no child should be treated unfairly on any basis" and that "the most disadvantaged children and the countries in greatest need have priority" in everything UNICEF does.

LIST OF ACRONYMS

ACT-A	Access to COVID-19 Tools Accelerator
BCG	Bacille Calmette-Guerin vaccine
COVAX	COVID-19 Vaccines Global Access Initiative
DTP1	First dose of diphtheria, tetanus and pertussis containing vaccine
DPT3	Third dose of diphtheria, tetanus and pertussis containing vaccine
GNI	Gross national income
HPV	Human papillomavirus
IA2030	Immunization Agenda 2030
MCV1	First dose of measles-containing vaccine
MCV2	Second dose of measles-containing vaccine
POL3	Third dose of polio vaccine
PCV	Third dose of pneumococcal vaccine
PHC	Primary health care
ROTAC	Completed dose of rotavirus vaccine
UNICEF	United Nations Children's Fund
UHC	Universal Health Coverage
WASH	Water, sanitation and hygiene
WHO	World Health Organization



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EXECUTIVE SUMMARY

Immunization is one of the world's most effective public health interventions, averting 2 to 3 million child deaths every year. However, millions of children miss out on the full benefits of vaccines each year – and these numbers have increased over the course of the COVID-19 pandemic.

The UNICEF Immunization Roadmap 2022–2030 outlines UNICEF's priorities for immunization through 2030. It explores how these priorities contribute to overarching strategic goals for health and health systems strengthening, including for pandemic preparedness.

This document is an update of the UNICEF Immunization Roadmap 2018–2030, which was first launched in September 2019. It presents a strategic approach to addressing the setbacks that immunization programmes are facing due to the COVID-19 pandemic and aims to accelerate progress towards the achievement of global immunization goals by 2030. This updated Roadmap was informed by an analysis of global immunization and health trends and was developed through a rigorous consultative process engaging internal and external stakeholders.

An evolving global immunization landscape

The emergence of the COVID-19 pandemic in 2020 impacted economies and health systems, leading to disruptions of health and immunization services and the erosion of trust in vaccines. Vaccine coverage in all regions of the world has been negatively impacted by the pandemic, particularly in low- and middle-income countries. Today, in 2022, pandemic-related economic shocks are exacerbated by a global food crisis, climate change, ecological degradation, migration, conflict, pervasive inequalities, and increased pandemic risk that threaten the health and future of children in every country.

At the same time, innovative technologies have emerged to enhance the reach and effectiveness of immunization programmes. Further, expansion of immunization programmes and broader and more complex partnerships and governance structures are offering new opportunities for improving the immunization landscape.

Bottlenecks and barriers to programme delivery

Persistent backsliding in immunization coverage in recent years and disparities in access to and uptake of vaccines are presenting important challenges to reaching every child with life-saving vaccines.

Barriers related to the enabling environment include limited financing for immunization in many countries, lack of high-quality data to inform decision-making, limited leadership and management capacity of immunization programmes and harmful social norms that can derail vaccination efforts.

Many countries also face supply-side barriers, such as limited availability and access to health care facilities and services, human resources constraints and gender-related inequities. Demand-side barriers include long distances to services and poor integration of immunization, gender-related disparities and information and communication challenges, limited caregiver knowledge, social and cultural barriers and misinformation.

UNICEF's comparative advantage

As a leading advocate for equity in child survival and health, UNICEF is well-placed to support countries in accelerating equitable access to vaccines for children in the lead-up to 2030. UNICEF implements health programmes in an estimated 130 countries and supplies vaccines to 45 per cent of the world's children under 5, highlighting its potential to enact change on a global scale.

UNICEF plays a leadership role in multiple global health platforms and is a founding member of all key global immunization partnerships. As such, UNICEF shapes and influences the vision, strategies and policies that make up the global immunization agenda. UNICEF delivers immunization services in humanitarian contexts, during and after emergencies, and has a mandate to work along the continuum of humanitarian and outbreak response.

Strategic shifts to reach every child with full vaccination

UNICEF's Immunization Roadmap 2022–2030 outlines important shifts arising from progress achieved and lessons learned during the past four years, including innovations to accelerate progress after the setbacks of the COVID-19 pandemic.

A major focus of UNICEF's Immunization Roadmap 2022–2030 is increasing equity by reaching zero-dose children and communities with full vaccination, including in fragile and humanitarian settings. The Roadmap also articulates how UNICEF's immunization programme will increase support to and leverage resilient primary health care, including community health systems. Efforts to identify and reach zero-dose children with immunization provide opportunities to expand the health care offered to under-served communities through the bundling of immunization with broader essential services.

A focus on innovative and evidence-based approaches to social and behavioural change is vital to support improved vaccination equity. In addition, a shift towards deliberate actions to support middle-income countries – which are home to most of the world's zero-dose and under-vaccinated children – is critical to meet the Roadmap objectives.

As UNICEF and the global community continue to respond to the COVID-19 pandemic, the lessons learned from this crisis will be incorporated into strengthening immunization programme readiness and response to future shocks.

Programme framework

The vision of the UNICEF Immunization Roadmap 2022–2030 is a world where every woman, child and adolescent fully and equally benefits from vaccines for good health, well-being and full realization of their potential. With a focus on equity, the Roadmap enables attainment of the following three goals:

1. *Catch up and recover:* Vaccinate children missed during the pandemic, restore disrupted immunization services and accelerate progress to achieve IA2030 goals.
2. *Leave no one behind:* Increase equitable access to and use of existing and new vaccines.
3. *Strengthen and sustain:* Strengthen immunization programmes to sustainably reach target populations with full vaccination and essential primary health care services.

Working with partners, UNICEF will contribute to realizing these goals by achieving the following objectives by 2030: (1) Create an enabling environment for immunization and primary health care; (2) enhance equitable access to quality immunization services provided through resilient primary health care; and (3) improve demand for quality immunization and primary health services.

These objectives are linked to anticipated outputs, which serve as the benchmarks against which progress towards the 2030 objectives will be measured.

To create an enabling environment for immunization and primary health care, UNICEF will improve the generation and use of evidence; strengthen leadership, management, coordination and strategic planning of immunization programmes; and enable governments and immunization stakeholders to sustainably finance immunization services.

To enhance equitable access to quality immunization services provided through resilient primary health care, UNICEF will extend the reach of immunization services, including the introduction of new and under-utilized vaccines; ensure improved readiness to prevent and respond to vaccine-preventable disease outbreaks and pandemics, while achieving eradication and elimination goals; ensure countries have uninterrupted access to affordable vaccines and immunization-related supplies; and ensure improved availability of potent vaccines at service delivery points.

To improve demand for quality immunization and primary health services, UNICEF will ensure responsive and effective social and behaviour change interventions designed and implemented with communities; and improve the capacities of frontline health workers to build trust and confidence in vaccination and primary health care services.

Change strategies and programming approaches

UNICEF will employ cross-cutting change strategies to achieve its Roadmap goals and objectives. Through its advocacy, UNICEF will continue to foster change by influencing decision-makers to take positive action to strengthen immunization policies and programmes. UNICEF will also deepen its engagement with existing partners and initiate new partnerships by strengthening synergies, building trust and leveraging comparative advantages to take action on shared objectives.

With an emphasis on data, evidence and knowledge, UNICEF will continue to advocate for and support evidence-informed policies, strategies and programmes to meet its Immunization Roadmap goal and objectives. In addition, UNICEF will continue investing in digital transformation and technology to improve vaccine supply, delivery and uptake. Through gender-transformative approaches, UNICEF will identify barriers to access and use of services, as well as underlying power dynamics within households, which impact the likelihood that a child will be immunized.



Improving immunization outcomes, especially in missed communities, requires integrated service delivery and interventions within and beyond the health sector. Through a multisectoral approach, UNICEF will promote immunization as a platform for the delivery of other essential interventions and work across sectors to address the underlying causes of poor availability, reach and uptake of services. Lastly, UNICEF will continue investing in resilience-building and preparedness to improve future response to pandemics, outbreaks and other crises.

To implement the Immunization Roadmap, UNICEF will tailor its programming approach to country context and the needs of its target populations – children, adolescents and mothers – while also targeting wider populations in certain settings to ultimately protect children.

01

INTRODUCTION





1.1 Overview

The UNICEF Immunization Roadmap 2022–2030 outlines and updates UNICEF's priorities in immunization through 2030. The Roadmap articulates organizational priorities in immunization and explains how these priorities contribute to overarching strategic goals for health and health system strengthening, including for pandemic preparedness. It describes how UNICEF will continue to build on its comparative advantages to lead and support global efforts to provide immunization services to the most disadvantaged children.¹ It also provides a framework for UNICEF regional and country offices that can be adapted to local contexts.

The Roadmap presents a strategic approach to addressing the setbacks that immunization programmes are facing due to the COVID-19 pandemic to accelerate progress towards the achievement of global immunization goals by 2030. This approach focuses on the interlocking priorities of catching up on children missing vaccination, restoring disrupted immunization services and strengthening systems to reach zero-dose children sustainably. The Roadmap articulates how UNICEF's immunization work will contribute to reaching the 2030 Sustainable Development Goals² and the UNICEF Strategy for Health 2016–2030³ strategic goals of ending preventable, newborn and child deaths and promoting the health and development of all children. It describes how UNICEF will draw upon its strengths and extend its capacity to contribute to achieving the Immunization Agenda (IA2030)⁴ and Gavi 5.0⁵ goals. The Roadmap also commits to mitigating the impact of the COVID-19 pandemic as well as that of future pandemics and epidemics, while renewing UNICEF's commitment to existing disease-specific initiatives.

This Roadmap is a broad strategic document that provides overarching direction for the 2022–2030 period. However, the prioritization and implementation of core initiatives and specific activities will continuously be reviewed to respond to the needs of countries, changes in global circumstances and emerging partnerships.

The Roadmap's primary audiences are:

1. UNICEF senior management at the global, regional and country levels
2. UNICEF technical teams and staff working in health, immunization, social and behavioural change, supply and logistics at all levels
3. UNICEF's immunization partners, including ministries of health, ministries of finance and planning, the World Health Organization (WHO), donors, global partnerships and alliances (e.g., Gavi, the Vaccine Alliance; the Global Polio Eradication Initiative; etc.), civil society organizations, non-governmental organizations, international organizations, United Nations agencies and bodies, international financial institutions, philanthropic foundations, private sector actors and academic and research institutions

1.2 Developing the Roadmap

This document is an update of the UNICEF Immunization Roadmap developed in 2017–2018 and launched in September 2019.

This updated Roadmap was informed by a desk review of the latest global immunization strategies and policies, analysis of global immunization and health trends, and reviews of existing and emerging areas of work. It was developed through a rigorous consultative process, including, semi-structured interviews with internal and external stakeholders. In addition, a series of virtual and in-person consultations were held with UNICEF staff, government representatives and partners to review and contribute to all aspects of the updated Roadmap.

¹ United Nations Children's Fund, 'About UNICEF: UNICEF's mission statement', UNICEF, 25 April 2003, <www.unicef.org/about/who/index_mission.htm>, accessed 17 October 2017.

² United Nations, 'The 17 Goals', <<https://sdgs.un.org/goals>> accessed March 10 2022.

³ United Nations Children's Fund, 'Strategy for Health 2016–2030', <<https://www.unicef.org/media/58166/file>> accessed 10 March 2022.

⁴ 'Immunization Agenda 2030', <<https://www.immunizationagenda2030.org/>> accessed 31 March 2022.

⁵ Gavi, the Vaccine Alliance, 'Phase V', <<https://www.gavi.org/our-alliance/strategy/phase-5-2021-2025>> accessed 31 March 2022.

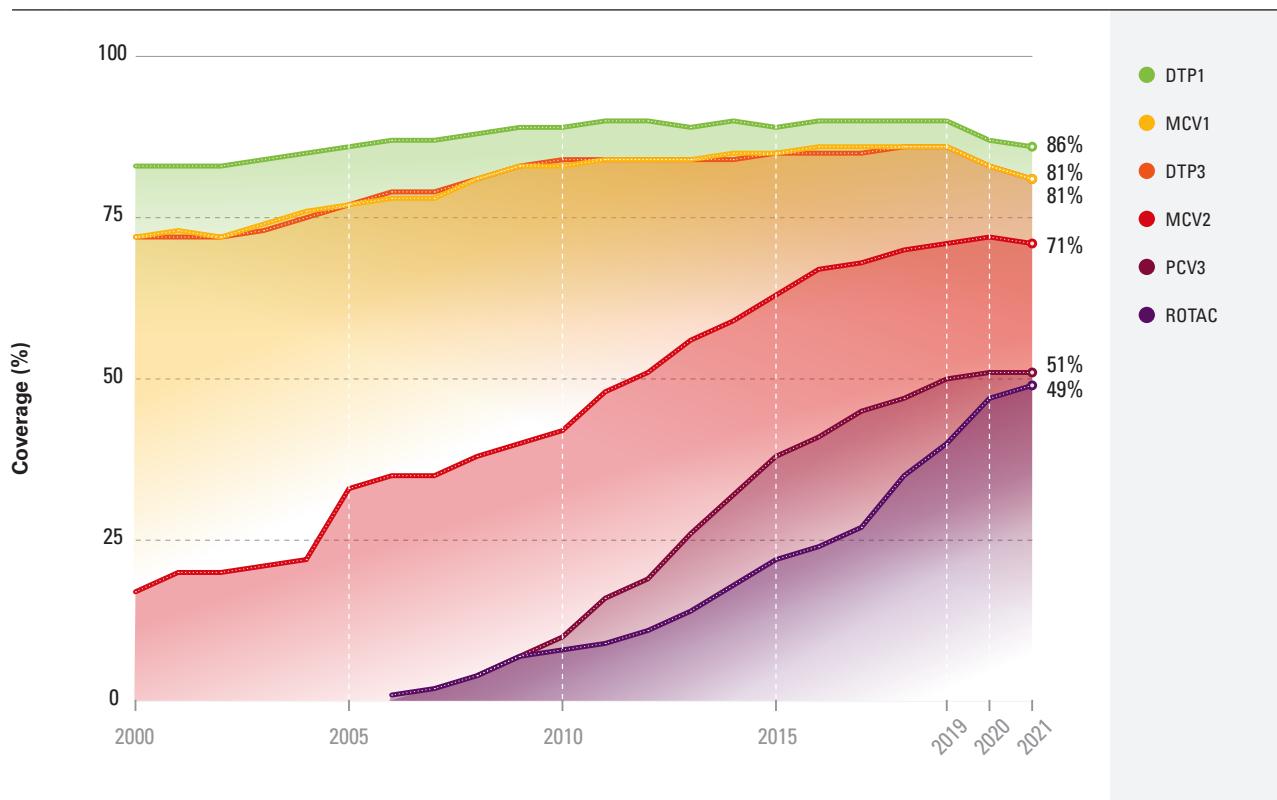
1.3 Background

Trends in vaccine coverage

Immunization is one of the world's most effective public health interventions, averting 2 to 3 million child deaths every year. Nonetheless, each year, millions of children do not receive the full benefit of vaccines – a number which has increased over the course of the COVID-19 pandemic. In 2021, an estimated 25 million children did not receive their third dose of the diphtheria, tetanus and pertussis containing vaccine (DTP3). Of these children, 18.2 million did not even receive a single vaccine dose, and are therefore referred to as “zero-dose.” This is a sharp increase from 2019, when 20 million children did not receive DTP3 and 14 million children were considered zero-dose.

From 2010 to 2019, global coverage of DTP3 stagnated at approximately 85 per cent, followed by declines throughout 2020 and 2021, as the world responded to the COVID-19 pandemic (Figure 1). Pandemic-associated declines in coverage were particularly severe in low- and middle-income countries. Compared with 2019 coverage levels, 2021 DTP3 coverage levels increased in 27 countries, stagnated in 56 countries, and declined in 112 countries, with 26 countries seeing declines of more than 10 per cent. The rate of new vaccine introductions also fell during 2020 and 2021 – after having grown steadily since 1990 – thus reducing the protective benefits of vaccines for children.

FIGURE 1. Global immunization coverage, selected antigens, 2000–2021



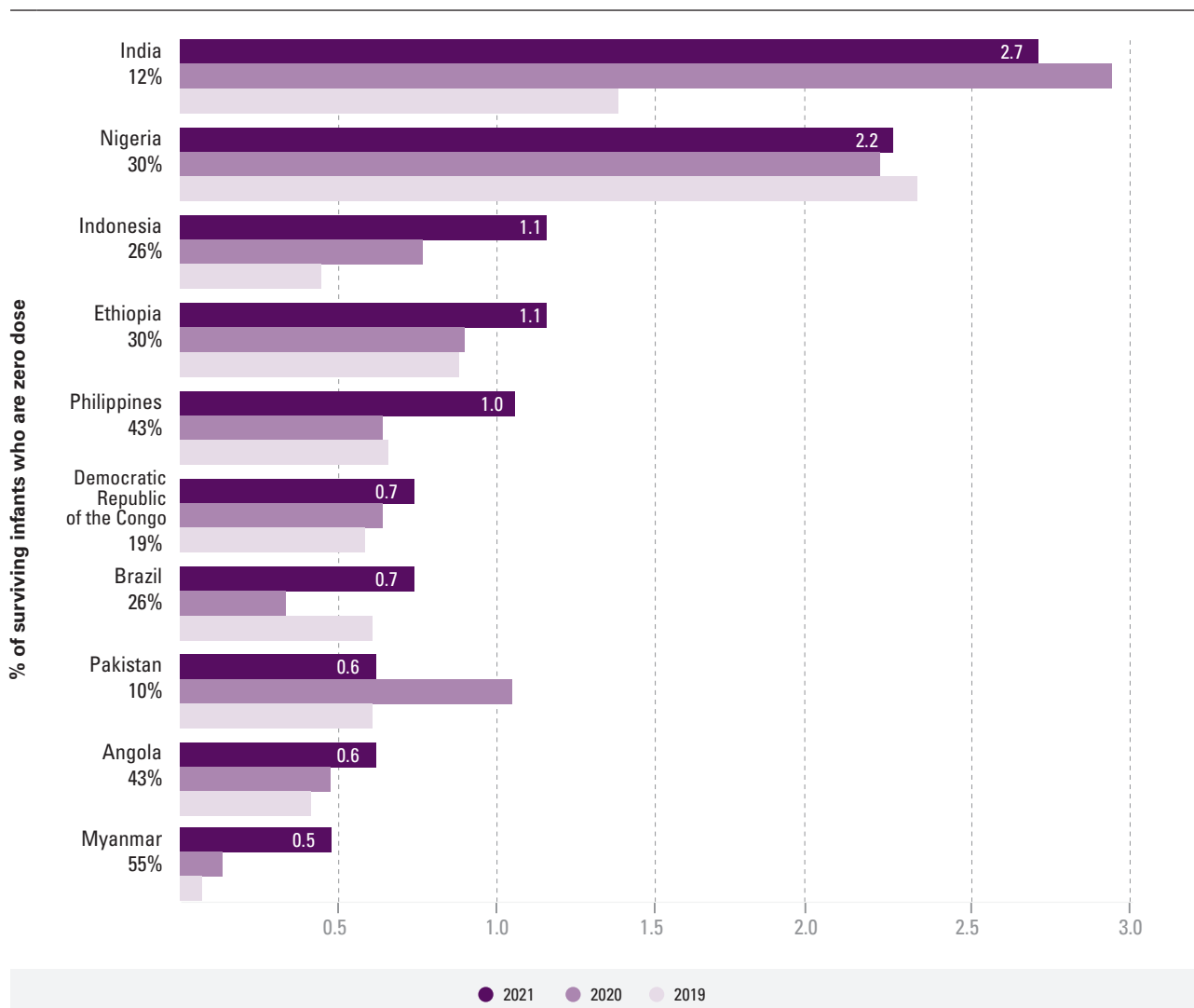
Legend: BCG: Bacille Calmette-Guerin; DTP1: First dose of diphtheria, tetanus and pertussis vaccine; DTP3: Third dose of diphtheria, tetanus and pertussis vaccine; MCV1: First dose of measles-containing vaccine; MCV2: Second dose of measles-containing vaccine; PCV3: Third dose of pneumococcal vaccine; POL3: Third dose of polio vaccine; ROTAC: Completed dose of rotavirus vaccine

Source: WHO/UNICEF Estimates of National Immunization Coverage, 2021 revision

Closer analysis of global DTP3 coverage estimates – prior to the pandemic – reveals considerable unevenness in progress among countries over the past decade. While some countries made gains from 2010 to 2019, this progress was offset by backsliding in other countries: between 2010 and 2019, DTP3 coverage increased in 81 countries, stagnated in 31 countries, and decreased in 81 countries. Of the 81 countries that increased their coverage over the decade, 41 saw erosion of these hard-earned gains between 2019 and 2021.

