HIGHLIGHTS

- With funds from the ACT-A Humanitarian Action for Children (HAC) appeal, UNICEF achieved the following results in 2022:
  - Supported the administration of 2.82 billion doses of COVID-19 vaccines in low- and middle-income countries (LMIC), including in 34 priority countries of the COVID-19 vaccine delivery partnership.
  - Delivered 2.1 million COVID-19 diagnostics tests to countries that are responding to humanitarian situations.
  - Delivered 14.6 million treatment courses of Dexamethasone antiviral medication to seven low- and middle-income countries.
  - Provided ongoing supply and technical support for increased oxygen access, including for the implementation of 123 oxygen plants in 32 countries across seven regions.
  - Shipped US$64.8 million worth of personal protective equipment (PPE) to 44 countries responding to the COVID-19 global health emergency.
  - Supported 133 low- and middle-income countries to rollout risk communication and community engagement (RCCE) and promote trust in COVID-19 tools, including the integration of COVID-19 vaccination with other routine immunization globally.

ACT-A targets for 2022 to be achieved with partners

- **4 billion**
  - Vaccine doses to be delivered via ACT-A partners, including UNICEF

- **988 million**
  - Diagnostic tests to be delivered via ACT-A partners, including UNICEF

- **120 million**
  - Cases of COVID-19 treated with support from ACT-A partners, including UNICEF

- **2.7 million**
  - Health workers protected with PPE with support from ACT-A partners, including UNICEF

UNICEF ACT-A Appeal 2022

- **US$1.27 billion**
- **Received** $929 m
- **Requirement** $1.27b
- **Carry Over** $361 m

Reporting Period: 1 January – 31 December 2022
UNICEF RESPONSE AND FUNDING STATUS

FUNDING OVERVIEW AND PARTNERSHIPS

The UNICEF ACT-A HAC appeal enabled UNICEF, as a lead implementation partner of the ACT-A global collaboration, to support national governments to equitably scale up access to COVID-19 vaccines, tests, treatments, and PPE. The ACT-A HAC appeal presented the agency’s most urgent needs, particularly for humanitarian contexts, and formed a significant part of UNICEF’s 2022 funding requirements as outlined in the investment case “UNICEF’s Role In Accelerating Equitable Access To COVID-19 Tools.” UNICEF revised the ACT-A HAC appeal fundraising targets in June 2022 to include the carry-over of funds in the Vaccine Pillar and realigned the pillar-specific budgets of the appeal in November 2022 to better reflect the changing context and programmatic needs.

As of 31 December 2022, UNICEF had received US$929.4 million against the 2022 ACT-A appeal. The funds available against this appeal totalled US$1,290.4 million, which included US$361.0 million received and carried forward from the 2021 ACT-A HAC appeal, in line with grant end-dates and implementation timelines. The 2022 UNICEF ACT-A HAC appeal includes grants received late in 2022 to support the roll-out of COVID-19 tools and their integration into the delivery of services, and initiatives to strengthen primary health care (PHC) systems, which have end-dates that extend beyond 2022.
UNICEF would like to thank all partners, especially those who provided flexible and timely contributions against this appeal. We acknowledge the flexible funding from the Governments of Norway and the United States, in addition to ongoing, solid support from Gavi, the Vaccine Alliance, and its underlying donors, including governments and the private sector. We also acknowledge significant flexible funding from the Government of Canada for COVID-19 vaccine roll-out in countries supported by the COVID-19 Vaccines Global Access (COVAX), along with similar, multi-year country-earmarked support for COVID-19 vaccine delivery, including PHC strengthening. We acknowledge additional contributions from the German Federal Foreign Office, building on previous substantial investments of flexible funds for COVID-19 vaccine roll-out. In addition, we thank the Government of Japan for cold chain system building support, and the Governments of Iceland and Italy for their contribution of fully flexible funds to scale up the response to COVID-19. We would like to thank all private sector partners including the Zurich Foundation and UNICEF National Committees for their tireless efforts in fundraising for ACT-A.

