

HEALTH RESULTS 2021

IMMUNIZATION

unicef 
for every child

On 29 August 2021, a team of porters cross over landslide-hit stretches of road to deliver COVID-19 vaccines and supplies to Bajura District in far-western Nepal. With several kilometres of the highway at Balde thoroughly damaged by landslides, transportation on foot – over steep, challenging terrain – is often the only way to ensure that the COVID-19 vaccine drive, as well as routine immunization sessions for children, can continue.

CONTEXT

Immunization is a critical component of primary health care, proving to be one of the most successful health interventions of all time and preventing an estimated 2 to 3 million deaths annually. However, immunization coverage has plateaued since 2010 due to poverty, increased numbers of children living in conflict zones and humanitarian emergencies, chronic under-investment in primary health care, and vaccine hesitancy. The most recent data from 2020 shows immunization coverage has declined, mainly due to the effects of COVID-19, erasing more than a decade of progress.

A total of 23 million children missed basic childhood vaccines through routine health services in 2020, 3 million more than in 2019. Global coverage of diphtheria, tetanus, and pertussis (DPT3) vaccination coverage – the proxy indicator for immunization – fell from 86 per cent in 2019 to 83 per cent in 2020.¹ The decline of vaccination in children and population immunity, coupled with critical gaps in disease surveillance, heighten the risk of disease outbreaks globally.

¹ The figures cited correspond with UNICEF's Universe of Countries for immunization (the 64 priority countries and HPV priority countries).

² Including donated doses

UNICEF WORK AND RESULTS IN 2021¹



More than 64 million children in 64 UNICEF priority countries were vaccinated with three doses of DTP-containing/pentavalent vaccine.



With UNICEF support, 53 countries have implemented a national health sector supply chain strategy/plan.



Over 22.4 million children in humanitarian settings in 48 countries were vaccinated against measles.



The human papilloma virus (HPV) vaccine was introduced to an additional two countries, making 18 in total; 8 million women of reproductive age received tetanus toxoid-containing vaccines.



COVAX delivered 958 million doses² to 144 countries and territories. In support of this, **UNICEF delivered 800 ultra-cold freezers to nearly 70 countries.**



UNICEF spent US\$572 million in immunization-related expenses out of US\$1.66 billion of health-related expenditure.



Bisakha Chakma brings her youngest son Tuhin Marma (7) for a measles-rubella vaccination in Rangamati, Bangladesh, during the national vaccination campaign.

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WORKING TO REACH EVERY CHILD

UNICEF is uniquely positioned to ensure that all children and women receive essential vaccines. As a leader in advocacy for immunization equity, UNICEF works with partners to supply vaccines: enough to reach 46 per cent of the world's children under 5.

UNICEF continues to advocate for the prioritization of 'zero-dose' children for the delivery of immunization and other basic health services in missed communities,³ especially those in remote rural areas, urban-informal settlements, and conflict-affected areas. Despite severe disruptions, UNICEF and

partners supported the vaccination of more than 64 million children with DTP3 in 64 priority countries in 2020.

To bring immunization inequity and zero-dose children and communities to the centre of the Immunization Agenda 2030, UNICEF worked in partnership with the Bill & Melinda Gates Foundation to co-lead the Equity Reference Group for Immunization (ERG). The 2021 ERG Consensus Statement on the Economics of Reaching Zero-Dose Communities with Immunization and Primary Health Careⁱⁱ helped shift the focus to

conflict, gender influence on vaccination, urban poor, and remote rural to improve coverage and equity.

To address the inequities of immunization coverage, a ground-breaking innovative technology – the vaccine-containing Microarray Patch – has the potential to expand the reach of immunization programmes and increase acceptability by caregivers and recipients while making vaccines easier to administer. UNICEF is focusing on driving the research needed to support the development and scale-up of the microarray patch.



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Read about how UNICEF works to ensure every child receives routine immunization during the pandemic



My village is too far from the health centre and the road is very difficult to travel, so if the outreach team did not come to my village, my daughter might not have the opportunity to get vaccinated. She is too small to travel on this long difficult road in the rainy season.