Vaccine coverage in all regions of the world was impacted by the COVID-19 pandemic, with Southeast Asia the most heavily affected. Regional variations in vaccine coverage are reflected in the distribution of zero-dose children, with the global share of these children increasing in Africa and Latin America and the Caribbean, even prior to the COVID-19 pandemic. Sixty-nine per cent of zero-dose children now reside in middle-income countries, and, in 2021, 62 per cent were found in only 10 countries. Eight of these countries are lower-middle-income (Figure 2).

FIGURE 2. Ten countries with largest number of zero-dose children, 2019–2021



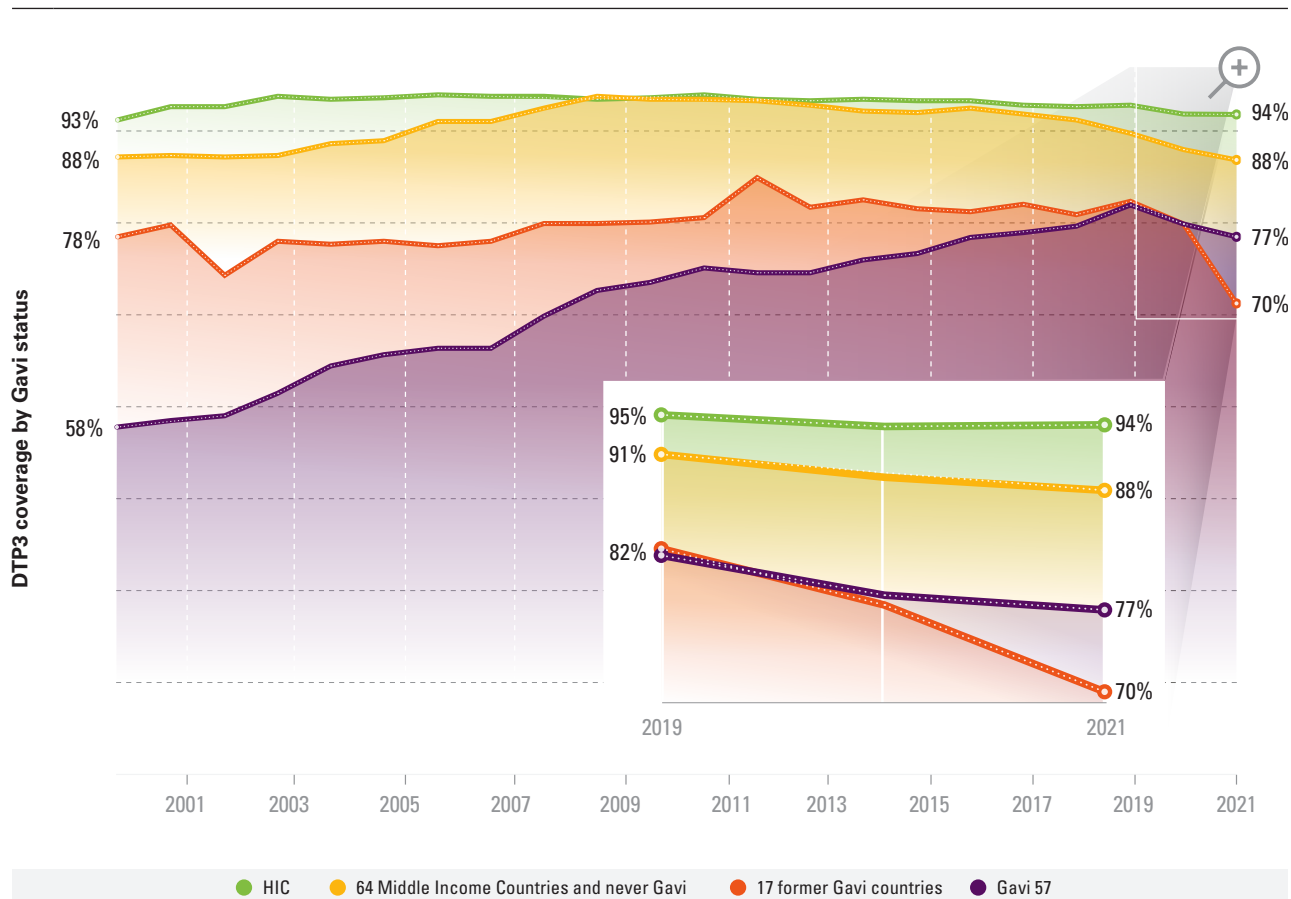
Source: WHO/UNICEF Estimates of National Immunization Coverage, 2021 revision

Country income level, in general, plays a role in whether children are vaccinated or not. An estimated 95 per cent of children living in high-income countries received DTP3 in 2019, compared with 74 per cent of children living in low-income countries – a gap that has persisted since 2010. However, many middle-income countries are showing declines in performance: since 2019, coverage has declined sharply in countries that have transitioned out of Gavi support (Figure 3).

The impact of the COVID-19 pandemic can also be examined through the lens of global disease eradication and elimination initiatives. Progress towards maternal and neonatal tetanus elimination stalled during the pandemic. Vaccination coverage in all countries at risk for yellow fever remained low at 47 per cent. Coverage with human papillomavirus (HPV) vaccine dropped dramatically between 2019 and 2021. These coverage declines resulted in outbreaks of vaccine-preventable diseases, including circulating vaccine-derived polioviruses and widespread measles outbreaks in low- and middle-income countries.

Overall declines in vaccination coverage during 2020–2021 were heavily driven by COVID-19 pandemic-related disruptions, which compounded the existing coverage and equity gaps. Service disruptions were experienced as countries diverted resources to the pandemic response, including staff providing routine immunization services. Routine immunization delivery dropped by as much as 50 per cent in some countries, driven by service delivery interruptions, conflicts and fragilities, vaccine stockouts and financing challenges. Immunization campaigns were suspended across the globe due to the risk of exacerbating COVID-19 transmission.

FIGURE 3. DTP3 coverage by eligibility for Gavi support



Source: WHO/UNICEF. Progress and Challenges with Achieving Universal Immunization Coverage. 2021 WHO/UNICEF Estimates of National Immunization Coverage

The evolving global immunization landscape

Key changes in the global immunization landscape prompted the need for a refresh of the previous Roadmap 2018–2030.

The COVID-19 pandemic

The emergence of the COVID-19 pandemic in 2020 has impacted economies and health systems, leading to disruptions in health and immunization services and to the erosion of trust in vaccines. The COVID-19 pandemic has demonstrated that health emergencies can spread quickly beyond national and regional borders. It has also highlighted the precariousness of global health and immunization programmes in the face of multiple challenges – particularly in the poorest and most vulnerable countries. Due to differences in the severity of and response to the pandemic, strategies for recovery and sustainability of routine immunization services require tailored approaches designed according to setting and context, and attuned to the epidemiological data of vaccine-preventable diseases and COVID-19 transmission. Strengthening the primary health care system in these settings is necessary to better prepare for the next global health emergency.

Despite these challenges, the development and roll-out of COVID-19 vaccines have provided opportunities to draw global attention to the importance of vaccines and vaccine programmes – both for COVID-19 and for pre-existing vaccines. Innovative approaches to training, digital tracking, cold chain enhancements, vaccine management processes, interventions to create demand for vaccines, and reaching adult populations, have broad applicability to routine immunization programmes and to outbreak responses for vaccine-preventable diseases. Most importantly, critical lessons have been gained regarding preparedness for the use of vaccines in future pandemics.

Global shocks that constrain political commitments and spending on immunization and health

The economic shock caused by the COVID-19 pandemic is further exacerbated by the climate and food crisis taking place globally in 2022. It is estimated that economies shrank by 6.4 per cent per capita in 2020 alone, and up to 124 million people were pushed into extreme poverty. A recent analysis by the World Bank estimates that 41 low-income and lower-middle-income countries will continue to see health spending that is lower than 2019 levels up until 2027, while 69 countries will see only very slight increases in health spending.⁶ Unless governments manage to protect and prioritize resources for health and immunization, health systems will be constrained in providing essential services.

The changing contexts of children's lives

Children in 2030 will live in a world that is more urban and more interconnected than ever before. At the same time, climate change, ecological degradation, migrating populations, conflict, pervasive inequalities, and increased pandemic risk are threatening the health and future of children in every country.⁷ By 2030, 2.3 billion people are projected to live in fragile or conflict-affected contexts, with more countries embroiled in internal and international conflicts now than at any time since the adoption of Convention on the Rights of the Child in 1989.⁸

⁶ Kuroski, C., Evans, D., Tandon, A. et al., *From Double Shock to Double Recovery. Technical Update: Old Scars to New Wounds*, World Bank Group, September 2022, <<https://openknowledge.worldbank.org/bitstream/handle/10986/35298/September%202022.pdf?sequence=12&isAllowed=y>>, Accessed 13 December 2022.

⁷ Clark H, Coll-Seck AM, Banerjee A, Peterson S, Dalglis SL, Ameratunga S et al., 'A Future for the World's Children? A WHO-UNICEF-Lancet Commission 2020', *Lancet*, 2020; 395: 606-58, <[https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(19\)32540-1.pdf](https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(19)32540-1.pdf)>. Accessed 12 April 2022.

⁸ United Nations Children's Fund, *Humanitarian Action for Children 2020 – Overview*, <<https://www.unicef.org/media/62606/file/HAC-2020-overview.pdf>>, Accessed 12 April 2022.

Improved technologies to support immunization systems

New and improved vaccines will become available and new delivery, storage and transportation technologies are expected to change the way that vaccines move through the supply chain and are administered. Solutions for personal digital records of vaccinations already exist and the rapid expansion of mobile networks and internet access will allow service providers to send SMS reminders and track children over time and space with the help of electronic immunization registries. Electronic birth registration by frontline health workers will progressively improve denominator estimates. The widespread penetration of information and communication technologies, if coupled with efforts to achieve equitable access and address the digital divide, will change how information about vaccines and immunization is produced, disseminated and accessed by vaccine providers, caregivers and vaccine recipients.⁹



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The expanded scope of immunization programmes

In the 1980s, a typical immunization programme vaccinated infants with six antigens at a vaccine procurement cost of less than US\$1 per child. By 2020, a comparable programme vaccinated children under 1 year of age against 11 diseases at a vaccine procurement cost of approximately US\$25 per child. With the continuous introduction of vaccines targeting adolescents, adults and older age groups, and a move towards life-course immunization programmes, the complexity of implementing immunization programmes will likely increase, necessitating the development of new delivery platforms and strategies.

Broader and more complex immunization partnerships

The global immunization landscape was already shifting prior to the COVID-19 pandemic, as articulated in the IA2030. The immunization partnership landscape has expanded and will continue to evolve in the coming years, including via key global partnerships such as Gavi, the Vaccine Alliance; the Global Polio Eradication Initiative; the Measles and Rubella Initiative; and the Elimination of Yellow Fever Epidemics initiative. Confronting the COVID-19 pandemic has further shifted the landscape, demanding a scale of health sector response – including immunization – that is unprecedented in the twenty-first century, and contributing to a changing milieu of global, regional and national immunization partners.

This changing context has also introduced new and time-limited governance structures, such as the COVID-19 Vaccines Global Access (COVAX) initiative and the COVID-19 Vaccine Delivery Partnership, in addition to a growing number of bilateral donors providing support for COVID-19 vaccine roll-out and immunization systems. The role of private sector and civil society organizations is also growing steadily. The expansion of the network of partners has lent impetus to vaccine and device research and development efforts, and given rise to new market shaping and pricing agreements. The growing role of regional and sub-regional institutions on issues of public health importance adds to the complexity and emphasizes the need to find synergies. As countries strengthen immunization delivery within the context of primary health care, the partnership landscape for immunization will expand and become more complex.

⁹ Bill & Melinda Gates Foundation, *Landscape Analysis on Key Drivers for Immunization until 2030*, Bill & Melinda Gates Foundation, Seattle, Wash., 2016.

Bottlenecks and barriers to programme delivery

Despite the progress in vaccination coverage witnessed in the past few decades, there has been persistent backsliding in coverage in recent years and disparities in access to and uptake of vaccines.¹⁰ The evolving global context presents important challenges to reaching every child with life-saving vaccines. This section provides an overview of bottlenecks and barriers to improving vaccine coverage and strengthening programme delivery that will need new and targeted strategies to respond effectively. These bottlenecks and barriers are related to the enabling environment, supply and demand-side factors.

Bottlenecks in the enabling environment

Financing for immunization and other primary health care services is insufficient in many countries. The total cost of immunization programmes is expected to increase steadily in the next decade; between 2011 and 2030, the cost is estimated to total more than US\$70.8 billion.¹¹ Increasing coverage rates, new vaccine introductions, and the relatively high price of new vaccines are expected to influence the cost of vaccines. Delivery costs are also substantial – close to 50 per cent of the total cost.¹² The COVID-19 pandemic has worsened this situation, as pandemic-linked economic declines in many donor countries have limited the global funds available for immunization.¹³

A return to pre-pandemic levels of coverage will depend heavily on the availability of funding. Gavi provides key support for immunization in many countries, with eligibility dependent on country income status. As a result of the economic impact of the pandemic, some countries are now expected to need more time than originally anticipated to graduate from Gavi support, whereas others that have already graduated may once

more become eligible for Gavi funding due to their slipping economic status. Approximately 50 per cent of never-Gavi-eligible middle-income countries had yet to introduce pneumococcal, rotavirus or HPV vaccines at end of 2021. High vaccine prices are a barrier to vaccine access and can affect immunization performance in these countries.¹⁴ Thus, procurement mechanisms and capacities need to evolve to support middle-income and fully self-financing countries to meet their immunization goals.

High-quality data, defined as data that are accurate, precise, relevant, complete and timely enough for the intended purpose, are critical for decision-making in immunization programming at global, national and subnational levels¹⁵ However, the data that do exist are not always being used to their fullest extent. In addition to new technologies, interventions to improve data quality and use require focusing on skills-building and fostering the enabling environments required for functional information systems. Systems that improve data management,¹⁶ interpreting and appropriate use of data are key to ending vaccine-preventable diseases, and require continuous capacity development across the workforce^{17,18} Electronic immunization records that record immunized and non-immunized people can improve vaccine coverage estimates (including providing better estimates of target populations, such as migrants), and interoperable systems can support programme efficiency and effectiveness.¹⁹

Leadership and management competencies among national immunization teams are critical to achieving global immunization targets.²⁰ ²¹ ²² In contrast, ineffective immunization programme leadership, governance and coordination can compound deficiencies in decision-making, planning, and implementation of immunization programmes. The failure to monitor, use available data and exercise

¹⁰ Linstrand et al., 'World of Immunization: Achievements, Challenges, and Strategic Vision for the Next Decade', *Journal of Infectious Diseases*, Vol. 224, Issue Supplement 4, 1 October 2021, Oxford Academic, <https://academic.oup.com/jid/article/224/Supplement_4/S452/6378083>, accessed 13 December 2022.

¹¹ Banks et al., 'Cost of vaccine delivery strategies in low- and middle-income countries during the COVID-19 pandemic', *Vaccine*, Vol. 39, Issue 35, 16 August 2021, <<https://www.sciencedirect.com/science/article/pii/S0264410X21008380>>, accessed 13 December 2022.

¹² Brenzel et al., 'Costs and financing of routine immunization: Approach and selected findings of a multi-country study (EPIC)', *Vaccine*, Vol. 33, Supplement 1, 7 May 2015, <<https://www.sciencedirect.com/science/article/pii/S0264410X14017216>>.

¹³ Banks et al., 'Cost of vaccine delivery strategies in low- and middle-income countries during the COVID-19 pandemic', *Vaccine*, Vol. 39, Issue 35, 16 August 2021, <<https://www.sciencedirect.com/science/article/pii/S0264410X21008380>>.

¹⁴ Sim et al., 'Costs of Immunization Programs for 10 Vaccines in 94 Low- and Middle-Income Countries From 2011 to 2030', *Value in Health*, Volume 24, Issue 1, January 2021, <<https://www.sciencedirect.com/science/article/pii/S109830152034393X>>.

¹⁵ Scobie et al., 'Improving the quality and use of immunization and surveillance data: Summary report of the Working Group of the Strategic Advisory Group of Experts on Immunization', *Vaccine*, Vol. 38, Issue 46, 27 October 2020, <<https://www.sciencedirect.com/science/article/pii/S0264410X20311592>>.

¹⁶ Osterman et al., 'A realist systematic review of evidence from low- and middle-income countries of interventions to improve immunization data use', *BMC Health Services Research*, Vol. 21, July 2021, <<https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-021-06633-8>>.

¹⁷ Nicol et al., 'Pre- and in-service training of health care workers on immunization data management in LMICs: a scoping review', *Human Resources for Health*, Vol. 17, article 92, December 2019, <<https://human-resources-health.biomedcentral.com/articles/10.1186/s12960-019-0437-6>>.

¹⁸ Scobie et al., 'Improving the quality and use of immunization and surveillance data: Summary report of the Working Group of the Strategic Advisory Group of Experts on Immunization', *Vaccine*, Vol. 38, Issue 46, October 2020, <<https://www.sciencedirect.com/science/article/pii/S0264410X20311592>>.