### Map of countries receiving funds from the ACT-A HAC appeal in 2022

Countries with Humanitarian Response Plans (HRPs) are highlighted in dark blue. Countries that received flexible funding in 2022 are marked with white line overlay.

<table>
<thead>
<tr>
<th>Pillar</th>
<th>2022 HAC requirement (US$) *</th>
<th>Funds received in 2022 (US$)</th>
<th>Funds carried forward from 2021**</th>
<th>Total funds available (US$)</th>
<th>Funding gap (US$)</th>
<th>Funding gap (%) ***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaccine delivery</td>
<td>$913.6 M</td>
<td>$690.3 M</td>
<td>$329.9 M</td>
<td>$1,020.2 M</td>
<td>$0.0 M</td>
<td>0%</td>
</tr>
<tr>
<td>Diagnostics</td>
<td>$33.0 M</td>
<td>$11.9 M</td>
<td>$5.9 M</td>
<td>$17.8 M</td>
<td>$15.2 M</td>
<td>46%</td>
</tr>
<tr>
<td>Therapeutics</td>
<td>$92.0 M</td>
<td>$38.1 M</td>
<td>$2.2 M</td>
<td>$40.3 M</td>
<td>$51.7 M</td>
<td>56%</td>
</tr>
<tr>
<td>Health Systems and Response Connector: PPE</td>
<td>$130.0 M</td>
<td>$77.7 M</td>
<td>$10.2 M</td>
<td>$87.9 M</td>
<td>$42.1 M</td>
<td>32%</td>
</tr>
<tr>
<td>Health Systems and Response Connector: RCCE</td>
<td>$94.0 M</td>
<td>$102.4 M</td>
<td>$12.8 M</td>
<td>$115.2 M</td>
<td>$0.0 M</td>
<td>0%</td>
</tr>
<tr>
<td>Global coordination and technical support</td>
<td>$9.0 M</td>
<td>$9.0 M</td>
<td>$0.0 M</td>
<td>$9.0 M</td>
<td>$0.0 M</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$1,271.6 M</strong></td>
<td><strong>$ 929.4 M</strong></td>
<td><strong>$361.0 M</strong></td>
<td><strong>$1,290.4 M</strong></td>
<td><strong>$109.0 M</strong></td>
<td><strong>8.6%</strong></td>
</tr>
</tbody>
</table>

Note: M = million.
* UNICEF revised the ACT-A HAC appeal in November 2022 to reflect the changing context and programmatic needs, available at [Access to COVID-19 Tools Accelerator (ACT-A) Appeal | UNICEF/](https://www.unicef.org/)

** Carry-over from 2021 was adjusted internally across pillars to reflect the ongoing orientation of fully flexible funding towards emerging needs.

*** As partners have transitioned from an acute, global COVID-19 emergency to strengthening health and community systems, funds received over the course of 2022 for the vaccines and RCCE pillars are also being used for specific PHC strengthening that supports vaccine roll-out and maintains essential services. These costs were not originally budgeted under Vaccine and RCCE pillars of the ACT-A HAC; however, they were considered part of the inter-agency ACT-A budget. In addition, the implementation period for much of the funds received in 2022 extends into 2023, and in some cases through to 2024.
SITUATION OVERVIEW AND HUMANITARIAN NEEDS

As of 1 January 2023, more than 656 million confirmed cases of COVID-19 and over 6.6 million deaths have been reported globally. However, the change in testing strategies across the world (i.e., fewer tests performed, leading to fewer cases detected) has made it difficult to assess status and monitor trends, underestimating the true burden of the pandemic.

![Figure 1: COVID-19 cases reported weekly by WHO Region and global deaths, as of 1 January 2023](image)

The year began with a marked increase in COVID-19 cases. Across the Americas, Africa, the Eastern Mediterranean, South-East Asia, the Western Pacific and Europe, more than 21 million new cases of COVID-19 were reported in the last week of January 2022, representing the highest number of weekly cases recorded since the beginning of the pandemic. Between February and early March 2022, there was a consistent decreasing trend in the number of new COVID-19 cases globally, but in early summer, the rate of global COVID-19 cases and deaths began increasing steadily, peaking again in mid-July 2022. Subsequently, the number of new weekly cases and deaths started to steadily decline, and by the end of December 2022, the rate of new cases and deaths reported globally was stable, with over 3 million new cases and 10,000 deaths reported during the last week of the year.