Moung Toeur, a mother of a 10-month-old baby girl, who brought her daughter for DPT-PCV3 and measles vaccines.



Going the last mile to deliver COVID-19 vaccines in Nepal

³ Communities with a significant number of children who have not received a single dose of diphtheria, tetanus and pertussis-containing vaccine.



ACCELERATING IMMUNIZATION INITIATIVES

UNICEF continued to implement accelerated immunization initiatives against measles, rubella, yellow fever, and meningitis to reduce preventable illness, disability, and mortality.



In seven countries, UNICEF supported supplementary immunization activities to vaccinate more than 48 million people against yellow fever.



An additional two countries, Comoros, and Pakistan, introduced the combined measles-rubella vaccine in their national vaccination schedule.



UNICEF supported Pakistan in integrating measles, rubella, and polio vaccines in one of the largest-ever supplementary immunization activities that reached 93 million children, demonstrating the potential of integrated supplementary immunization activities (SIAs) to reduce the burden on strained health systems.

VACCINATING CHILDREN IN HUMANITARIAN SETTINGS

Immunization is even more important in humanitarian and fragile settings where children are particularly vulnerable to disease outbreaks like measles and polio. At the same time, there is often a significant drop in vaccination coverage when services provided through primary health care are disrupted. An estimated 40 per cent of zero-dose children for immunization (5.5 million)ⁱⁱⁱ live in areas affected by fragility and conflict.

UNICEF is working with partners to mitigate disruptions to routine immunization services caused by COVID-19 through continued efforts to re-establish cold chains, provide vaccines and technical support, and boost health workers' capacities to provide vaccinations in humanitarian and fragile settings.

In 2021, UNICEF worked with partners to provide leadership to support measles supplementary immunization activities as part of the Core

Commitments for Children. In 48 countries reporting, 22.4 million children were vaccinated against measles in humanitarian and fragile settings, but only 85 per cent of UNICEF-targeted children in these contexts were vaccinated against measles in 2021.

UNICEF played a key role in the COVAX Humanitarian Buffer to ensure that COVID-19 vaccines reached communities in humanitarian and fragile settings, and 2.5 million doses have been delivered to two countries. Through its partnership with the International Coordinating Group on Vaccine Provision, UNICEF supplied 2.3 million doses of yellow fever vaccine to three countries, 17 million doses of oral cholera vaccine to six countries and 2.1 million doses of meningococcal vaccine to four countries. During 2021, in response to humanitarian crises, UNICEF delivered more than 96.37 million vaccine doses to 14 countries.



UNICEF works to ensure that children living in conflict settings are not left behind

PROMOTING VACCINE DEMAND AND ACCEPTANCE

Demand for immunization is critical to attain equitable access and uptake of services by caregivers and communities. UNICEF supports countries with strategies to create demand and empower communities with information and knowledge, build trust in health services, instil confidence in the quality and safety of vaccine services, and promote positive and measurable behavioural change. This area of work has been elevated because of the pandemic, associated misinformation, and reduced trust in governments and health institutions' response management.

In 2021, UNICEF scaled up capacity-building using the human-centred design (HCD) methodology in eight countries^{iv} to address demand-related challenges at the community level. Countries are rapidly scaling up the HCD approach to co-create local solutions and have started institutionalizing it in national plans, strategies, and training curricula. The HCD approach is closely linked with equity and gender and is used to identify and address barriers to vaccine uptake, particularly in marginalized and zero-dose communities and areas with low immunization coverage.

UNICEF uses innovative ways to counter misinformation and improve vaccine uptake.



Read more – Using a truck to improve vaccine uptake in South Africa



Read more about the Vaccine Demand Observatory in the press release



Increasing community demand for the COVID-19 vaccine in Romania

In 2021, UNICEF launched the Vaccine Demand Observatory to strengthen social listening and digital engagement programmes to address vaccine misinformation. Six countries were aided to develop social listening strategies, and two countries have live dashboards. Social listening helps countries track rumours and misinformation in both online and offline media, as well as other sources of information like community conversations. It can help analyse and use data for addressing public concerns, fears, and negative perceptions towards vaccination.