¹⁹ Kolff, CA., Scott, VP., Stockwell, MS., 'The use of technology to promote vaccination: A social ecological model based framework', *Hum. Vaccines Immunother*, vol. 14, July 2018, pp. 1636–1646.

²⁰ Traicoff, D., et al., 'Developing standardized competencies to strengthen immunization systems and workforce', *Vaccine*, vol. 37, no. 11, March 2019, pp. 1428–1435.

²¹ Bradley, EH., Taylor, LA., Cuellar, CJ., 'Management Matters: a Leverage Point for Health Systems Strengthening in Global Health', *Int J Health Policy Manag*, vol. 4, no.7, July 2015, pp. 411–415.

²² Travis, P., et al., 'Overcoming health-systems constraints to achieve the Millennium Development Goals', *Lancet*, vol. 364, no. 9437, September 2004, pp. 900–906.



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programme leadership can also impact the design of immunization programmes, such that they systematically exclude disadvantaged groups or are persistently unable to reach specific population groups.

Harmful **social norms** related to vaccination tend to disproportionately impact under-served and vulnerable communities and can therefore exacerbate inequities. There is strong evidence on the effect of social norms in influencing – and at times derailing – vaccination and disease control efforts.^{23 24} Social norms are context-specific (related to historical influences, religious and cultural beliefs) and require tailored approaches and good leadership to respond effectively.

Supply-side determinants

Supply-side factors that affect vaccination coverage include **availability and access to health care facilities and services** (such as infrastructure, staffing, vaccine and service delivery management, budget allocation and information systems).^{25 26 27} Ensuring the availability of essential, high-quality commodities – including vaccines – at the lowest level of the health care system, remains an ongoing challenge in many parts of the world.²⁸ Multiple factors contribute to this challenge, including lack of funding to move commodities from subnational levels to the ultimate point of delivery; lack of data for adequate forecasting of needs; and weaknesses in the supply and logistics systems, including inadequate and poorly maintained cold chain equipment. The need to deliver COVID-19 vaccine widely has spurred a variety of innovations relevant to the immunization system as a whole, and led to the expansion of cold chain storage capacity.

²³ Dadari et al., 'Pro-equity immunization and health systems strengthening strategies in select Gavi-supported countries', *Vaccine*, vol. 37, no.17, <<https://www.sciencedirect.com/science/article/pii/S0264410X21003376#b0015>>.

²⁴ Jalloh, M., 'Mobilize to vaccine: lessons learned from social mobilization for immunization in low and middle-income countries', *Human Vaccines & Immunotherapeutics*, vol. 16, no.5, 2020, <<https://www.tandfonline.com/doi/full/10.1080/21645515.2019.1661206>>.

²⁵ Gore, P., et al., 'Predictors of childhood immunization completion in a rural population', *Soc Sci Med*, vol. 48, 1999, pp. 1011-1027.

²⁶ Johri, M., et al. 'Strategies to increase the demand for childhood vaccination in low-and middle-income countries: a systematic review and meta-analysis', *Bull World Health Organ*, vol. 93, 2015, pp. 339-346.

²⁷ Oyo-Ita, A., et al., 'Interventions for improving coverage of child immunization in low-and middle-income countries', *Cochrane Database of Systematic Reviews*, vol. 7, July 2016, pp. 959-1012.

²⁸ Lydon et al., 'Vaccine stockouts around the world: Are essential vaccines always available when needed?' *Vaccine*, vol 35, issue 17, April 2017, <<https://www.sciencedirect.com/science/article/pii/S0264410X17300452>>.

Adequately staffed services, access to relevant information, and equitably distributed and supported facilities are all important to ensure **adequate vaccine uptake**.²⁹ In many countries, **human resource constraints** do not allow both outreach services and fixed posts to be staffed simultaneously. Lack of training in interpersonal skills may lead health care providers to exhibit attitudes and behaviours that deter clients from attending health services.³⁰ Gender-related inequities are also relevant to supply-side considerations: although many frontline health care workers are female, women are much less represented at higher managerial and policymaking levels.³¹ Dissemination of information and community follow-up of patients often relies on volunteers who may receive minimal training and oversight. Female health workers may also face gender barriers, such as security risks and domestic burdens, which are critical factors contributing for attrition.

Successful delivery of immunizations in conflict settings is critical to address equity gaps. In these settings, disrupted health services and supply chains are compounded by security challenges and difficulties in identifying target populations that are mobile and seeking refuge or concealment, making forecasting of supplies challenging and delivering services particularly difficult.

Demand-side determinants

Demand-side factors interplay with supply-side and enabling factors to influence immunization coverage and the uptake of immunization services.³² **Long distances** to services and **poor integration of immunization** with other health services also present barriers to high vaccination coverage.³³ The **costs of vaccination**, including opportunity costs, travel costs and user fees, especially at private facilities, present financial barriers to vaccine access.³⁴

While **gender-related disparities** are relevant to supply challenges, as noted above, they are also increasingly recognized as influencing demand for immunization.³⁵ Although mothers and other women are primary caregivers for their children, their lower economic and decision-making status within the household and community limits their capacity to act on their child's behalf. Women are acutely affected by physical and time barriers to accessing immunization services. In settings where health literacy is gendered, women are more likely to have limited understanding of immunization and weaker capacity to navigate the health system. Women's negative experiences with immunization services may also make them less likely to return.

Barriers to demand vary by context and may include **communication and information** challenges, such as inadequate information about immunization and its benefits, weak interpersonal skills of health care providers, and lack of engagement between primary health care services and the community.

Other factors include **social and cultural barriers**, such as the social disconnect experienced by marginalized and disenfranchised communities, cultural constraints, language barriers and ineffective messaging in both traditional and social media. Weak community feedback mechanisms and engagement constrain community ownership of demand promotion interventions.

Barriers related to **caregiver attitudes and knowledge** include a lack of information about the role of vaccination in disease prevention, fear of adverse events, cultural or religious beliefs, and general mistrust of the health system.

In addition, **misinformation** about the safety and efficacy of vaccines is proliferating on digital channels and is exploited to sow mistrust.

²⁹ LaFond, A., et al., 'Drivers of routine immunization coverage improvement in Africa: findings from district-level case studies', *Health Policy and Planning*, vol.30, no. 3, April 2015, pp. 298-308.

³⁰ Nicol, E., Turawa, E., and Bonsu, G., 'Pre-and in-service training of health care workers on immunization data management in LMICs: a scoping review', *Human Resources for Health*, vol. 17, no.1, December 2019, pp. 1-14.

³¹ Feletto, M., et al., *A gender lens to advance equity in immunization*, Equity Reference Group for Immunization, New York, 2018.

³² Johri, M., et al., 'Strategies to increase the demand for childhood vaccination in low-and middle-income countries: a systematic review and meta-analysis', *Bulletin of the World Health Organization*, vol. 93, 2015, pp. 339-346.

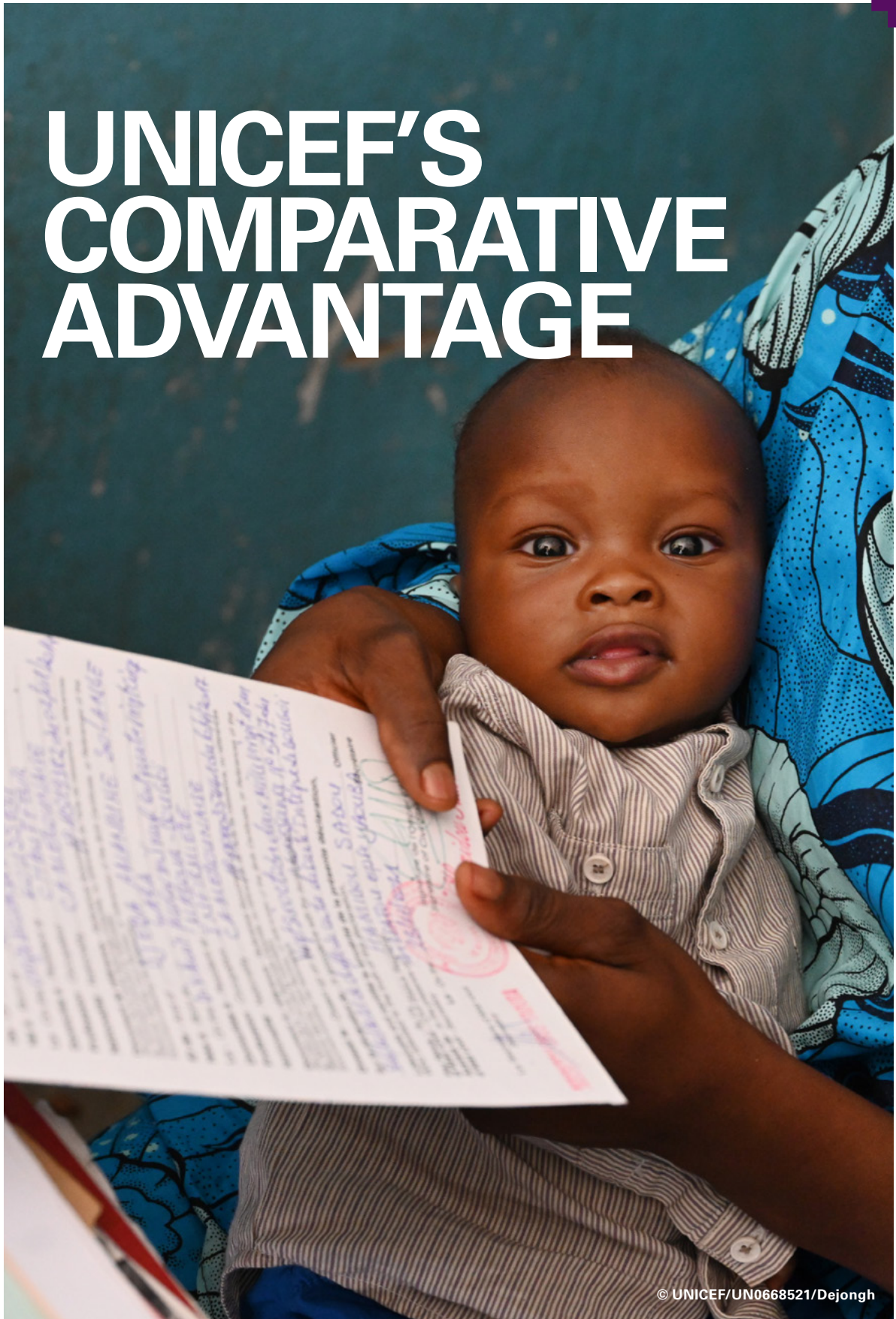
³³ Bangura, J. B., et al., 'Barriers to childhood immunization in sub-Saharan Africa: a systematic review', *BMC Public Health*, vol. 20, no.1, 2020, pp. 1-15.

³⁴ Ridde, V., and Morestin, F., 'A scoping review of the literature on the abolition of user fees in health care services in Africa', *Health policy and planning*, vol. 26, no. 1, 2011, pp. 1-11.

³⁵ Feletto, M., and Sharkey, A., 'The influence of gender on immunisation: using an ecological framework to examine intersecting inequities and pathways to change', *BMJ Global Health*, vol. 4, no.5, 2019.

02

UNICEF'S COMPARATIVE ADVANTAGE





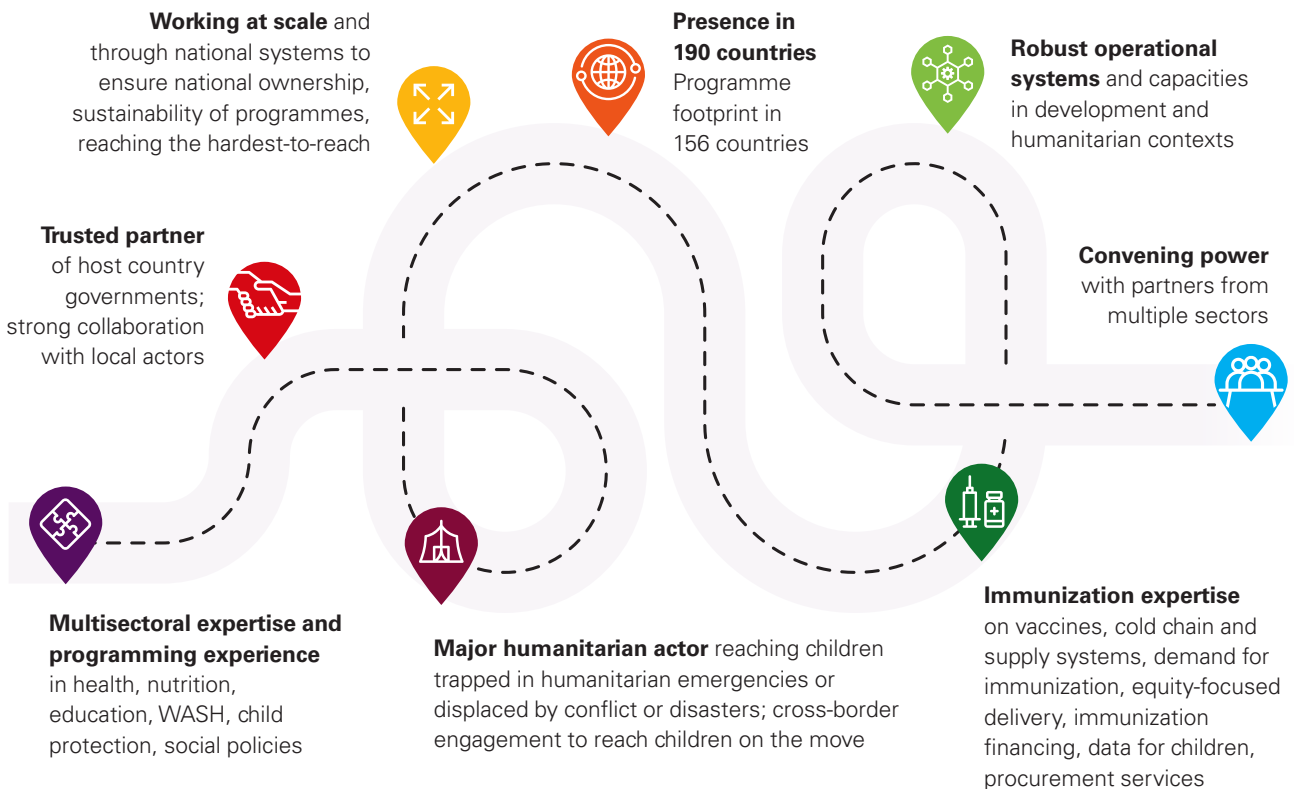
2.1 United Nations organization with a mandate to protect child rights

UNICEF has been mandated by the United Nations General Assembly to advocate for the protection of children’s rights, including the right to health, to help meet their basic needs and to expand their opportunities to reach their full potential. UNICEF works across sectors and life-cycles to protect these rights, focusing on protecting the rights of the most disadvantaged and vulnerable children, and also on the promotion of gender equality. To fulfil its mandate, UNICEF supports governments and works through partners, including civil society, to deliver its programming.

UNICEF’s position within the United Nations gives it a unique power to work with governments and other influential partners to generate impact at the highest levels for children, adolescents and women. It allows UNICEF to mobilize political will and material resources to help countries ensure a “first call for children” and to build their capacity to form policies and deliver services for children, their families and communities.

This mandate extends to work on immunization and UNICEF is therefore well-placed to support countries in accelerating equitable access to vaccination and other essential services for target populations in the lead-up to 2030.

UNICEF’s Immunization Roadmap will build on **UNICEF’s mandate and comparative advantage**



2.2 Global footprint

For over 75 years, UNICEF has been active in more than 190 countries, territories and areas through 33 national committees and more than 150 country offices worldwide. UNICEF brings deep field experience to the policy table at global, regional and national levels. The organization's presence at both national and subnational levels positions it to engage in immunization programming and advocacy activities at central and decentralized levels.

UNICEF has health programmes in an estimated 130 countries and supplies vaccines to 45 per cent of the world's children under 5. This means we can enact change on a global scale.

2.3 Expertise for children: Equity, advocacy, data, innovation and multisectorality

Through its global, regional and country network of experts, staff, consultants and knowledge networks, UNICEF strives to improve the livelihoods of children everywhere.

UNICEF is a leading advocate for equity in child survival and health, positioning the organization to play a key role in promoting equitable access to vaccines and vaccination services. The agency is a co-convenor of the Immunization Agenda 2030 governance structures and also co-founded the Equity Reference Group on Immunization.³⁶ Most recently, UNICEF has been playing a central role in the Access to COVID-19 Tools Accelerator, a global collaboration to accelerate the development, production and equitable access to COVID-19 tests, treatments and vaccines.³⁷

UNICEF's mandate as a child rights agency and its central focus on equity position the organization as a leader in advocating for the right of every woman and child to immunization services. UNICEF's relationships with national and local governments allow the organization to advocate for equity-enhancing immunization policies, programming and financing.

The UNICEF Gender Action Plan calls for integrating gender within health outcomes through a systems-strengthening approach, including in the recruitment, training and remuneration of frontline workers. This Plan also prioritizes the expanded coverage of quality, dignified maternal and newborn health services, including for pregnant adolescents and adolescent mothers, as well as access to quality nutrition and immunization services for girls and women in all settings. The new 2022–2025 programme strategy for adolescent girls, "Building Back Equal, With and For Adolescent Girls" outlines UNICEF's commitments towards the adolescent development agenda, including a focus on HPV vaccination.

UNICEF plays a key role in collecting, analysing and using immunization data. Together with WHO, UNICEF annually collects and reviews key programmatic data on immunization and uses this evidence to guide priorities at the national and global levels. UNICEF has extensive experience working with immunization surveys and is committed to documenting and sharing lessons learned and best practices to improve the effectiveness of immunization programmes in countries.

UNICEF's Office for Innovation works with programme teams to identify and implement innovative solutions to programme challenges. The Office also works with industry, seeking to steer investments towards new vaccines, diagnostics and health technologies. UNICEF's innovation principles³⁸ highlight the importance of designing with the end-user in mind, understanding local ecosystems, designing for scale and using open-source technology and open data sources.

³⁶ The Equity Reference Group, convened by UNICEF and the Bill & Melinda Gates Foundation, aims to generate innovative ideas to accelerate progress on equity in immunization.

³⁷ World Health Organization, 'Access to COVID-19 Tools (ACT) Accelerator', <www.who.int/initiatives/act-accelerator>, accessed 8 September, 2022.

³⁸ United Nations Children's Fund, 'Principles', UNICEF Stories of Innovation, <<http://unicefstories.org/principles/>>, accessed 17 October 2022.