More than 105,000 SARS-CoV-2 sequences were shared between 2 December 2022 and 2 January 2023, through the Global Initiative on Sharing Avian Influenza Data. The Omicron variant of concern accounted for 98.4 per cent of sequences reported globally in December 2022. There continues to be increased diversity within Omicron and its descendent lineages, with a number under monitoring. As of 16 January 2023, BA.5 continued to be dominant, followed by BA.2 and BA.4 descendent lineages.

Vaccines: Globally, 13.12 billion doses of COVID-19 vaccines were administered (cumulatively) by the end of 2022. Overall, the total share of doses administered in low-income and lower-middle-income countries has increased compared to 2021. Specifically, low-income countries (LICs) showed a modest increase in their share of administered COVID-19 doses, from 1 per cent at the beginning of the year to 2 per cent by the end of 2022. This positive trend was also observed in the 30 countries with HPRs, where the share of doses administered increased from 5.9 per cent at the start of the year to 9 per cent by the end of 2022.

Similarly, of the 34 countries targeted for concerted support by the COVID-19 Vaccine Delivery Partnership (CoVDP), 27 managed to cross the 10 per cent vaccination coverage threshold by the end of 2022, including 18 countries with coverage higher than 20 per cent and nine countries with coverage higher than 30 per cent. Globally, the CoVDP received an increasing number of urgent funding requests from priority countries, from 10 at the end of the first quarter to 55 by the fourth quarter of 2022.
Supply constraints experienced in 2021 were removed in 2022 and many countries ramped up efforts to implement vaccine delivery scale-up and other initiatives to mitigate the impact of low-risk perception and decreased population demand for COVID-19 vaccines.

Despite these achievements, vaccination rates declined across the 133 low- and middle-income countries by the end of 2022 compared to the first quarter, with exceptions in some LICs and CoVDP priority groups. Specifically, several countries, including Afghanistan, Ethiopia, Malawi, Sierra Leone, the Sudan, South Sudan and Somalia reported vaccination rates at the end of the year that were comparable to the beginning of 2022. It is worth noting that these countries implemented extensive vaccination campaigns during the year to increase the number of COVID-19 vaccine doses administered and combat the decrease in population demand.

Declining vaccination is a multi-faceted issue, which can be explained partly by the population’s decreased perception of risk vis-a-vis new COVID-19 variants, such as Omicron, contributing to lower demand for COVID-19 vaccines. In some countries, especially where significant efforts and investments were made during 2021 and where high vaccine coverage levels were achieved at the beginning of 2022, this decline naturally followed a period of high vaccination during which the majority of the population had received their primary COVID-19 dose. In addition, countries experiencing humanitarian emergencies remain among those with the lowest vaccination coverage. Populations needing humanitarian assistance face greater obstacles in getting vaccinated, including challenging programmatic contexts (including lack of security), lack of access to services and assistance, bureaucratic or administrative issues, language barriers, a lack of vaccine information, and competing priorities.

During 2022, many countries shifted from a ‘pull-system’ of reaching un-vaccinated and under-vaccinated target populations to a ‘push system’ with a focus on campaigns and other community-based delivery approaches rather than relying on facility-based delivery. To increase coverage, many countries expanded vaccine eligibility criteria and adopted vaccination delivery strategies that targeted youth and adolescents aged 12 and above. There was also a renewed focus during the year on equitable vaccine coverage within countries, with an emphasis on the most vulnerable and hard-to-reach populations (e.g., the elderly, immunocompromised/those with comorbidities, and populations in humanitarian settings, such as internally displaced persons, migrants and conflict-affected populations).