14 July 2021 – Lodja, Sankuru province, Democratic Republic of Congo. After losing his first son to measles, Djamba became a community relay and informs parents about the importance of vaccination.

UNICEF co-chaired the global vaccine confidence task team and has been providing strategic guidance and technical assistance to countries to identify barriers to vaccine uptake and address gaps with evidence-based strategies.

STRENGTHENING IMMUNIZATION SUPPLY CHAIN

Immunization supply chains are critical in ensuring that vaccines are transported safely and effectively. The immunization supply chain is a key component of the health system for reaching zero-dose children, enabling delivery of services to underserved communities, ensuring vaccine availability and potency, and maximizing efficiency where possible. UNICEF helped shape this agenda through strategic investments, such as temperature management, storage capacity, infrastructure, and vaccine management to strengthen the supply chain for primary health care.

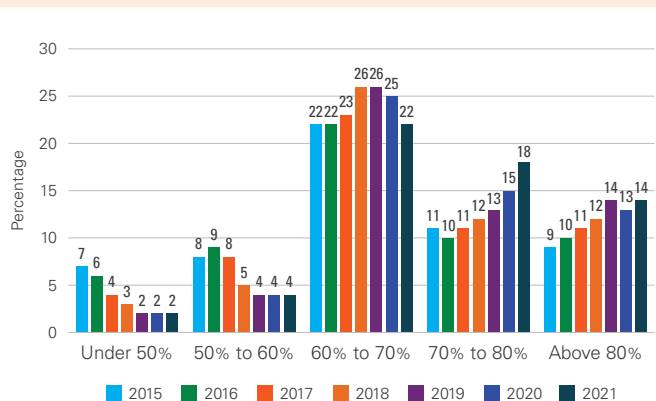
In 2021, UNICEF continued to work with countries to implement the comprehensive effective vaccine management (EVM) process. EVM measures whether national immunization supply chain systems comply with WHO standards in supply system capacity to ensure vaccine availability, vaccine quality and efficient use of resources – this approach remains the entry point to broader-based supply chain strengthening initiatives.

PROGRESS ON EFFECTIVE VACCINE MANAGEMENT

The deployment of the UNICEF Supply Chain Maturity Model allowed a comprehensive review of 13 critical operational and technical supply chain functions. The evidence gathered was instrumental to determining country readiness levels and management capacity to achieve an equitable,

fast, and efficient rollout of all health products, including COVID-19 vaccines.

Progress on effective vaccine management, 2015–2021



Solar power and other technologies were harnessed to ensure vaccines maintain their full efficacy from source to child.



Harnessing solar power for the cold chain in South Sudan



Reaching the last mile using solar power in Peru

To accelerate equity improvements for the most disadvantaged children and to support the effective delivery of health services, health-sector supply chain strategies and plans must be strengthened. In 2021, 53 countries continued implementing a national health-sector supply chain strategy. UNICEF country offices supported the implementation of these strategies/plans in 42 countries.

Working with partners, UNICEF established, maintained, and improved the cold chain for vaccines and other essential medical supplies and supported the rebuilding of health teams torn apart by conflict. UNICEF supported the Central African Republic as part of the measles and polio outbreak response; Chad in response to the measles outbreak; the Democratic Republic of Congo as part of the Machakos initiative; Somalia as part of the integrated campaigns and COVID-19 response; South Sudan as part of the protracted response; Sudan as part of the measles outbreak and COVID-19 response; the Syrian Arab Republic as part of Gavi's exceptional support through UNICEF; and Yemen as part of the Gavi, USAID and Gulf countries' funding for solarization and integrated campaigns.

INTRODUCING NEW VACCINES

UNICEF continued to advocate for increased coverage of new and under-utilized vaccines, particularly the pneumococcal conjugate vaccine (PCV) and rotavirus vaccine (RV) against the top two deadly childhood diseases of pneumonia and diarrhoea; human papillomavirus vaccine (HPV) for the elimination of cervical cancer; and the new malaria vaccine against the disease responsible for the third largest number of childhood deaths.