Among the major immunization partners, UNICEF's multisectoral nature uniquely positions it to act as a bridge between sectors and vertical interventions, thereby facilitating integrated programming and service delivery. As outlined in the UNICEF Strategic Plan 2022–2025, the agency is organized to achieve long-term results in five interconnected areas in all contexts, including humanitarian crises and fragile settings, to ensure that every child and adolescent: (1) survives and thrives with access to nutritious diets, quality primary health care, nurturing practices and essential supplies; (2) learns and acquires skills for the future; (3) is protected from violence, exploitation, abuse, neglect and harmful practices; (4) has access to safe and equitable water, sanitation and hygiene (WASH) services and supplies, and lives in a safe and sustainable climate and environment; and (5) has access to inclusive social protection and lives free from poverty.³⁹

2.4 UNICEF leadership and expertise in demand and supply of vaccines

UNICEF plays a leadership role in multiple global health platforms and is a founding member of all key global immunization partnerships. As such, UNICEF shapes and influences the vision, strategies and policies that make up the global immunization agenda.

UNICEF leads and supports partnerships to reduce social barriers to immunization access, and to improve vaccine confidence and acceptance. UNICEF interventions seek to strengthen local accountability and encourage communities to advocate for immunization as a right. UNICEF supports countries to develop evidence-based, community-centred and tailored strategies to address the needs of different population groups, particularly of vulnerable populations.

UNICEF is the global leader in procuring, distributing and influencing markets for vaccines, vaccination products and cold chain equipment, and has successfully promoted healthy markets and reduced costs. It has played a critical role in procuring and supplying vaccine for COVAX, the largest vaccine supply operation ever conducted. The agency plays a leading role in strengthening the capacity of vaccination programmes to forecast and manage vaccine supply and cold chain systems, and ensure the viability of vaccines as they move down the supply chain.

2.5 UNICEF as major humanitarian actor

Humanitarian action within UNICEF-supported programmes is guided by the Core Commitments for Children (CCCs). As per the updated UNICEF Procedure on Humanitarian, Development and Peace Nexus, at the country level, UNICEF is more systematically implementing its commitments to risk-informed and conflict-sensitive programming; localization; accountability to affected populations; and linking humanitarian cash transfers with social protection. It is also conducting risk and conflict analyses to inform programming across the nexus. To facilitate the delivery of support, countries/areas that have been designated as an L2 or L3 crisis employ Simplified Standard Operating Procedures.

UNICEF delivers immunization services in humanitarian contexts, during and after emergencies, and has a mandate to work along the continuum of humanitarian and outbreak response. The UNICEF Supply Division plays a crucial role in emergencies by mobilizing and shipping essential supplies and providing support for in-country logistics. The UNICEF Emergency Operations Division also has long-standing experience and robust processes for analysing, preparing for and responding to emergencies. These capacities are employed to deliver immunization and other essential health services in humanitarian settings where access and service convenience are limited.

³⁹ United Nations Children's Fund, *UNICEF Strategic Plan, 2022–2025*, UNICEF, 2021, <<https://www.unicef.org/media/107516/file/UNICEF%20Strategic%20Plan%202022-2025.pdf>>.

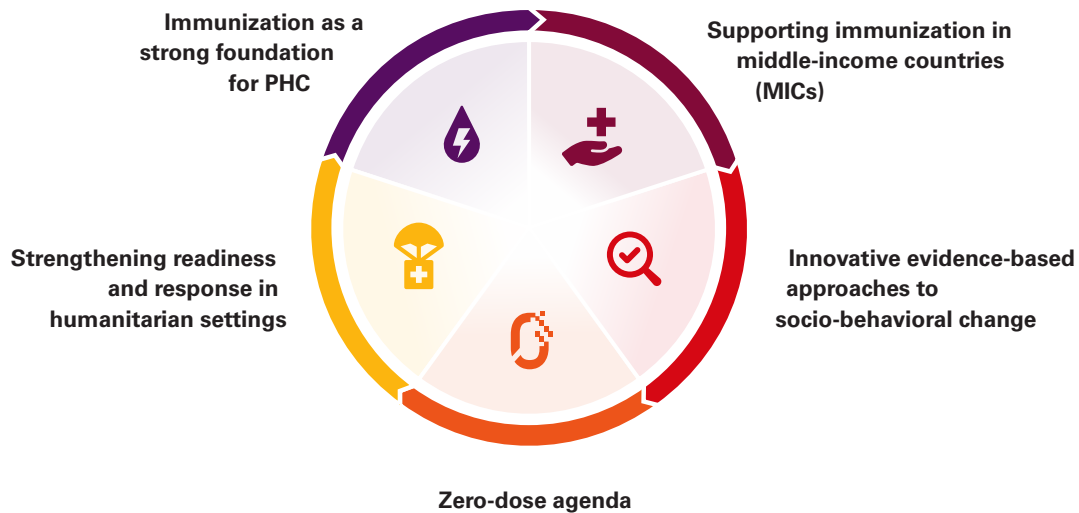
03

STRATEGIC SHIFTS





UNICEF Immunization Roadmap to 2030 emphasizes **5 strategic shifts**:



UNICEF’s Roadmap 2022–2030 incorporates strategic shifts to respond to the evolving context in global immunization and to reach every child with full vaccination. These shifts arise from progress achieved and lessons learned in the past four years since the launch of the UNICEF 2018–2030 Immunization Roadmap, and from the need to strengthen and continuously innovate to accelerate progress after the setbacks of the COVID-19 pandemic. These shifts are described briefly below, and underpin the different components of the revised Programming Framework described in the following section.

3.1 Zero-dose agenda

A major focus of UNICEF’s Immunization Roadmap 2022–2030 is increasing equity by reaching zero-dose children and communities with full vaccination. Zero-dose children are recognized as markers of underserved communities that miss not only immunization but other primary health care services and broader social services.⁴⁰ Expanding the reach of immunization to zero-dose children and their communities is an ideal opportunity to introduce other, multisectoral

interventions. Timely, accurate data are critical to identify children who are not accessing services and to better address the challenges that health workers face.

The type of setting – remote rural, urban poor, and communities affected by conflict – is an important determinant of access and use of immunization.⁴¹ Remote rural contexts are characterized by physical distance from urban centres, small settlements and low population densities. The marginal cost of reaching these populations is high, limited resources often affect retention of health care personnel, physical remoteness compounds supply chain challenges, and populations residing in these settings frequently have limited socio-political power. In contrast, urban areas have high mobility and population density. Among the urban poor, inadequate knowledge about vaccination and its benefits, discrimination and cultural differences and harmful social norms may influence health-seeking behaviours and lead to a distrust of systems. Further, insecurity, lack of information and poor quality of services may also affect access to immunization among urban populations. Globally, urbanization is rapidly increasing: by 2050, nearly 70 per cent of the world’s population is expected to live in an urban area.⁴²

⁴⁰ Equity Reference Group for Immunization, *A Focus on “Zero Dose” Children: Key Issues for Consideration*, Equity Reference Group for Immunization, 2020, <<https://irp.cdn-website.com/44236788/files/uploaded/ERG%20Discussion%20Paper%209%20Zero%20Dose%20FINAL.pdf>>.

⁴¹ Equity Reference Group, *ERG Advocacy Brief*, <sites.google.com/view/erg4immunisation/>, accessed 6 April 2022.

⁴² The World Bank, ‘Urban Development’ <<https://www.worldbank.org/en/topic/urbandevelopment/overview#1>>, accessed 12 April 2022.

Gender equality barriers underpin vulnerabilities in all these settings and influence decisions to vaccinate, restrict access and limit uptake of immunization services. Some of these barriers include low educational levels, limited mobility, restricted decision-making power, limited access to information and resources in rural areas, challenges facing working mothers and urban poor, insecurity and negative coping mechanisms that disadvantage women. Understanding how gender roles, norms and relations and gender inequality influence access to, and demand for, vaccines in different contexts is critical for expanding reach.

Demographics in Africa add to the challenge of reaching everyone. Annually increasing birth cohorts represent an additional challenge for immunization programmes on the continent. The combination of epidemiologic, demographic, economic, environmental, and conflict-related shocks further exacerbate inequities and make marginalized children, adolescents, women and their communities more vulnerable.

Fragile and humanitarian settings are particularly important to the zero-dose agenda: nearly 40 per cent of un-immunized and under-immunized children live in such environments. In these settings, pre-existing inequities related to gender, ethnicity and caste, education and disability may be compounded. Yet reaching children in these diverse circumstances is critical to decreasing the number of zero-dose children.

3.2 Immunization as a strong foundation for primary health care

The Roadmap articulates how UNICEF's immunization programme will increase support to and leverage resilient primary health care, including community health systems. Zero-dose children are clustered in some of the most under-served communities, where they frequently also lack access to broader primary health care. Efforts to identify and reach these communities with immunization – including through vertical programmes such as polio eradication, measles elimination, and maternal and neonatal tetanus elimination – provide opportunities to expand the health care offered to communities through the bundling of immunization with broader essential services,

including nutrition services; maternal and child health services; WASH services; and social protection services. Beyond such under-served communities, interventions to enhance the immunization programme, such as solarization of health facilities to support vaccine fridges, also benefit provision of services at primary health care level. Primary health care is also strengthened by maximizing resources for immunization to digitalize health information systems and improve management capacity to analyse and use data for programming, policy and budgeting.

Integrated immunization, and maternal, neonatal, child and adolescent health will promote the regularization and strengthening of community health workers to serve as the backbone of primary health care. UNICEF will advocate with governments for formalizing the role of community health workers, including developing job descriptions, identifying sustainable sources of funding and investing in community health worker training. In addition, UNICEF will advocate for standardization of community health workers, including the gradual creation of career advancement opportunities for frontline health care workers. Capitalizing on gender transformative approaches to tackle deep-rooted gender barriers will, over time, help change cultural and societal norms towards greater equality between men and women and towards more resilient communities that benefit more fully from health programmes.

UNICEF's initiative to link health facilities to existing electrical grids and to electrify vaccine fridges through solarization of health facilities will also provide power for other critical primary health care services, including WASH interventions. Additionally, the organization's immunization programme is supporting countries to manage the decommissioning of health care and immunization-related equipment and the safe disposal of infectious waste generated through immunization and other health care activities.⁴³ Initiatives to support "last-mile" delivery of vaccines can also support delivery of other essential, primary health care commodities.

⁴³ United Nations Children's Fund, 'Healthy environments for healthy children: Global programme framework', January 2021, <<https://www.unicef.org/documents/healthy-environments-healthy-children-global-programme-framework>> accessed June 4 2022.

3.3 Innovative evidence-based approaches to social and behavioural change

Building on its strength in promoting demand for immunization, UNICEF is implementing innovative people-centred approaches to catalyse social and behavioural change in support of improved vaccination equity. Barriers to vaccination resulting from the propagation of inaccurate information, gender inequalities, deficiencies in communication modalities, poor interpersonal communication and service experience, or limited caregiver knowledge must be addressed to reduce the number of zero-dose children and improve vaccination coverage. UNICEF is increasingly using behavioural science to listen to community concerns and fears about vaccination and co-create local solutions and strategies with communities. The use of social media platforms and digital solutions to disseminate information, debunk misinformation and engage communities is also becoming a priority approach.

3.4 Supporting immunization in middle-income countries

Meeting the goals and targets set out in the Immunization Roadmap requires deliberate actions and support to middle-income countries. Without action by UNICEF and partners, by 2030, most of the world's zero-dose and under-vaccinated children will live in disadvantaged communities in middle-income countries. Indeed, in 2019, 3.6 million zero-dose children lived in these settings.

Despite the considerable variability among middle-income countries in terms of equity, governance, ability to finance vaccines, and health systems, eligibility for support is largely based on established gross national income (GNI) per capita thresholds.⁴⁴ This means that many middle-income countries are not receiving external support, particularly those that are not eligible for or have transitioned out of Gavi support.⁴⁵ This poor access to external funding has led middle-income countries to lag behind lower-income countries in new vaccine introductions, innovation-focused investments, and support for critical programmatic components, such as electronic data systems.

UNICEF will work to support middle-income countries around a set of key priorities: (i) advocating for sustainable external and domestic financing for immunization and primary health care; (ii) supporting countries to strengthen immunization and primary health care systems (including multisectoral approaches, private health sector engagement, and innovations in products and service delivery); (iii) supporting governments in mobilizing domestic resources to buy essential supplies, including new vaccines, and strengthening procurement functions; (iv) supporting countries in generating country-specific evidence, tools, training and strategies to devise tailored interventions that increase vaccine uptake and mitigate misinformation and mistrust in vaccines.

3.5 Strengthening readiness and response in humanitarian settings

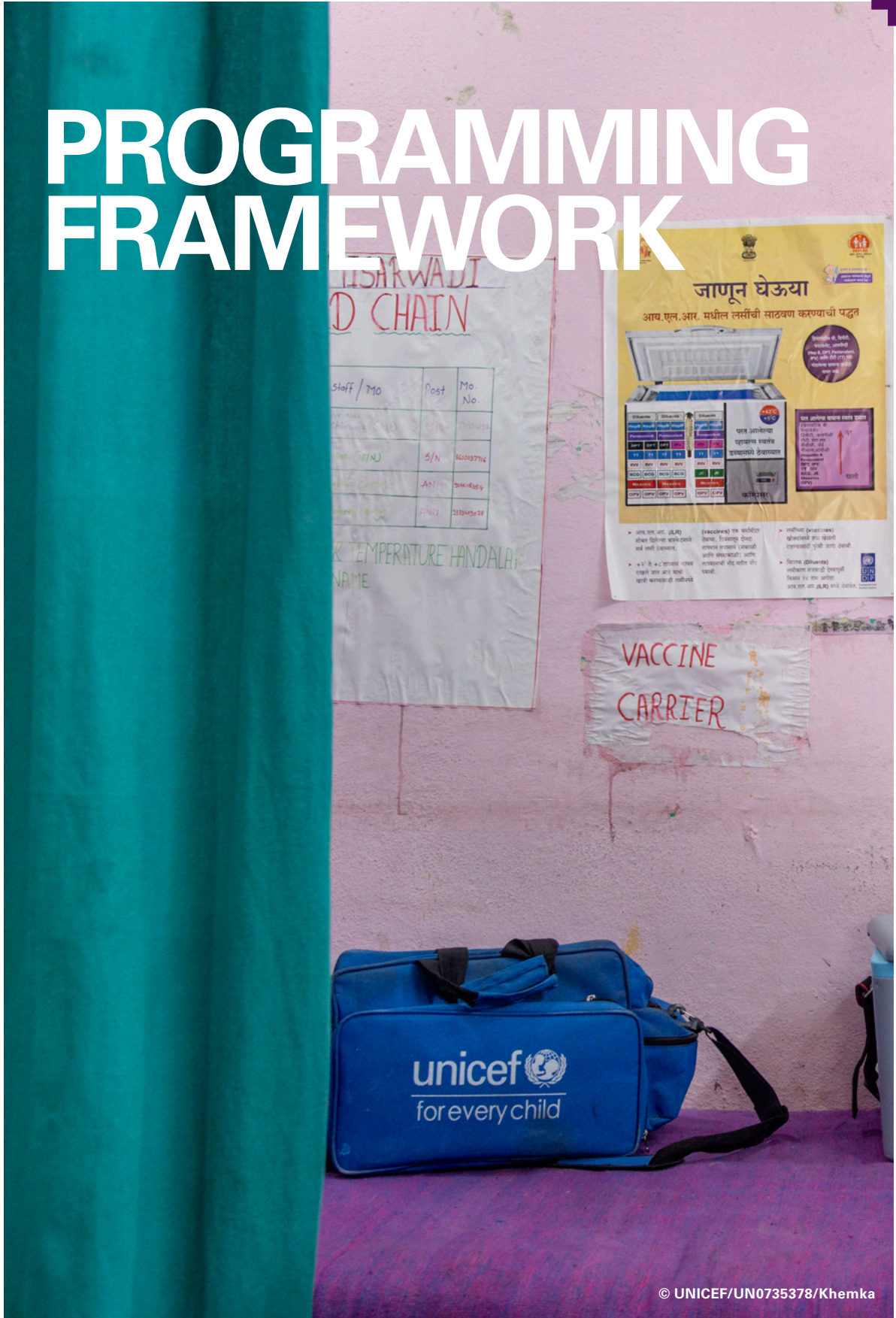
As UNICEF and the global community continue to respond to the COVID-19 pandemic, there is an imperative that the lessons learned from this disaster be incorporated into strengthening the readiness and response that immunization programmes will require for any future shocks. The Roadmap therefore includes resilience and emergency response as a specific change strategy that will be critical in operationalizing the Roadmap through 2030.

⁴⁴ Gavi, the Global Fund and the World Bank's International Development Association loans are all based on GNI per capita thresholds. See also: Silverman, R., *Projected Health Financing Transitions: Timeline and Magnitude*. CGD Working Paper 488, Center for Global Development, Washington, DC, 2018.

⁴⁵ IA2030 Agenda Annex on Middle-Income Countries

04

PROGRAMMING FRAMEWORK





4.1 Vision and goal statements

UNICEF’s Strategy for Health, 2016–2030, sets out the following vision for 2030, based on the Sustainable Development Goals and the Every Woman Every Child framework: “A world where no child dies from a preventable cause and all children reach their full potential in health and well-being.”

This is complemented by the UNICEF Immunization Roadmap 2022–2030 vision:

A world where every woman, child and adolescent fully and equally benefits from vaccinations for good health, well-being and full realization of their potential.



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The Immunization Roadmap vision considers the UNICEF mandate, promotes the rights of children, and emphasizes UNICEF’s focus on equity. It is supported by the following three goals:

1 Catch up and recover

Vaccinate children missed during the pandemic, restore disrupted immunization services and accelerate progress to achieve IA2030 goals.