The stark reality of routine vaccination backsliding across many countries due to the impact of COVID-19 has led to an urgent need to better integrate COVID-19 vaccine delivery with other essential immunization and health services, ensuring the delivery of vaccines in an integrated approach. By the third quarter of 2022, there was a notable uptick in requests from countries to strengthen health systems in the areas of cold chain, waste management, health facility solarization, public financial management, and digital health.

**Diagnostics:** During 2022, equitable access to COVID-19 testing remained a challenge. The testing target set by WHO is one test per 1,000 people per day. High-income countries remained at high levels of testing throughout the year, increasing from a daily average testing rate of 0.6 in Q1 of 2022 – 6 tests per 1,000 people per day – to 1.84 by the end of the year. Unfortunately, the scale of diagnostic testing declined in middle-income countries, with an average daily testing rate of 0.84 and 0.70 in lower- and upper-middle-income countries, respectively, at the beginning 2022; this fell to 0.07 and 0.15, respectively, by the end of the year. The situation was worst in LICs, where the average testing rate decreased from 0.08 at the beginning of 2022 to 0.02 – 0.2 tests per 1,000 people per day – by the end of the year. Africa remained the region with the lowest level of testing among all regions.11

While the beginning of 2022 saw some deterioration in supply lead times for antigen detection, rapid diagnostic tests (Ag RDTs), the situation stabilized by March. For the remainder of 2022, reverse transcription polymerase chain reaction (RT-PCR) and Ag RDTs were both available without constraint and with agile supply lead times.

In 2022, prices for rapid tests under UNICEF procurement ranged from US$1.95 to US$2.40 per test. UNICEF’s Free Carrier-based weighted average price for these tests were further reduced to US$2.15 per test by the end of the year. In 2022, demand for COVID-19 diagnostics concentrated on Ag RDTs, with some manufacturers of manual PCR tests projecting plans to phase out COVID-19 products due to the lack of demand. However, such individual product departures were not seen as a market risk, as the number of qualified suppliers and products in this category remained high. Notably, in the 4th quarter of 2022, following the WHO listing for emergency use, UNICEF established supply arrangements for the first quality-assured Ag-RDT for COVID-19 self-testing with the manufacturer, enabling increased access to COVID-19 diagnostics.
Though the pandemic continued to evolve, there was a growing sense of COVID-19 fatigue during 2022. The exhaustion of health workers and the public, coupled with competing national and local priorities, further reduced the already suppressed demand for COVID-19 diagnostics. Testing rates followed a continued downward trajectory, having declined from a high of 470 million per day in January 2022 to 32 million per day in December 2022. As a result, generating demand for testing and ensuring that affordable tests were accessible remained an integral part of ensuring equitable access to life-saving drugs as supplies became available throughout 2022 (see below).

**Therapeutics:** In 2022, infection with COVID-19 and related illness continued to be a global threat. While treatment of mild-to-moderate cases of COVID-19 has now become more accessible to vulnerable people who need it most, inequities persist in many low- and middle-income countries.

Since March 2022, WHO treatment guidelines have included recommendations for novel oral antivirals for patients with non-severe COVID-19 and who are at the highest risk of hospitalization, in addition to other medicines and oxygen, which are often required for patients with severe or critical COVID-19. When administered early, these medicines can reduce the risk of hospitalization, allow time to resolve symptoms, and reduce mortality.

In 2022, UNICEF established several supply agreements for the procurement of up to 4 million treatment courses of nirmatrelvir/ritonavir, covering 137 countries to date and expanding access to life-saving medicine. With increased availability of novel therapeutics, many low- and middle-income countries focused on stockpiling small quantities of therapeutics to quickly respond if there was a spike in the number of COVID-19 cases while, at the same time, piloting targeted test and treat approaches for high-risk populations.