Progress in introducing these new vaccines into national immunization schedules has been severely hampered by COVID-19, financial constraints, and competing priorities such as outbreak responses. With countries focusing on mitigating the impact of COVID-19 and the roll-out of COVID-19 vaccines, the introduction of other new vaccines suffered, with only 16 vaccine introductions reported in 2021, the lowest in the history of new vaccine introduction.

Despite the challenges, the following results were achieved:



An additional two countries introduced HPV vaccine into their national immunization schedules by the end of 2020, taking the total number of countries to 18.



UNICEF has been participating in the pilot implementation for the new malaria vaccine in Ghana, Kenya and Malawi, and is working with partners to establish the global malaria vaccination programme.

SUPPLYING VACCINES FOR THE WORLD'S CHILDREN

UNICEF remains the largest buyer of vaccines globally and uses its unique leveraging power to shape markets, cut costs and increase efficiency for children's rights and improved health. In 2021, the organization procured 2.751 billion vaccine doses, including COVID-19 doses for 123 countries.⁴ Partnerships continue to be essential for the timeliness and reach of vaccine procurement and shipping operations.

On behalf of COVAX, UNICEF is using its unique and long-standing expertise in procurement and logistics

to lead the largest vaccine supply operation in history. UNICEF continued to play a central role in the Access to COVID-19 Tools Accelerator (ACT-A), a global collaboration to accelerate development, production, and equitable access to COVID-19 tests, treatments, and vaccines.

UNICEF worked with manufacturers and partners to procure COVID-19 vaccines, as well as on freight, logistics and storage. UNICEF is leading the procurement and delivery to around 100 countries.



Bhutan provides a beacon of hope with the roll-out of COVID-19 vaccines



UNICEF supports Bolivia's response to COVID-19

⁴ This figure excludes donations.

PUSHING FORWARD TOWARDS A POLIO-FREE WORLD

Huge progress has been made towards the eradication of polio since 1988, when the Global Polio Eradication Initiative (GPEI) began. Within the GPEI partnership, UNICEF has continued leading in vaccine procurement, logistics and management, together with key strategic communication, to build trust and motivate caregivers to vaccinate their children.

COVID-19 has severely impacted efforts to eradicate polio. In 2021, 28 supplementary immunization activities (SIAs) were deferred in 20 countries, leading to an increase in the scale and number of polio outbreaks of circulating vaccine-derived polio virus (cVDPV) and the emergence of wild poliovirus in geographies certified polio-free. Vaccine refusals increased in some countries during SIAs amid confusion over COVID-19 and polio vaccines. Insufficient funding due to diversions to the COVID-19 response and a more challenging environment for fundraising also led to reduced resources.

Outbreaks of cVDPV, a non-wild variant of the polio virus that can emerge in under-immunized communities with poor sanitation and hygiene, are spreading in parts of Africa, Asia, the Middle East and Europe, fueled by low population immunity levels and compounded by delays in detection (surveillance) and response exacerbated by COVID-19. While the polio programme successfully closed seven cVDPV outbreaks, close to 700 children were paralyzed by cVDPV in 2021.



Women continue to play a critical role in polio eradication programmes globally. Female vaccinators are central to building community trust for vaccine acceptance, especially in countries where cultural norms prevent men from entering households.

Polio assets have proven extremely useful in the fight against COVID-19, bolstering public health capacities and helping prepare for long-term recovery and future resilience post-pandemic. The UNICEF polio programme supported the COVID-19 pandemic response in 21 countries in Asia and Africa.



The number of wild poliovirus cases reduced to six: four in Afghanistan, one in Malawi, and one in Pakistan.



Working towards vaccine acceptance, UNICEF launched a digital social listening platform in 30 high-risk polio countries, reaching 50 million people.




Almost 160 million children in 12 countries received the novel oral polio vaccine type 2 vaccination through the Global Polio Eradication Initiative, with UNICEF as a key partner.