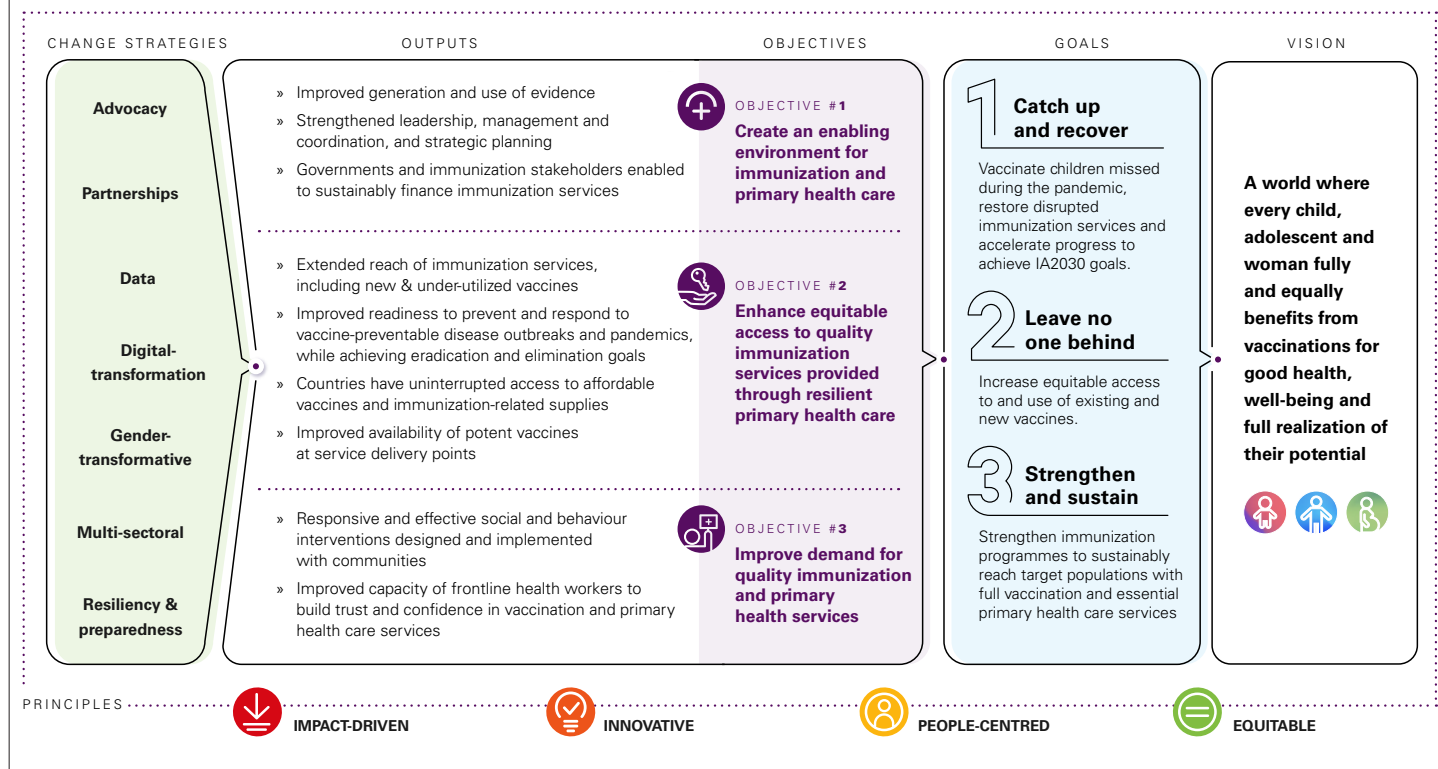
2 Leave no one behind

Increase equitable access to and use of existing and new vaccines.

3 Strengthen and sustain

Strengthen immunization and primary health care to sustainably reach target populations with full vaccination and essential health services.

FIGURE 4. UNICEF Immunization Roadmap Programming Framework 2022–2030



4.2 Programming principles

UNICEF’s immunization programming is underpinned by the following principles, which draw upon UNICEF’s values and comparative advantage (see section 2).

Equity-focused

For UNICEF, equity means that all children have an opportunity to survive, develop and reach their full potential without discrimination, bias or favouritism.⁴⁶ Equity requires reaching zero-dose children with vaccination and primary health care, and using transformative approaches to recognize and address the many ways that gender-based discrimination and harmful gender norms exacerbate inequities.

People-centred

UNICEF places the person at the centre of its approach to immunization, taking into account life experience, beliefs and identity, and supporting individuals to make informed decisions about their own lives and the lives of their children.

Innovative

UNICEF’s immunization programming invests in the development of new technologies, products and processes, as well as new approaches in policy, financing and business models. Innovation is critical to moving beyond the status quo to reach ambitious global immunization goals. Innovation is considered a corporate priority within UNICEF and the agency as a whole has recently renewed and deepened its commitment to innovating.⁴⁷

Impact-driven

UNICEF focuses on the impact and results attained through its immunization programming, evaluating its success in terms of outcomes achieved rather than processes undertaken.

⁴⁶ United Nations Children’s Fund, ‘Equity’, <<https://www.unicef.org/eu/equity>>, accessed 14 December 2022.

⁴⁷ United Nations Children’s Fund, *Evaluation of innovation in UNICEF work*, UNICEF, August 2020, <<https://gdc.unicef.org/resource/evaluation-innovation-unicef-work>>.

4.3 Objectives

Working with partners, UNICEF will contribute to realizing the three goals through achieving the following objectives by 2030:

1. **Create an enabling environment for immunization and primary health care**
2. **Enhance equitable access to quality immunization services provided through resilient primary health care**
3. **Improve demand for quality immunization and primary health services**

These objectives capitalize on UNICEF's strengths as an agency working across development and humanitarian settings and outline UNICEF's contribution to achieving the IA2030 agenda.

4.4 Outputs

UNICEF's Immunization Roadmap objectives are linked to anticipated outputs, which serve as the benchmarks against which progress towards the 2030 objectives will be measured. Immunization programme outputs will be reviewed and updated for the period of 2026–2030.

Outputs for objective 1

To create an enabling environment for immunization and primary health care, UNICEF will:

Improve generation and use of evidence

UNICEF will develop and implement a multi-year evidence generation and research agenda to fill evidence gaps and generate evidence to inform immunization and primary health care policies, budgets and implementation across all immunization programmatic areas. For example, on the immunization demand side, UNICEF will develop, adapt and disseminate tools and guidance on behavioural and social data and research to identify barriers to vaccine confidence, including gender barriers, and develop solutions to improve uptake of health services. Particular focus will be placed on generating and disseminating evidence on integrated

delivery and multisectoral approaches to reaching zero-dose children and missed communities, including through implementation research. UNICEF will strengthen national and global systems to improve the collection, availability, timeliness, and quality of immunization data, and will test and scale up gender indicators. UNICEF will strengthen its internal capacity and that of national partners to use data for advocacy and programming. Lessons learned regarding immunization and primary health care, including those from the COVID-19 pandemic, will be packaged and widely disseminated.

Strengthen leadership and management of immunization programmes, including within primary health care and multisectoral platforms

UNICEF will (co)lead, actively participate in and support effective functioning of the IA2030⁴⁸ and Gavi⁴⁹ governance structures, as well as other immunization forums at global level, and will be actively engaged with regional and national immunization strategic and technical forums.⁵⁰ This work will involve strengthening existing partnerships and engaging in new ones with relevant multilateral, bilateral and civil society organizations and international financial institutions⁵¹ to promote and support immunization and the zero-dose agenda within primary health care and multisectoral settings. In partnership with WHO, UNICEF will support governments to develop, implement and monitor National Immunization Strategies and Annual Operational Plans; strengthen leadership and management capacities of immunization managers at national and subnational level, including for gender analysis and programming; promote the development and use of scorecards and data dashboards to strengthen accountability and programme management; and strengthen political commitment to and national ownership of immunization programmes, including through support to develop, implement and monitor advocacy plans for immunization.

⁴⁸ IA2030 Partnership Council, Coordination Group, Technical/Functional/Cross-cutting Working Groups

⁴⁹ Gavi Board, Statutory Committees, Partnership Team, Communities of Practice and others

⁵⁰ Demand Hub, Gender and Equity Alliance on Immunization

⁵¹ WHO, Gavi, Bill & Melinda Gates Foundation, United States Agency for International Development, World Bank and international financial institutions, PATH, International Vaccine Access Center, JSI, civil society organizations, European Union, bilateral development organizations, Africa Centres for Disease Control and Prevention, COVID-19 Vaccine Delivery Partnership, academic institutions and others

Enable governments and immunization stakeholders to sustainably finance immunization services

UNICEF will advocate for increased government budgets for immunization, particularly to ensure the sustainability of interventions for reaching zero-dose communities. In addition, UNICEF will influence the allocation of external resources to immunization and primary health care, collaborate with partners on innovative and blended financing approaches for primary health care, and promote greater efficiency in resource use for primary health care and immunization, including through improved integration of services.

Outputs for objective 2

To enhance equitable access to quality immunization services provided through resilient primary health care, UNICEF will:

Extend the reach of immunization services, including through the introduction of new and under-utilized vaccines

UNICEF will support the identification of zero-dose children in priority settings through the use of coverage and equity assessments, gender analyses and other innovative tools. It will promote and support the implementation of differentiated, gender-transformative interventions to reach zero-dose children and missed communities in priority settings with vaccination and other essential services. UNICEF will also support the implementation of coverage and equity improvement initiatives, both for immunization and for multisectoral services. Based on contextual analysis, UNICEF will support private health sector engagement and improve access to immunization and other essential services by developing, testing and scaling up new delivery models and platforms. Further, UNICEF will strengthen community health systems for delivery of immunization and other essential services and support pandemic preparedness by investing in community health workers, promoting their registration, remuneration, capacity building, supervision and monitoring.

To expand the depth of protection, UNICEF will support country decision-making to introduce pneumococcal, rotavirus, HPV, and malaria vaccines, as well as other vaccines in routine immunization programmes, by providing evidence, advocacy, and technical guidance and by facilitating cross-country

experience sharing. Leveraging its multisectoral capacities in health, education, nutrition, as well as cross-cutting approaches to social and behaviour change and gender, UNICEF will support the expansion and broader reach of HPV vaccines.

Ensure improved readiness to prevent and respond to vaccine-preventable disease outbreaks and pandemics, while achieving eradication and elimination goals

UNICEF will advocate for and provide technical and financial resources to support government efforts to attain national vaccine-preventable disease control and elimination targets for measles and rubella, yellow fever, cholera, meningitis, and for the completion of maternal and neonatal tetanus elimination in countries where this has not yet been achieved. UNICEF will promote and advocate for the conduct and institutionalization of root cause analysis as part of vaccine-preventable disease outbreak response and use findings to develop and implement action plans to strengthen the Expanded Programme on Immunization and primary health care systems. UNICEF will support the integration of outbreak and pandemic preparedness planning in country work plans centred on ensuring continuity of access to quality health and other essential services. In addition, UNICEF will maximize the use of existing assets, and capitalize on lessons learned from accelerated disease control programmes (e.g., polio eradication) to strengthen systems and national priorities for immunization, and, where appropriate, transition accelerated disease control programmes to national routine immunization and financing systems.

Ensure countries have uninterrupted access to affordable vaccines and immunization-related supplies

UNICEF will develop and maintain healthy markets to ensure a sustainable supply of affordable immunization products of assured quality. The agency will influence global policies and develop alliances to ensure efficient, effective and transparent access to vaccines and immunization-related supplies. This includes supporting regional bodies, such as the African Union, in exploring local manufacturing options or pooled procurement for immunization-related commodities. UNICEF will also engage with and strengthen the capacity of lower-middle-income countries in forecasting, budgeting, planning and procurement of vaccines and immunization-related supplies, while strengthening relevant national information systems and data use. In pandemic

settings, UNICEF will leverage existing agreements, innovative financing approaches and agile contracting mechanisms to ensure early access to vaccines, safe injection equipment, personal protective equipment and other essential commodities.

Ensure improved availability of potent vaccines at service delivery points

UNICEF will strengthen national and subnational immunization supply chain capacity to manage stock and cold chain equipment to respond promptly to under- and overstock. It will buttress government capacity to assess supply chains, develop comprehensive supply chain improvement plans, strengthen electronic logistics management information systems, and track the implementation of these. UNICEF will support strategic partnerships and/or in-house distribution and waste management systems for vaccines and primary health care commodities across the supply chain. It will improve access to primary health care services through solarization of health facilities, and develop and support innovative approaches and partnerships to facilitate “last-mile” delivery of vaccines and other essential commodities.

vaccine hesitancy. In addition, UNICEF will support capacity building of countries to roll-out human-centred design, social listening,⁵³ and interpersonal communication on immunization.⁵⁴ These investments will also help communities prepare for and respond to future epidemics and pandemics.

Improve the capacities of frontline health workers to build trust and confidence in vaccination and primary health care services

UNICEF will support equipping frontline workers with skills and tools in interpersonal communication and community engagement to help them engage and communicate better with caregivers. It will provide support to countries to motivate frontline workers through improved training, monitoring, and supportive supervision, as well as the provision of the latest technical resources. In addition, UNICEF will collaborate with public health workers through rightly able partners to establish supportive mechanisms for fostering information and capacity building.

UNICEF will employ a variety of cross-cutting change strategies to achieve its Roadmap goals and objectives.

Outputs for objective 3

To improve demand for quality immunization and primary health services, UNICEF will:

Ensure gender responsive and effective social and behaviour change interventions designed and implemented with communities

UNICEF will use community-based platforms to promote community engagement and reach zero-dose children and missed communities. It will use human-centred design approaches⁵² to co-create gender-responsive local strategies to reduce barriers, promote positive behaviours and social norms, and generate demand for vaccination and other health services. UNICEF will engage and mobilize influencers to promote trust and confidence in vaccines and health services through the use of social media, traditional media and community platforms. UNICEF will support countries to strengthen systems to track rumours and misinformation in order to debunk myths rapidly through on- and offline platforms and address

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⁵² United Nations Children's Fund, 'Human-Centred Design', <<https://www.hcd4health.org/>>, Accessed 8 June 2022.

⁵³ Social listening systems help track rumours and misinformation circulating in both online and offline media and community conversations in order to listen to community concerns, fears and perceptions towards vaccinations and public health services. The information is used to develop tailored communication messages and approaches to rapidly respond to the public's concerns and information needs.

⁵⁴ United Nations Children's Fund, 'Interpersonal communication', <<https://ipc.unicef.org/>>, Accessed 8 June 2022.

05

CHANGE STRATEGIES





UNICEF will employ a variety of cross-cutting change strategies to achieve its Roadmap goals and objectives.

5.1 Advocacy

Advocacy is a core part of UNICEF's work and a critical strategy for securing results for children. Evidence-driven advocacy plays a pivotal role at global, regional, national and subnational levels. Advocacy aims to foster change by influencing decision-makers and others to take positive action to strengthen immunization policies and programmes. UNICEF applies a range of advocacy approaches, including leveraging evidence, policy dialogue, strategic influencing, partnerships and coalition building.

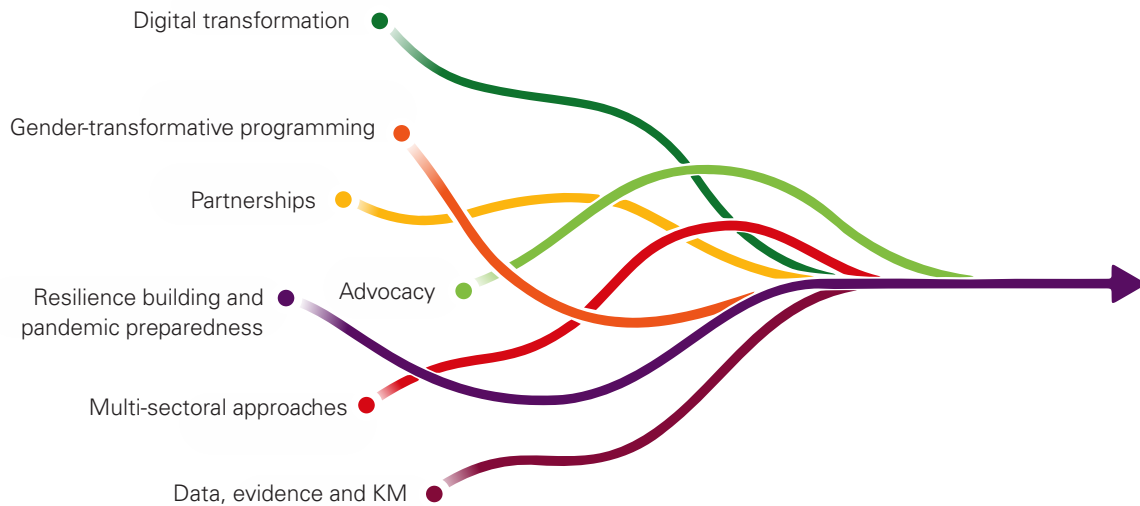
UNICEF aims to build and sustain a global movement to ensure that quality vaccination services are available and accessible to all as part of strong primary health care on the path towards universal health coverage. UNICEF will advocate for protection and expansion of domestic and donor funding for immunization and primary health care. In collaboration with IA2030 and Gavi Alliance partners, UNICEF will implement a global political advocacy approach to increase global attention, leverage resources and build support to catch-up children missed during the pandemic, recover from backsliding, accelerate the zero-dose agenda and get back on track to meet the IA2030, Gavi 5.1 and UNICEF Immunization Roadmap goals.

Specifically, UNICEF will support global campaigns that increase attention to zero-dose and under-immunized children, multiple deprivations and the cost of inaction. This will include planning and implementing the World Immunization Week, engaging UNICEF's Good Will Ambassadors, vaccines champions, youth advocates, and civil society organization networks. Key political engagement mechanisms such as United Nations General Assembly meetings, World Health Assembly, World Bank Spring Meetings, G7, G20, etc., will be leveraged to build commitments and trigger actions to recover and strengthen immunization. As part of global advocacy efforts, UNICEF will invest in analysis and disseminate key findings and advocacy messages through its flagship reports (i.e., State of the World's Children) and (co)convene global immunization events. Global reporting and monitoring mechanisms will be used to strengthen accountability for immunization (i.e., the WHO/UNICEF Estimations of National Immunization Coverage and the IA2030 scorecard).

Through its country offices, UNICEF will develop a country advocacy engagement approach and support the analysis, the development of national strategies and implementation tools to strengthen national commitments and support to immunization and primary health care. In partnership with IA2030 and Gavi Alliance partners, UNICEF will lead or participate in joint high-level missions to priority high-burden countries to engage Heads of State, ministers and parliaments, and to enhance political will and build commitments.

UNICEF will strengthen advocacy and engagement with stakeholders beyond immunization at global level (i.e., Global Fund, Global Financing Facility, World Bank, International Monetary Fund and other international financial institutions), regional level (i.e., Africa Centers for Disease Control, Association of Southeast Asian Nations, European Union) and country level to leverage resources for immunization and primary health care and to promote a multisectoral approach, with the aim of reaching zero-dose communities with immunization and other essential health and social services.

UNICEF will use change strategies to meet its objectives:



5.2 Partnerships

UNICEF is committed to working with partners to achieve the results articulated in this Roadmap. In response to the evolving partnership landscape, UNICEF will deepen its engagement with existing partners by reassessing synergies, communicating these synergies and leveraging comparative advantages to identify and take action on shared objectives. This includes continuing UNICEF's co-convening and engagement with global, regional, and national immunization mechanisms and initiatives such as the IA2030⁵⁵ and Gavi⁵⁶ governance structures, as well as other immunization coordination and technical working groups⁵⁷ at global level, including the Measles and Rubella and Maternal and Neonatal Tetanus Elimination initiatives.

UNICEF will initiate engagement with new partners by building trust, clearly communicating its mandate, priorities, and comparative advantage, and jointly identifying synergies and areas of collaboration with a view to maturing these partnerships to create shared value. Institutional bottlenecks within UNICEF will be simplified to provide an enabling environment for new partnerships, and UNICEF will advocate for the simplification of the global architecture of immunization partners.

UNICEF will deepen its engagement with United Nations agencies, other multilateral agencies, and technical agencies to promote technical and financial cooperation, while leveraging joint advocacy and combined influence to shape global, regional and national immunization policies and strategies. Through this engagement with partners, UNICEF will also promote robust technical advice and inputs to strengthen national immunization implementation systems. In particular, UNICEF will strengthen its close affiliation with WHO and its active participation as a core partner in Gavi, the Vaccine Alliance. In addition, UNICEF will enhance engagement with bilateral agencies to leverage comparative advantages and build synergies across objectives that require technical, financial and political advocacy.