Scaling up oxygen systems is a key part of increasing access to essential treatment for patients suffering from severe or critical COVID-19. Despite significant investments, including by UNICEF, there remained an underlying gap in oxygen as well as a limited capacity to manage and maintain these systems in many countries during 2022. There were fewer requests for rapid emergency procurement through the year, thus shifting the approach to larger-scale and longer-term solutions, such as market shaping efforts for liquid medical oxygen and the installation of oxygen-generating plants.

The significant influx of oxygen equipment since the onset of the COVID-19 pandemic raised concerns about sustainability. There continues to be a need for ongoing investment, national ownership, and coordination covering both basic and surge needs, with equitable access to all patients requiring oxygen. This includes strategic and costed plans for oxygen scale-up in relevant national and subnational budgets, a greater number of trained engineers and technicians to maintain and repair oxygen and other biomedical equipment, and the integration of oxygen in patient care protocols.

Towards the end of 2022, there was a gradual shift in the pandemic response from an emergency approach to a longer-term COVID-19 management strategy. Oxygen is an essential treatment for many conditions beyond COVID-19 and the ACT-A HAC investments have helped to close at least part of a pre-existing gap, which will impact the quality of health services and allow a faster response in future outbreaks.

**Health Systems and Response Connector**

**PPE:** PPE is one of the most cost-effective health interventions for protecting the lives of health workers and significantly reducing the risk of infection, making it a critical tool both at the onset and throughout the course of a health emergency. The COVID-19 pandemic revealed severe constraints in the PPE ecosystem, including acute PPE shortages, steep price shocks, and deep gaps in access to high-quality supplies.

The global demand for PPE remained high in 2022. Given that many countries were far from meeting global targets on vaccination coverage, testing rates, and access to treatments, PPE remained a vital tool in protecting front-line health care workers as they worked to vaccinate, test, and treat patients against COVID-19. During the year, there was an observed increase in demand owing to natural baseline growth and potential enduring habits in PPE use among workers in non-health care settings and the general public. In addition, co-occurrences of other infectious disease outbreaks (such as Ebola) have increased needs for PPE in impacted countries.
Risk Communication and Community Engagement (RCCE): RCCE is critical to ensuring the COVID-19 response is designed, implemented, and tailored to the local context.

At the beginning of 2022, there was a growing sense of pandemic fatigue, coupled with the easing of pandemic-related restrictions that led to a declining risk perception of COVID-19. In addition, humanitarian crises such as disease outbreaks, natural disasters, conflicts, and economic shocks throughout the year severely impacted the implementation of health services and oriented national agendas and priorities away from the COVID-19 response. Multiple humanitarian crises particularly affected the regions of Eastern and Southern Africa, the Middle East, and North Africa, exacerbating these issues.

Despite these challenges, many countries were able to re-position RCCE as an entry point to support primary preventive care and promote routine immunization to address pressing issues, such as the zero-dose population (those who have never received a single vaccine) and low COVID-19 vaccine uptake in priority communities. Vaccination willingness also remained high across most countries with available data – a global average of more than 91 per cent by the end of the year.14

RCCE continued to be used to address key barriers to COVID-19 vaccination, such as limited or lack of information on where to access vaccines and continued concerns over the safety and efficacy of vaccines among certain groups (women, young people, marginalized groups and religious groups in some countries). New approaches, such as the use of behavioural insights, behavioural design, and human-centred design, helped increasingly engage community members as agents of change to address vaccine hesitancy and promote vaccination, both for COVID-19 and routine immunization.

Key challenges affecting the RCCE response in 2022 included campaign fatigue, lack of human resources, operational issues, and vaccination indifference due to myths and misinformation. In addition, low uptake of the COVID-19 vaccine was also impacted by earlier supply side challenges and is not only affected by the matter of vaccine hesitancy. As a result, expectations for interventions default to trying to change the people / users, instead of involving these people better in participatory processes to better design and change the service.

HUMANITARIAN STRATEGY, LEADERSHIP AND COORDINATION

Humanitarian strategy: Throughout 2022, UNICEF implemented a comprehensive response strategy to help end the acute phase of the global COVID-19 pandemic, while working to build resilient systems to maintain essential health services and prepare for future pandemics and shocks.