UNICEF procured and distributed over 900 million doses of polio vaccine to support routine and supplementary immunization activities in endemic and outbreak countries.




 Polio survivor helps improve polio vaccination coverage in Afghanistan



 Frontline polio workers continue to reach children during the pandemic



 UNICEF procures over 1 billion doses of polio vaccines annually and works with manufacturers around the world to ensure adequate supplies and competitive prices for routine immunization and vaccination campaigns.

LOOKING AHEAD

For a second year, the COVID-19 pandemic has severely affected the delivery and uptake of immunization services globally. Increased investments are needed to ensure that in-country COVAX deliveries do not draw resources away from the Expanded Programme on Immunization.

Zero-dose children and communities must be reached if the world is to have a chance of reversing the current trend in immunization coverage. Moving forward with the new Strategic Plan, UNICEF will renew its focus on zero-dose children, programming in conflict and fragile areas and urban-poor communities, removing gender-related barriers, and integrating immunization services within primary health care and other basic services such as nutrition and WASH where possible. The Immunization Agenda 2030, the Gavi strategic plan and the new Polio Eradication Strategy 2022-2026: Delivering on a Promise provide the best path in ensuring that resources will allow services to be fully restored and expand into zero-dose communities.

The service delivery infrastructure, supply chains, data systems and community engagement for immunization must be optimized and resourced to reach zero-dose



Yesterday our family doctor came and told us that we had to get supplementary polio drops. Now I'm confident that my baby won't get sick; that he's vaccinated, so he's protected.



Mahin Rakhmoni,
Dushanbe resident, Tajikistan

children and close equity gaps. UNICEF will advocate for increased investments in immunization programming in middle-income countries, where an increasing number of zero-dose children are found.

In support of the Access to COVID-19 Tools – Accelerator, UNICEF will maintain its focus on supplying COVID-19 vaccines to countries in need. It will also strengthen vaccine delivery, risk communication, and community engagement whilst renewing its focus on systems-building to ensure a more integrated approach. To scale up equitable delivery of COVID-19 vaccines, UNICEF will continue to support and host the Vaccine Delivery Partnership, which focuses on countries with the lowest vaccine coverage.

Under the new Strategic Plan, UNICEF is emphasizing the centrality of primary health care to accelerate results by expanding immunization services including multi-antigen campaigns to reach all missed children due to interruption of routine immunization services caused by the COVID pandemic, the quality of maternal and newborn care, and the prevention, diagnosis, care and treatment of childhood illnesses. To ensure that no child is left behind, additional investments are urgently needed to enable UNICEF to continue effective support to countries and partners.

ⁱ World Health Organization, Immunization Coverage, 15 July 2021, www.who.int/news-room/fact-sheets/detail/immunization-coverage, accessed 16 May 2022.

ⁱⁱ Equity Reference Group for Immunization, 'Consensus Statement on the Economics of Reaching Zero-Dose Communities with Immunization and Primary Health Care', August 2021, https://irp.cdn-website.com/44236788/files/uploaded/ERG%20Consensus%20Statement%20on%20the%20Costing%20of%20Immunization%20and%20Primary%20Health%20care%20Services_August%202021.pdf, accessed 16 May 2022.

ⁱⁱⁱ United Nations Children's Fund, 'Health in Emergencies and Humanitarian Settings', UNICEF, April 2021, b2315f08-09cf-4a7a-b224-5b9df6403e51.usrfiles.com/ugd/b2315f_d199fbd301243e6a5e53582227c84ea.pdf, accessed 28 February 2022.

^{iv} Afghanistan, Ethiopia, Indonesia, Madagascar, Mozambique, Nepal, Somalia and South Sudan.



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A health worker draws the COVID-19 vaccine to administer the first dose for eligible students between at a school in Chitikona under the Khambesi primary health care centre. A Solar Direct Drive vaccine refrigerator, supplied by UNICEF, was installed at the Khambesi primary health care centre at the Rayagada district of Odisha, India.

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[Link to the full report](#)