UNICEF will expand partnerships with civil society organizations⁵⁸ to deliver tailored programmes subnationally that foster trust and engagement with communities and build social accountability mechanisms for immunization programmes within the context of primary health care. UNICEF will strengthen collaboration with partners such as the United States Centers for Disease Control and Prevention, and expand partnerships with national and regional health professional associations, academia and think tanks to promote sustainable capacity building and generate

⁵⁵. IA2030 Partnership Council, Coordination Group, Technical/Functional/Cross-cutting Working Groups

⁵⁶. Gavi Board, Statutory Committees, Partnership Team, Communities of Practice and others

⁵⁷. Demand Hub, Gender and Equity Alliance on Immunization

⁵⁸. https://unicef.sharepoint.com/:w/r/teams/PD-Immunization/_layouts/15/Doc.aspx?sourcedoc=%7B899F6D55-9977-434C-84A1-EA6E9F9E572C%7D&file=Narrative_Edited_v3%2026%20Sept_JD_CLEAN.docx&action=default&mobileredirect=true

evidence to inform policies and plans. By leveraging its policies, procedures and capacities, UNICEF will invest in strengthening the capacities of local partners to advocate for, design, deliver, and monitor immunization and primary health care services. Through efforts to strengthen gender-transformative programming and address root causes and barriers within communities and at system level, UNICEF will contribute to fostering sustainable immunization programmes and results.

UNICEF will broaden its private sector engagement and leverage these partnerships to mobilize resources, harness innovation to strengthen delivery systems, and expand integrated service delivery. Finally, UNICEF will collaborate with regional political bodies (e.g., the African Union, the Caribbean Community and Common Market, [CARICOM]) and regional development agencies, to improve integration of technical, funding and advocacy capacities relevant to immunization and primary health care.

5.3 Data, evidence and knowledge management

UNICEF's actions will be driven by the latest scientific and programmatic evidence and guidance. One of the priorities of this Roadmap will be to develop and implement a comprehensive data, evidence and research agenda that will ensure UNICEF's work is guided by emerging information, evidence and knowledge.

UNICEF will continue to advocate for and support evidence-informed policies, strategies and programmes to meet its Immunization Roadmap goal and objectives. Continuing to build on its experience, UNICEF will work with national governments and partners to pursue innovations that help pool and integrate data sets from diverse sources, including adopting multiple digital enablement approaches, such as innovative geographic information systems mappings for hard-to-reach populations. In addition, UNICEF will work to strengthen existing information systems to facilitate the identification of zero-dose communities and foster integrated service delivery between immunization and primary health care in those settings.

UNICEF will also work to enhance analytical and data triangulation capability to assist preparedness and decision-making at subnational levels.

UNICEF will support the generation and use of immunization outcome and coverage data to inform advocacy, decision-making, service delivery, and monitoring and evaluation. UNICEF plays a central role in generating immunization-related data and evidence, including collaborating with WHO and national governments to generate annual estimates of immunization coverage,⁵⁹ quantifying immunization supply chain needs through comprehensive effective vaccine management surveys,⁶⁰ conducting Multiple Indicator Cluster Surveys,⁶¹ generating evidence for social and behavioural change, and documenting best practices and lessons learned. Coherent, complete, timely and available data and evidence are important to optimize all aspects of immunization programmes.

Several different processes exist within UNICEF at various levels to foster innovative solutions: a centralized unit provides resources to agency programmes to refine problem statements, identify methodologies and funding for innovation, and scale up innovation successes; specific divisions or units within UNICEF⁶² are tasked with innovation; and, at country level, innovations responding to local challenges can be identified and supported.

Knowledge generated by UNICEF and other partners will be made available through UNICEF's knowledge management platforms. In terms of vaccine procurement, one of UNICEF's flagship programmes is the Vaccine Procurement Practitioners Exchange Forum and related Network, which promotes knowledge exchange among practitioners to strengthen their capacities at country level. UNICEF will also gather and disseminate lessons learned, conduct implementation research and promote the direct exchange of information and experience between countries.

⁵⁹ United Nations Children's Fund, 'Immunization Country Profiles', <<https://data.unicef.org/resources/immunization-country-profiles/>>, accessed 4 June 2022.

⁶⁰ United Nations Children's Fund, 'WHO/UNICEF Joint Statement – Achieving immunization targets with the comprehensive effective vaccine management framework', March 2016, <www.unicef.org/rosa/media/1281/file/WHO%20UNICEF%20statement.pdf>, accessed 13 December 2022.

⁶¹ United Nations Children's Fund, 'Multiple Indicator Cluster Surveys', <<https://mics.unicef.org/>>, accessed 4 June 2022.

⁶² The Information and Communication Technology Division and the Supply Division Innovation Unit, *inter alia*

5.4 Digital transformation

UNICEF will continue investing in digital transformation and technology that can improve vaccine supply, delivery and uptake. UNICEF's overall Digital Health Approach emphasizes the importance of taking a systems approach, including strengthening governance, coordination, and human resources, and situating any specific digital health initiatives within National Health Sector Strategies. Through the Digital Health Centre of Excellence, UNICEF together with WHO and partners (including Gavi, Global Fund, the United States Agency for International Development and the World Bank), is delivering coordinated, standardized support to governments, enabling them to prepare and deploy mature digital technologies to support health service delivery, including in response to the COVID-19 pandemic. Given the gender digital divide, UNICEF will also work with partners to enhance digital literacy among female health workers and community volunteers.

Digital, data and geospatial solutions have direct value in improving the delivery of immunization programmes, specifically when they have been deployed and scaled for planning and mapping of distribution of commodities and vaccines; tracking supplies; surveillance and case detection; monitoring vaccination coverage and campaign efficiency; and communicating to generate demand and reduce misinformation.

5.5 Gender-transformative approaches

Gendered norms can create barriers that constrain caregivers from getting their children immunized, or prevent health workers from providing gender-responsive services to communities. Identifying gender-related social, economic, and cultural barriers to accessing or utilizing services, as well as underlying power dynamics within households, can have great impacts on the likelihood that a child will be immunized.

Recognizing the impact of gender inequality on immunization outcomes, UNICEF will support the generation of gender-disaggregated data across all pillars of immunization programmes, including gender social and structural barriers to immunization as well as on the concerns and perceptions of both women and men towards vaccination. Similarly, gender-disaggregated data will be collected on the service delivery side. UNICEF will also adopt a gender lens in

designing and delivering immunization programmes. Human-centred design approaches will be used to understand barriers to vaccine uptake, including gender norms. Analysing gender barriers will also be a key component of equity assessments. UNICEF will also intensify advocacy efforts to increase support and motivation for the female health workforce through ensuring protective environment, training and career opportunities, family-friendly policies, and equal pay.

UNICEF will support the development of communication materials and approaches to respond to identified gender issues – for example, by developing materials specifically targeting women and men, advocating for female social mobilizers, and promoting male engagement in immunization programmes. UNICEF's immunization team will collaborate with internal gender specialists and external partners, and will promote transformative efforts at community and system levels to ensure more sustainable and broad-reaching results.

UNICEF will support regions and countries to enhance capacity to understand and apply gender-informed approaches to immunization programmes and primary health care services through gender training offered in collaboration with external partners. A gender-learning toolkit will be tested and made available in a variety of languages, and UNICEF will continue documenting and disseminating good practices and lessons learned from these strategies. UNICEF will assist countries in identifying standard core gender indicators and applying these to monitor the effectiveness of interventions. The agency will also support countries to conduct implementation research to better understand how to tailor gender-related interventions. Finally, UNICEF will continue its active participation in the Equity Reference Group, for which gender is a core focus, and in the global Alliance for Gender and Equity.

5.6 Multisectorality

Improving immunization outcomes, especially in missed communities, requires addressing multiple deprivations of missed communities, through integrated service delivery and interventions within and beyond the health sector. Besides meeting the holistic needs of communities, such an approach boosts trust in immunization. To this end, following a multisectoral approach means that all country programmes should promote immunization service delivery as a platform for the delivery of other essential interventions and vice versa, and work jointly across sectors and partners to

UNICEF's Immunization Roadmap supports the achievement of:

UNICEF Strategy for Health 2016-2030

Goals:

1. Ending preventable maternal, newborn and child deaths
2. Promoting the health development of all children.

Approaches:

1. Address inequities
2. Strengthen health systems, including emergency preparedness, response and resilience
3. Promote integrated, multi-sectoral policies and programmes

Programmatic focus:

1. Equitable access to integrated primary health care services, including immunization
2. Public policies and supportive environments



2022-2025 UNICEF's Strategic Plan

Goal Area 1 – output 2:

Children, including adolescents, and women have access to quality immunization services as part of primary health care, in development and humanitarian contexts.



address the social determinants and underlying causes of poor availability, reach and uptake of services. Given the diversity of the UNICEF programming scope (which spans nutrition, education, early childhood education, HIV, child protection, and water and sanitation), UNICEF has unique potential to leverage its multisectoral capabilities to address not only the immediate causes, but also the root causes and social determinants of inadequate access/service utilization and care practices.

UNICEF will collaborate with the education sector to promote school-based immunization platforms. Drawing on its expertise in gender, immunization and maternal, neonatal and child health, UNICEF will facilitate the delivery of integrated priority adolescent interventions in schools, including HPV vaccines. In addition, school vaccination checks can increase vaccination coverage and decrease vaccine-preventable disease outbreaks in schools.

Immunization and social policy teams will work hand-in-hand to advocate for the protection and expansion of domestic budgets for immunization and primary health care, to encourage the establishment of social

safety nets, and to promote cash transfers and cash plus programmes that encourage immunization among poor households.

UNICEF will promote child protection by conducting civil registration during vaccination campaigns, leading to improved civil registration coverage, better tracing of defaulter children for full vaccination, and more accurate denominators for the calculation of immunization and other coverage data.

Multiple opportunities exist to bundle nutrition and immunization services, such as the integration of vitamin A supplementation, deworming and growth monitoring and promotion within immunization campaigns. During emergencies or food insecure contexts, linking immunization programmes with nutrition aid may enhance vaccine uptake. UNICEF's polio programme will continue to support health system strengthening. Specifically, in polio-endemic countries, multi-antigen immunization campaigns will be scaled to include integrated health and nutrition services.

5.7 Resilience-building and pandemic preparedness

In alignment with the IA2030 Framework for Action, and guided by learnings from the COVID-19 pandemic as well as national disasters and epidemics, UNICEF will emphasize and employ efforts to prepare and respond to pandemics, outbreaks, and other types of disasters. The experience of COVID-19 highlighted the need for adequate preparation to mitigate disruptions to immunization services in the event of new disease outbreaks and humanitarian disasters. Successful disaster preparedness and response requires the tools and systems to both mitigate the impact of the disaster, and ensure immunization services are not disrupted. UNICEF has a critical role to play within the immunization sphere in this regard; it will draw on its comparative advantages to focus on: (1) strengthening governance and coordination to establish necessary mechanisms for response; (2) enhancing readiness and responsive systems; and (3) ensuring optimal access to supplies required during an emergency.

Governance and coordination

UNICEF will leverage its convening role to coordinate across agencies on efforts that relate to preparing for and responding to pandemics, outbreaks and disasters. In addition, UNICEF will use its political and technical levers to garner support from partners and governments to ensure immunization remains at the centre of pandemic preparedness and response. Within the agency, UNICEF will promote internal collaboration to optimize timely information flow between country, regional and global levels on vaccine-preventable disease outbreaks to improve the timeliness and effectiveness of response.

UNICEF will support the integration of outbreak and pandemic preparedness planning in country work plans centred on ensuring continuity of access to quality immunization and other essential health services.

Good practices and lessons learned in rapidly scaling up vaccine procurement, distribution and delivery during the COVID-19 pandemic at the global, regional and country level will be documented to inform future responses. This knowledge will be widely disseminated and used for advocacy in shaping future responses. UNICEF can also support countries to evaluate what worked well during the pandemic and determine the changes necessary to improve preparedness and capacity to respond to future vaccine-preventable disease outbreaks.

System readiness and response

UNICEF will support systems-strengthening to improve responsiveness to new shocks, while limiting disruptions to existing immunization and health services. Systems-strengthening efforts should ensure that countries and partners are ready for emergencies and can activate the response effectively. This will require supporting countries to develop and implement tailored approaches for strengthening the resilience of immunization programmes, including: (1) conducting root cause analysis and generating evidence on the event; (2) building the availability of a skilled and trained health care workforce, including community health workers, social mobilizers and community networks, by advocating for and supporting an expanded health care workforce, mapping of existing community-based women and youth networks, and establishing health workforce registries; (3) sustaining resilient and expandable immunization supply chains; and (4) scaling robust risk communications and community engagement capacities in countries to ensure uptake of expanded vaccination services.

The innovations and capacities developed during the COVID-19 pandemic will be adapted and maintained to allow for more rapid and equitable scale-up of vaccination response in the future, while minimizing the associated disruption to ongoing health service delivery, particularly for the most vulnerable and marginalized communities. In addition, UNICEF will maximize the use of existing assets, and capitalize on lessons learned from accelerated disease control programmes (e.g., polio eradication) to strengthen systems and national priorities for immunization, and, where appropriate, to transition accelerated disease control programmes towards national routine immunization and financing systems.

This strengthened cross-cutting capacity needed for rapid vaccination response will also benefit broader primary health care strengthening and improve gender-responsive delivery of vaccines and other essential health interventions in intra-pandemic periods. Investing in capacity building on social listening systems, community feedback mechanisms and people-centred community engagement approaches will help communities prepare for and respond to future epidemics and pandemics.



Access to supplies

UNICEF continues to be well-placed to ensure early access to vaccines, safe injection equipment, personal protective equipment and other essential commodities during a pandemic. This is ensured by employing innovative financing approaches and agile contracting modalities with suppliers as required and in collaboration with donors and external partners. UNICEF is also collaborating with countries and partners to establish accurate forecasting to enable both timely funding availability, access to commodities for countries, and the management of stockpiles.

UNICEF has agreements with a number of global transport service providers. These agreements have proven essential and can be easily leveraged to ensure in-country delivery, including during lockdowns and when travel is restricted. In partnership with WHO and Gavi Alliance, UNICEF will support regional bodies, including in Africa and Asia, to explore and support regional/local manufacturing and/or pooled procurement.

UNICEF works with industry to incentivize the development of new, innovative products and steer research and development investment towards vaccines and technologies that meet the needs of national immunization programmes. The agency will continue to provide catalytic support to scale up relevant innovations, including by supporting the field testing of new products and providing financial support to partners to mitigate the risk of research and development investments. UNICEF will also work to address challenges with products where there is no viable market by supporting work on stockpiles for emergency response or for very low demand. UNICEF will seek to encourage innovation for essential commodities for children and influence markets to make sure that such commodities are accessible, affordable and appropriate. At the same time, UNICEF will conduct advocacy to shape and influence policies and mindsets to promote greater adoption of innovations.

06

PROGRAMMING APPROACH





UNICEF immunization programming takes place in a wide variety of contexts. The country and programming landscape and capacities differ across low-, middle- and high-income countries and countries affected by conflict and humanitarian crisis. There are no standard programme packages that apply to all countries. Rather, in each country, programmes are designed to address problems and opportunities specific to its context to realize the rights of all children to immunization, guided by UNICEF strategic and comparative advantage in development cooperation. That said, in all contexts, UNICEF emphasizes the importance of multi-sector approaches to enhance child development and address underlying causes and determinants of poor health outcomes. It aims to further shift UNICEF from vertical disease control programmes towards strengthening health systems and building resilience, including calling for better integration of humanitarian and development efforts and encouraging risk-informed programming in all contexts.

6.1 Country contexts

To implement the Roadmap, UNICEF's programming approach will be tailored to country context and needs of target populations. Using a broader categorization of country contexts as outlined in the UNICEF Strategy for Health 2016-2030,⁶³ the UNICEF Roadmap expanded on and detailed the characteristics relevant to immunization programming (Table 1) to guide the development of tailored approaches to country needs.

While recognizing the need to tailor support to each country's specific needs, UNICEF supports a variety of programming approaches, such as advocacy and communications, service delivery, systems-strengthening, capacity building, resource mobilization. Table 1 and Figure 6 below illustrate how these can be deployed in various contexts.

UNICEF has a distinct mandate to advocate for the rights of all children to health and immunization. Advocacy is applicable across all contexts in which UNICEF operates and must be data-driven and evidence-based. In contexts where UNICEF has a subnational field presence and actively engages on strengthening service delivery and empowering communities, country offices can use this field experience to generate evidence and use it to better engage partners and influence local, national and global agendas.

The majority of UNICEF country programmes operate in emergency, fragile, low-income, lower-middle-income countries. In these settings, country programmes address deprivations, risks and priority child-related issues as identified in the situation analysis. UNICEF's depth of field presence is a crucial asset that enables it to develop and implement an appropriate mix of interventions and change strategies. While 'downstream' service delivery may predominate in these countries, 'upstream' policy advocacy, systems-strengthening and capacity building are also appropriately introduced.

Programming in middle-income countries is guided by the financial capacity of UNICEF offices, relatively advanced economic and technical capacity of government, civil society and private sectors. UNICEF programming in middle-income countries will shift progressively from primarily 'downstream' service delivery to an increasingly 'upstream' policy advocacy focus, influencing the decisions of key duty-bearers. The immunization-related needs of middle-income countries are highly heterogeneous, demanding a tailored approach to identify the most appropriate support. As described in section 1.2, there are growing indications of the need for greater support to middle-income countries: the percentage of the world's zero-dose children found in these countries is increasing; many of these countries are experiencing declines in immunization coverage; and those that have never been eligible for Gavi support lag in terms of vaccine introductions. UNICEF is committed to working with national governments and partners to identify ways to buttress and strengthen immunization programming in middle-income countries.

⁶³ UNICEF Strategy for Health 2016-2030

TABLE 1. Description of various country and programming contexts where UNICEF operates

	Country context	Immunization programme context	Illustrative examples of UNICEF support
EMERGENCY	A situation that threatens the lives and well-being of a large portion of the population and requires extraordinary action to ensure their survival, care and protection.	<ul style="list-style-type: none"> • Backsliding in coverage very likely. • Highly dependent on external funding. • Immunization infrastructure lacking or destroyed. • Immunization services disrupted, especially in areas directly affected by emergency. • In areas without government access, immunization programme is managed by and services delivered by humanitarian partners. • Vaccine uptake low and hesitancy high or unknown. • Limited vaccine quality control. 	<ul style="list-style-type: none"> • Advocacy and communication • Direct immunization service delivery • Outbreak response
FRAGILE	Areas with post-conflict or prolonged crisis. Inability to meet the population's expectations or manage changes in expectations and capacity through the political process.	<ul style="list-style-type: none"> • Poor immunization governance and infrastructure and low immunization coverage. • Highly dependent on external funding. • Weak immunization and health systems. Immunization services limited to accessible populations requiring deliberate strategies to reach under-served and disadvantaged populations. • Vaccine uptake low and hesitancy high or unknown, with variations likely by populations affected (e.g., internally displaced persons). • Limited vaccine quality control. 	<ul style="list-style-type: none"> • Advocacy and communication • Recovery and rehabilitative immunization services • Intensive technical assistance for systems-strengthening • Capacity building • Resource mobilization
LOW CAPACITY	A setting with insufficient fiscal resources and low-functioning government and infrastructure.	<ul style="list-style-type: none"> • Low immunization coverage and large within-country disparities in coverage. • Dependent on external funding and mostly eligible for Gavi support. • Weak immunization governance and infrastructure. • Weak health systems. Immunization services limited to easily accessible populations. Inadequate strategies to reach under-served and disadvantaged populations. • Vaccine uptake low and hesitancy high or increasing. • Limited vaccine quality control. 	<ul style="list-style-type: none"> • Advocacy and communication • Broadbased technical assistance for systems-strengthening and service delivery • Cold chain equipment • Health worker training • Vaccine procurement
MEDIUM CAPACITY	A setting with limited fiscal resources and medium-functioning government and infrastructure. It may struggle with persistent equity challenges among sub-populations.	<ul style="list-style-type: none"> • Immunization coverage mostly high but with persistent disparities in coverage by household wealth, education, gender-related barriers, and urban/rural. • Immunization programme largely self-funded. • Strong immunization governance and infrastructure, with much variation within and between countries. • Mostly strong national health systems, with variation in equity, quality, effectiveness and efficiency. • Vaccine uptake and hesitancy varies among and within countries. • Vaccine quality and regulatory systems in place with ad hoc assistance. 	<ul style="list-style-type: none"> • Advocacy and communication • Tailored and/or ad hoc technical assistance for immunization programmes to reach vulnerable and marginalized communities • Capacity building • Sustainable financing
HIGH CAPACITY	A setting with adequate fiscal resources and high functioning government and infrastructure. It may struggle with persistent equity challenges among sub-populations.	<ul style="list-style-type: none"> • High immunization coverage, with some inequities by income, gender, and urban/rural. • Largely self-funded, with government ownership. • Robust governance and infrastructure of public and private immunization programmes. • Mostly strong national health systems, with major role of private health sector. • Vaccine uptake is high and hesitancy low; however, challenges exist within and across countries. • Strong vaccine forecasting, procurement, distribution and regulation. 	<ul style="list-style-type: none"> • Advocacy and communication • Tailored and/or ad hoc technical assistance • Private sector engagement • Integration of services through a child-centric lens



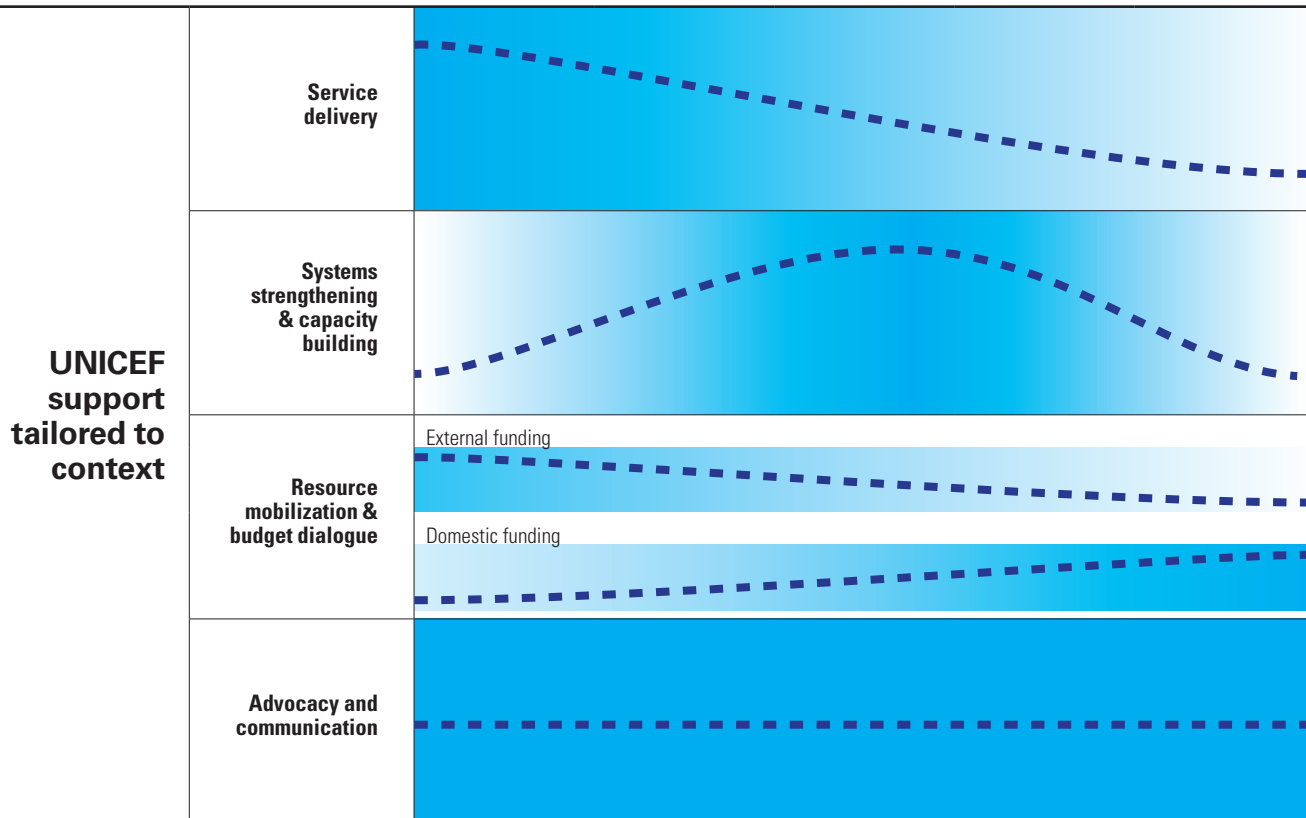
UNICEF’s growing expertise in immunization financing makes the agency well-placed to support countries in advocating for external and domestic financing. As global development assistance is often based on country income groups, these groupings are relevant in assessing country needs. Eligibility for support from Gavi, the Global Fund for AIDS, Tuberculosis and Malaria and the World Bank’s International Development Association loans are all based on established GNI per capita thresholds,⁶⁴ with countries grouped into lower-income, lower-middle-income, upper-middle-income and upper-income categories.

During a country’s transition from upper-middle-income to high-income status, UNICEF programme delivery is driven by policy advocacy, capacity building and establishing quality standards. This ‘upstream’ programming may also include ‘downstream’ elements to support service delivery in response to specific pockets of deprivation, to generate evidence, to demonstrate innovative approaches that can be scaled up or replicated, and to ensure financial sustainability of immunization.

⁶⁴ Silverman, R., *Projected Health Financing Transitions: Timeline and Magnitude*. CGD Working Paper 488, Center for Global Development, Washington, DC, 2018.

FIGURE 5. How UNICEF tailors its immunization support according to different programming contexts

	EMERGENCY	FRAGILE	LOW CAPACITY	MEDIUM CAPACITY	HIGH CAPACITY
Coverage	Variable, usually declining	Low	Low	Medium to high with persistent inequities	High with some inequities
Funding	Highly dependent on external funding	Highly dependent on external funding	Dependent on external funding (mostly Gavi-eligible)	Largely self-funded	Largely self-funded with government ownership
Infrastructure and governance	Lacking or destroyed	Weak	Weak	Strong	Robust
Access and systems	Services disrupted and delivered by humanitarian partners	Weak system. Services limited to accessible populations	Weak system. Services limited to accessible populations	Mostly strong system with variation on equity, equality, effectiveness and efficiency	Mostly strong system with major role of private health sector
Vaccine demand and hesitancy	Low demand and high hesitancy	Low demand and high hesitancy	Low demand and high hesitancy	Varies among and within countries	High demand and low hesitancy
Supply	Limited vaccine quality control	Limited vaccine quality control	Limited vaccine quality control	Ad hoc assistance to vaccine quality and regulatory systems	Strong vaccine forecasting, procurement, distribution and regulation





6.2 Target populations

While UNICEF has traditionally focused on child immunization,⁶⁵ there is growing recognition of the importance of maternal, adolescent and adult immunization across the life-course, in impacting lives of children.

The Expanded Programme on Immunization, established in 1974, originally targeted six diseases affecting infants. Over the ensuing years, the Programme has expanded its vaccine recommendations for all children to target 11 diseases, with additional antigens recommended for specific regions and some high-risk populations. Although many of these antigens are given in the first year of life, a second or booster dose for several vaccines, recommended to be given in the second year of life, provides a platform for other interventions.⁶⁶

HPV and tetanus-toxoid-diphtheria vaccine boosters target adolescents, and provide entry points for UNICEF to strengthen other aspects of adolescent services. HPV vaccination is also an entry point for improving coordination with external partners and across sectors within UNICEF – such as the education sector – to address adolescent health issues. UNICEF will strengthen national programmes to provide immunization services to adolescents who are both in and out of school through fixed delivery points and outreach approaches. UNICEF will continue to advocate for HPV vaccination with governments and partners across all low- and middle-income countries.

UNICEF's maternal immunization platform prioritizes the acceleration of maternal and neonatal tetanus elimination in countries where the disease remains endemic. Key approaches to achieving elimination include the integration of tetanus immunization with antenatal care services, supplementary immunization activities and the use of innovative approaches to reach the unreached.

Future initiatives beyond tetanus vaccination include the possible introduction of influenza, pertussis, respiratory syncytial virus and group B streptococcus vaccines. Maternal immunization is an entry point for UNICEF to strengthen linkages between immunization and maternal and neonatal health platforms and other maternal services, such as the prevention of mother-to-child transmission of HIV, the delivery of HIV testing and treatment for newborns, and deworming and multivitamin supplementation.

Children, adolescents and mothers remain UNICEF's primary focus; however, UNICEF also recognizes the need to target wider populations in certain settings, such as during vaccine-preventable disease outbreaks or pandemics, including COVID-19, in order to ultimately protect children. Furthermore, many interventions that support childhood immunization – such as strengthening the immunization supply chain and improving risk communication – are of benefit to the broader population.

⁶⁵ Jolly, R., *UNICEF (United Nations Children's Fund): Global governance that works*, Routledge, New York, 2014.

⁶⁶ World Health Organization, 'Table 2. Summary of WHO position papers – recommended routine immunizations for children', WHO, November 2021, <https://cdn.who.int/media/docs/default-source/immunization/immunization_schedules/immunization-routine-table2.pdf?sfvrsn=3e27ab48_9&download=true>, Accessed 20 May 2022.

07

ANNEXES





UNICEF Immunization Roadmap

Supporting actions by objectives and outputs

The Annex summarizes key supporting actions to operationalize the Immunization Roadmap. While not exhaustive, the Annex is intended to provide a menu of strategies and activities to be used at global, regional and country levels to inform the design of immunization programmes tailored to various contexts.

OBJECTIVE #1

Create an enabling environment for immunization and primary health care



OUTPUTS

1.1. Improved generation and use of evidence

SUPPORTING ACTIONS

Develop and implement a multi-year evidence generation, learning and adaptation agenda to drive immunization programming.

Conduct regular analysis of the electronic Joint Reporting Form (eJRF), the WHO/UNICEF estimates of national immunization coverage (WUENIC), and other similar data platforms, to avail timely and quality global immunization coverage estimates.

Support the planning and implementation of key assessments and surveys, and the analysis and utilization of administrative data sources, to improve the availability and use of country-level immunization and primary health care (PHC) data.

Strengthen internal and external capacity to analyse and use data for policy advocacy and programming, including through the development and deployment of new capacity building approaches and initiatives.

Document and widely disseminate new evidence, good practices and lessons learned on immunization and PHC.

Support countries to design, deploy and use digital health records and health information systems to readily capture and analyse childbirth, immunization and PHC data.

OUTPUTS

1.2. Strengthened leadership, management and coordination, and strategic planning

SUPPORTING ACTIONS

Provide leadership, and engage and support the effective functioning of global, regional and national level immunization governance and technical structures, including IA2030, Gavi, interagency coordination committees, advisory groups and thematic platforms.

Expand partnerships with relevant multilateral, bilateral, civil society organizations and economic bodies¹ at global, regional and country levels to reach every child with immunization, essential health services and other socioeconomic services.

Invest in strengthening the capacity of local partners to advocate, design, deliver, and monitor immunization and PHC services, thus ensuring the sustainability of immunization programmes and results.

Support integration of COVID-19 vaccination programme management into national immunization programmes, PHC and broader health systems.

Strengthen immunization programme management capacity at national and subnational levels.

Support governments to develop, implement and monitor National Immunization Strategies and Annual Operational Plans, including through strengthening accountability.

Support countries in the Gavi Full Portfolio Planning process and in developing applications for various Gavi funding levers, for World Bank funding or other donors.

Support governments to develop, implement and monitor advocacy plans for immunization in line with the UNICEF Global Advocacy Plan on Immunization to strengthen political commitment and national ownership.

1.3. Governments and immunization stakeholders enabled to sustainably finance immunization services

Use economic evidence to advocate for increased government budgets for vaccines, immunization and health, including to ensure sustainability of interventions for reaching zero-dose communities.

Influence the allocation of development assistance for health resources to immunization and PHC through Gavi and other similar mechanisms, and mobilize resources for strengthening immunization and PHC.

Work with global and regional multilateral development banks to incentivize/encourage governments to prioritize health spending in loan agreements, credit facilities and similar instruments.

Collaborate with countries, partners and the private sector to introduce and scale up innovative and blended financing approaches for PHC in low- and middle-income countries.

Promote greater efficiency of resource use for PHC and immunization, including through stronger integration of services.

¹ WHO, Gavi, Bill & Melinda Gates Foundation, United States Agency for International Development, World Bank and international financial institutions, PATH, International Vaccine Access Center, JSI, civil society organizations, European Union, bilateral development organizations, Africa Centers for Disease Control and Prevention, COVID-19 Vaccine Delivery Partnership, academic institutions and others.

OBJECTIVE #2

Enhance equitable access to quality immunization services provided through resilient primary health care



OUTPUTS

2.1. Extended reach of immunization services, including new and under-utilized vaccines

SUPPORTING ACTIONS

Support countries to catch-up on children missed during the COVID-19 pandemic through prioritization, intensification and coordinated delivery of immunization and other PHC services.

Identify and reach zero-dose children and missed communities using coverage and equity analysis, gender assessment tools, bottleneck and root cause analyses, and by triangulating data from various sources.

Leverage and coordinate UNICEF's multisectoral capacity (across health, nutrition, WASH, birth registration, parenting) to reach zero-dose children and communities with immunization and other PHC services, including those living in urban poor, rural, remote and conflict-affected settings.

Promote and support the implementation of differentiated, innovative and gender-transformative interventions to reach more children, prioritizing zero-dose and under-immunized children.

Engage the private health sector (based on contextual analysis and an assessment of benefits and risks) to help achieve immunization coverage and equity objectives.

Strengthen immunization services within PHC, including through investments in health care workers and particularly in community health workers.

Support country decision-making and the introduction of high-impact, new and underutilized vaccines in national immunization programmes, such as those for HPV, malaria, PCV and rotavirus.

Implement a life-course approach to immunization by expanding the capacity of the immunization programme to reach adolescents, young people, adults, older age, and those with co-morbidities.

2.2. Improved readiness to prevent and respond to vaccine-preventable disease outbreaks and pandemics, while achieving eradication and elimination goals

Advocate for and provide technical and financial resources to support government efforts towards attaining national vaccine-preventable disease control and elimination targets for measles and rubella, yellow fever, cholera, meningitis, and completion of maternal and neonatal tetanus elimination in the remaining 12 countries.

- Support countries to plan and implement quality integrated preventive and reactive campaigns focusing on zero-dose and under-immunized children, communities, and women of reproductive age.
- Facilitate the prompt inclusion of yellow fever, meningitis, rubella and second dose of measles vaccines in the routine immunization schedules of remaining endemic countries.

OUTPUTS

SUPPORTING ACTIONS

- Scale up vaccines to manage outbreak-prone diseases (e.g., measles, yellow fever, meningitis, rubella, polio, cholera).
- Facilitate and advocate for the use of second year of life platform established for measles second dose for providing missed doses of other routine immunization antigens such as yellow fever, meningitis and polio.

Promote and advocate for the conduct and institutionalization of root cause analysis as part of vaccine-preventable outbreak response and use findings to develop and implement action plans to strengthen immunization programmes and PHC systems.

Support integration of outbreak and pandemic preparedness planning in country work plans centred on ensuring continuity of access to quality health and other essential services, including immunization for women and children.

Strengthen immunization system resilience to withstand future shocks (including pandemics) through investing in preparedness, readiness and response.

Building on lessons learned from COVID-19 and other outbreaks, maximize the use of assets and lessons learned from accelerated disease control programmes and partnerships to strengthen systems readiness for immunization.

Strengthen outbreak response to vaccine-preventable diseases including through support to vaccine stockpiling.

Support the integration and transition of key vaccines programmes including polio and COVID-19.

2.3. Uninterrupted country access to affordable vaccines and immunization-related supplies

Develop and maintain healthy vaccine markets to ensure sustainable supply of affordable immunization products, including innovative products, of assured quality.

Influence global policies and develop alliances to ensure efficient and effective access to vaccines and immunization-related supplies in a transparent manner.

Support regional bodies, including in Africa and Asia, to diversify regional/local manufacturing and/or pooled procurement capacity.

Engage with and strengthen the capacity of low- and middle-income countries in forecasting, budgeting, planning, and procuring vaccines and immunization-related supplies.

2.4. Improved availability of potent vaccines at service delivery points

Strengthen national and subnational capacities to effectively manage stocks and cold chain equipment in order to improve effective vaccine management practices and storage capacities.

Improve distribution and waste management systems for vaccines and PHC commodities across the supply chain.

Maintain potency of vaccines and improved access to PHC services through deploying climate adaptive and sustainable technologies including solarization of health facilities.

Develop and support innovative approaches and partnerships for last-mile delivery of vaccines and other essential commodities.

OUTPUTS

SUPPORTING ACTIONS

Build capacity of health care workers in immunization supply chain functions and competencies.

Strengthen national and subnational logistics information systems and capacity to use data for decision making.

OBJECTIVE #3

Improve demand for quality immunization and primary health services



3.1. Responsive and effective social and behaviour change interventions designed and implemented with communities

Strengthen coordination mechanisms at global, regional and country levels for promoting vaccine uptake and trust in vaccines and health services.

Use human-centred design approaches and behavioural insights to co-create gender-responsive national and local strategies to promote positive behaviours, social norms, and demand for vaccination and primary health care.

Support governments in establishing social listening systems to track rumours/ misinformation and rapidly respond through online and offline platforms to address vaccine hesitancy.

Engage and mobilize influencers to promote trust and confidence in vaccines and health services using social media.

Use community-based platforms to promote community engagement and reach zero-dose children and missed communities.

Support capacity building of countries to roll out human-centred design approaches, social listening and interpersonal communication on immunization.

Invest in strengthening monitoring systems to show effectiveness of demand promotion interventions.

3.2. Improved capacity of frontline health workers to build trust and confidence in vaccination and PHC services

Develop, implement and disseminate evidence-informed state-of-the-art approaches and tools for strengthening the capacity of frontline workers.

Support countries to design, implement and monitor programmes that equip frontline workers with interpersonal communication and community engagement skills and tools to engage with and communicate better with caregivers.

Support countries to strengthen national systems and motivate frontline workers through improved training, provision of latest technical resources, monitoring and supportive supervision.

Collaborate with public health workers organizations to establish peer learning and other supportive mechanisms to address health worker information needs and build their capacities.



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Immunization Roadmap Results and Monitoring Framework

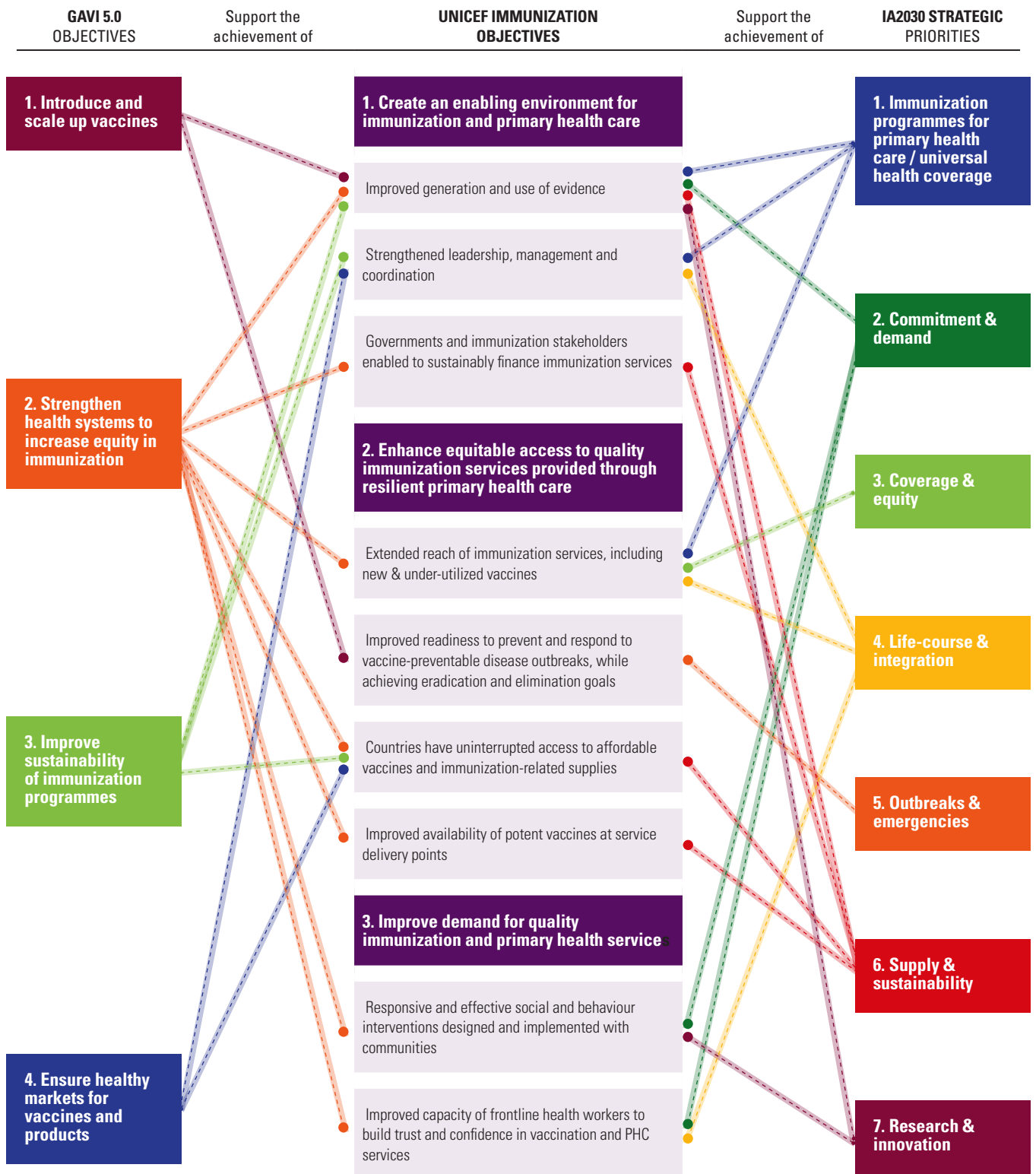
A results and monitoring framework will be used to monitor and evaluate progress against impact, outcomes and outputs outlined in the UNICEF Immunization Roadmap.

The framework consolidates existing indicators and targets set to meet internal and external commitments such as UNICEF Strategic Plan 2022–2025; Immunization Agenda 2030; UNICEF Foundational Support Proposal to Gavi; and Gavi 5.0/5.1. Additional indicators were developed to ensure the framework comprehensively supports the monitoring of results outlined in the Roadmap.

The monitoring and results framework therefore articulates UNICEF's contribution to global goals and objectives set by IA2030 and the Gavi Alliance (Figure 6), while meeting UNICEF's mandate and commitments to children, adolescents and women.

There will not be a separate reporting stream for the Roadmap. Rather, progress against set indicators and targets will be monitored and reported through the established UNICEF processes and systems. Internally, the Results Assessment Module is the main platform for UNICEF's programme performance management and reporting. Data collected are analysed annually and published in key annual reports, such as the Executive Director's Annual Report and Health Programme Annual Results Report. Impact and outcome indicators aligned with IA2030 will be collected and analysed through the WUENIC process with WHO. As for the Gavi Foundational Support Proposal, performance indicators and results will be analysed and reviewed biannually as agreed upon by Gavi and UNICEF. Internal mechanisms will be developed to collect, analyse, and report on the new indicators developed for the framework.

FIGURE 6. UNICEF Immunization Roadmap objectives and outputs are linked and contribute to the achievement of the IA2030 strategic priorities and Gavi 5.0 objectives



ROADMAP
GOAL

	IMPACT INDICATOR	SOURCE	INDICATOR#: AS PER FIRST SOURCE LISTED	BASELINE (2019)	2022-2025 TARGET MILESTONE	TARGET 2030	GEOGRAPHIC SCOPE
GOAL #1 Catch up and recover Vaccinate children missed during the pandemic, restore disrupted immunization services, and accelerate to achieving Immunization Agenda 2030 goals.	Number of children missed during the pandemic reached with vaccination (DPT1) (under discussion/development)	(as per Global Recovery Plan)		TBC	TBC		20 top high burden countries
	Number of children in missed children during the pandemic reached with vaccination (MCV1) (under discussion/development)	(as per Global Recovery Plan)		TBC	TBC		20 top high burden countries
	Number of zero-dose children in 20 top high burden countries			9.9m	6.8m		20 top high burden countries
	DTP1 coverage (%) in 20 top high burden countries			85	84		Top 20 high-burden (based on 2021 revision)
GOAL #2 Leave no one behind Increase equitable access and use of existing and new vaccines. (IA2030 - Impact Goal 2)	Number of zero-dose children	IA2030		13m	8.9	6.5	157 COs*
	Percentage of surviving infants who received (a) first dose of diphtheria, tetanus and pertussis (DTP) vaccine	UNICEF Strategic Plan (+Gavi 5.0, IA2030)	1.8.a.	0.89	0.87	0.9	157 COs
	Percentage of surviving infants who received first dose of the measles-containing vaccine	UNICEF Strategic Plan, Gavi 5.0, IA2030	1.9.	0.85	0.86	0.9	157 COs
GOAL #3 Strengthen and sustain Strengthen immunization programmes to sustainably reach target populations with full vaccination and essential primary health care services (aligns with IA2030 - Impact Goal 3)	Percentage of surviving infants who received (b) three doses of diphtheria, tetanus and pertussis (DTP) vaccine	UNICEF Strategic Plan, Gavi 5.0, IA2030	1.8.b.	0.9	0.84	0.9	157 COs
	Percentage of surviving infants who received 2 doses of measles-containing vaccine	IA2030		0.69	0.78	0.9	157 COs
	Vaccination coverage of PCV3 (%)	IA2030		0.46	0.63	0.9	157 COs
	Vaccination coverage of HPVc (last dose; females) (%)	IA2030		0.14	0.29	0.9	Global
	Universal Health Coverage Index	IA2030		68	80	95	157 COs

* COs = UNICEF Country Offices

OBJECTIVES	OUTCOME INDICATOR	SOURCE		BASELINE	2022-2025 TARGET MILESTONE	TARGET 2030	GEOGRAPHIC SCOPE
 <p>OBJECTIVE #1 Create an enabling environment for immunization and primary health care</p>	Number of countries implementing strategies to address under-vaccination	UNICEF Strategic Plan	1.2.6.	118 (2020)	157	157	157 COs
	Co-financing fulfillment: Percentage of countries that fulfil their co-financing commitments by the end of the year, or which pay their arrears in full within 12 months.	Gavi 5.0 Strategy	F.				Gavi-eligible countries
 <p>OBJECTIVE #2 Enhance equitable access to quality immunization services provided through resilient primary health care</p>	Number of vaccine introductions in low- and middle- income countries	IA2030	2.2	29 (2020)		500	157 COs
	Number of countries that introduced one or more of the following vaccines: human papillomavirus vaccine, hepatitis B vaccine, measles-containing vaccine second-dose, pneumococcal conjugate vaccine and/or rotavirus vaccine	UNICEF Strategic Plan	1.2.2.	18 (2020)	78	138	157 COs
	Number of countries with a national-level stock-out of DTP or measles vaccine for at least one month	UNICEF Strategic Plan	1.2.3.	29 (2020)	15	10	157 COs
	DTP3, MCV1, and MCV2 coverage in 20% of districts with the lowest coverage (baseline and targets under development)	IA2030		TBC	TBC	TBC	TBC
	Number of countries that are verified/validated as having eliminated maternal and neonatal tetanus	UNICEF Strategic Plan	1.11.	47 (2021)	59	59	157 COs
 <p>OBJECTIVE #3 Improve demand for quality immunization and primary health services</p>	Proportion of countries that have implemented behavioural or social strategies (i.e demand generation strategies) to address under-vaccination. Number of countries implementing strategies to address under-vaccination	UNICEF Strategic Plan	1.2.6.	118 (2020)	157	157	157 COs
	Proportion of people who accept vaccines (source?) - look at indicator used for COVID-19						

OUTPUTS	OUTPUT INDICATOR	SOURCE		BASELINE	2022-2025 TARGET MILESTONE	TARGET 2030	GEOGRAPHIC SCOPE
1.1. Improved generation and use of evidence	Global, regional and country level immunization coverage estimates published annually (WUENIC) and additional data collected and reported on annually from the eJRF.	Gavi Foundational Support Results Framework	1.1	–	–	–	
	Number of UNICEF-supported countries that conducted Coverage and Equity Assessments or similar analysis (including identification of gender related barriers) to inform zero-dose global, regional and national programming and advocacy agenda	Gavi FS Results Framework	1.2	5	42		Gavi-eligible countries
	Number of countries that developed, with UNICEF support, evidence-based strategies to reach zero-dose and unimmunized children/communities with immunization and essential health services including in conflict-affected, urban poor and/or remote rural settings and to overcome cross-cutting gender-related barriers	Gavi FS Results Framework	1.3	14	51		Gavi-eligible countries
	Number of countries that have integrated subnational GIS data into immunization equity assessment	Gavi FS Results Framework	1.1	1	9		Gavi-eligible countries
1.2. Strengthened leadership, management and coordination, and strategic planning	Number of countries supported by UNICEF with development of National immunization strategies (under development)			TBC	TBC	TBC	Gavi-eligible & MIC countries
	Number of countries implementing Leadership, Management, and Coordination capacity building activities supported by UNICEF (under development)			TBC	TBC	TBC	Gavi-eligible & MIC countries
1.3. Governments and immunization stakeholders enabled to sustainably finance immunization services	Number of countries that have assessed financial sustainability of zero-dose interventions, including through Gavi Full Portfolio Planning and EAF support.	Gavi FS Results Framework	1.6	0	20		Gavi-eligible countries
	Number of countries receiving support from UNICEF on Gavi 5.0 Domestic Financing Learning Agenda [A total of 3 countries which will receive multi-year support.]	Gavi FS Results Framework	1.7	0	3		Gavi-eligible countries
	Number of countries that have used NIS.COST approach and application as part of their strategic plan for immunization	Gavi FS Results Framework	2.5	2	17		Gavi-eligible countries
2.1. Extended reach of immunization services, including new & under-utilized vaccines	Number of children vaccinated against measles through UNICEF-supported programmes	UNICEF Strategic Plan	1.2.1.	152.6 million			95 COs with data
	Number of countries in which UNICEF supported the effective roll-out of COVID-19 vaccines	UNICEF Strategic Plan	1.2.5.	148 (2021)	30		
	Number of countries that introduced measles-containing vaccine second-dose or rubella vaccine with UNICEF support	Gavi FS Results Framework	2.12	8	9		Gavi-eligible countries
	(NEW) Number of countries that introduced HPV vaccine with UNICEF support, such as implementing coverage improvement strategies	Gavi FS Results Framework		21 (2021)	43		Gavi-eligible countries

OUTPUTS	OUTPUT INDICATOR	SOURCE	BASELINE	2022-2025 TARGET MILESTONE	TARGET 2030	GEOGRAPHIC SCOPE
	Number of countries that developed, with UNICEF support, evidence-based strategies to reach zero-dose and unimmunized children/communities with immunization and essential health services including in conflict-affected, urban poor and/or remote rural settings and to overcome cross-cutting gender-related barriers	Gavi FS Results Framework	1.3	14	51	Gavi-eligible countries
	Number of countries that apply a gender lens to identifying and mitigating gender-related barriers to reducing the number of zero-dose children, on the demand as well as on the supply side of immunization.	Gavi FS Results Framework	1.4	0	29	Gavi-eligible countries
2.2. Improved readiness to prevent and respond to VPD outbreaks and pandemics, while achieving eradication and elimination goals	Number of countries with policies and guidance on utilizing second year of life platform for providing missed doses for all EPI antigens	Gavi FS Results Framework	1.8	0	6	Gavi-eligible countries
	Number of countries experiencing vaccine preventable disease outbreaks that conducted root cause analysis of outbreaks and developed a targeted plan of action to strengthen the immunization program in the outbreak area with UNICEF's support	Gavi FS Results Framework	1.9	0	10	Gavi-eligible countries
	Number of countries that have developed and implemented integrated accelerated immunization activities with UNICEF support to close the immunity gaps created due to the COVID-19 pandemic	Gavi FS Results Framework	2.11	9	43	Gavi-eligible countries
2.3. Countries have uninterrupted access to affordable vaccines and immunization-related supplies	Number of countries procuring through UNICEF with an evidence-based roadmap to strengthen vaccine forecasting and budgeting	Gavi FS Results Framework	2.7	2	19	Gavi-eligible countries
	Number of countries procuring through UNICEF that avail themselves of the pre-financing to help avoid stock-outs	Gavi FS Results Framework	2.8	2	12	Gavi-eligible countries
	Number of countries procuring through UNICEF that default on co-financing obligations (target zero)	Gavi FS Results Framework	2.9	1	1	Gavi-eligible countries
2.4. Improved availability of potent vaccines at service delivery points	Number of countries in which UNICEF supported effective vaccine management	UNICEF Strategic Plan	1.2.4.	6 (2021)	42	
	Number of countries where UNICEF supported effective vaccine management assessments, development of improvement plans and/or implementation	Gavi FS Results Framework	2.1	6	42	Gavi-eligible countries
	Number of Gavi supported countries with full stock availability of DTPcV and MCV at national, regional and district levels	Gavi FS Results Framework	2.2	14	52	Gavi-eligible countries
	Number of Gavi supported countries utilizing existing stock management systems down to district level for reporting stock data and programming	Gavi FS Results Framework	2.3	14	52	Gavi-eligible countries
	Number of countries using vaccine information management system (e.g. logistics management information systems) and processes for data use	Gavi FS Results Framework	2.4	24	43	Gavi-eligible countries

OUTPUTS	OUTPUT INDICATOR	SOURCE		BASELINE	2022-2025 TARGET MILESTONE	TARGET 2030	GEOGRAPHIC SCOPE
	Number of countries with over 90% functional cold chain equipment	Gavi FS Results Framework	2.1	35	57		Gavi-eligible countries
3.1. Responsive and effective social and behaviour interventions designed and implemented with communities	Number of countries that apply a gender lens to identifying and mitigating gender-related barriers to reducing the number of zero-dose children, on the demand as well as on the supply side of immunization.	Gavi FS Results Framework	1.4	0	29		Gavi-eligible countries
	Number of countries gathering, analysing and applying social data (to understand the behavioural and social drivers of uptake and demand) to inform the design of evidence based demand strategies and plans	Gavi FS Results Framework	3.1	13	35		Gavi-eligible countries
	Number of governments in countries with a high burden of zero-dose children that take action and show leadership on immunization with UNICEF support	Gavi FS Results Framework	3.4	0	12		Gavi-eligible countries
	Number of countries using human-centred approaches to design behaviourally informed service delivery improvements, enhance health worker capacity and engage communities actively in immunization and PHC	Gavi FS Results Framework	3.2	9	34		Gavi-eligible countries
	Number of countries using human-centred approaches to design behaviourally informed service delivery improvements, enhance health worker capacity and engage communities actively in immunization and PHC	Gavi FS Results Framework	3.2	9	34		Gavi-eligible countries
3.2. Improved capacity of frontline health workers to build trust and confidence in vaccination and PHC services	Number of global events hosted or co-led by UNICEF at which commitments (policy and funding) are made to address vaccine inequity and zero-dose children	Gavi FS Results Framework	1.5	0	4		Gavi-eligible countries
	Number of external and high-profile UNICEF-led moments that utilize UNICEF leadership and influencers to drive global and national attention to investments in immunization and strong primary healthcare systems	Gavi FS Results Framework	2.6	0	12		Gavi-eligible countries
	Number of external and high-profile UNICEF-led moments that utilize UNICEF leadership and influencers to drive global and national attention to investments in immunization and strong primary healthcare systems	Gavi FS Results Framework	2.6	0	12		Gavi-eligible countries
	Number of external and high-profile UNICEF-led moments that utilize UNICEF leadership and influencers to drive global and national attention to investments in immunization and strong primary healthcare systems	Gavi FS Results Framework	2.6	0	12		Gavi-eligible countries



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