With support from the ACT-A HAC, UNICEF worked with governments and partners to support in-country delivery of COVID-19 vaccines in 2022, with a focus on interventions that strengthened PHC systems, supported the delivery of diagnostic tests and related technical assistance, strengthened oxygen systems and the delivery of novel and repurposed therapeutics, provided front-line workers with PPE and supplies to work safely, and supported RCCE to promote the uptake of COVID-19 vaccines, tests and treatments.

Into 2023, as global partners and countries continue to transition towards integration and strengthening of PHC to be more resilient to future challenges, UNICEF is making strategic adjustments to move away from pillar-specific approaches towards systems-building. This includes maintaining essential health care services at facility- and community-levels; promoting integrated and bundled service delivery (including to boost vaccine uptake, testing and care-seeking); building and maintaining sustainable oxygen systems for broader maternal, newborn and child survival; engaging communities through multiple platforms for RCCE; strengthening data and digital health solutions; reinforcing infection, prevention and control (IPC) and water, sanitation and hygiene (WASH) in PHC settings; and ensuring investments have long-term impacts on health outcomes beyond COVID-19. UNICEF remains engaged with ACT-A partners as we transition these global efforts, drawing on the lessons learned during the pandemic response to foster stronger public health emergency preparedness and response.

Coordination and leadership: In 2022, UNICEF continued to coordinate with global partners, including under the Vaccine and Health Systems and Response Connector Pillars of the Access to COVID-19 Tools Accelerator.
UNICEF, together with WHO and the ACT-A partnership, supported the ‘Ending the COVID-19 pandemic through equitable access to vaccines, tests and treatments’ high-level event during the seventy-seventh session of the United Nations General Assembly in 2022. In bringing together different stakeholders there was a repeated call to action to mobilize additional political support and effectively end the pandemic by accelerating priority actions and improving vaccination coverage strategies everywhere.

**Vaccines:** UNICEF, as the lead implementing agency of the COVAX Facility and co-convenor of the ACT-A Vaccine Pillar, continued to lead the global procurement and supply of COVID-19 vaccines to low and middle-income countries, in collaboration with the Pan American Health Organization.

Through the ACT-A HAC, UNICEF supported in-country delivery costs associated with turning vaccines shipped by COVAX into vaccinations. UNICEF also provided ongoing support to the CoVDP, a partnership that provides urgent, time-bound, and specialized support to address financial, political, and operational bottlenecks while playing a coordinating and convening role in COVID-19 vaccine delivery.

ACT-A HAC funding in 2022 allowed UNICEF to operationalize CoVDP at the global, regional, and country levels to manage its operations and to second staff, including the deputy responsible for demand planning and funding. The Partnership’s approach to support in-country delivery relied on the ‘one team, one plan, one budget’ strategy, with ‘one support team’ at the regional and global levels. To engage countries, UNICEF deployed several ‘desk officers’ who provided targeted country support and coordinated efforts across partners.

Over 20 field missions and country visits were organized in 2022 by the partnership. For example, in the United Republic of Tanzania the partnership advocated with authorities and worked with the Government and national partners to support an increase in COVID-19 vaccination coverage that reached more than 41 per cent of the population by the end of November 2022. By the end of the year, the CoVDP had facilitated the disbursement of over US$128 million in quick-impact funding. Approximately US$64.5 million went to supporting 18 campaigns that contributed to the vaccination of an estimated 63 million people. A detailed review of the work of the Partnership has been published and highlights the number of countries that increased coverage rates during 2022.

While many of the countries supported by CoVDP include those with significant humanitarian populations, some mechanisms that were put in place have not functioned as expected, such as the Humanitarian Buffer set up by the COVAX Facility in March 2021 to address vaccine access in these settings. In 2022, only a few applications to the Humanitarian Buffer were received, and on 31 December 2022, the Humanitarian Buffer was formally closed down. In February 2023, a global convening will take place in Nairobi to bring humanitarian actors together to examine these lessons and chart the way towards a better response in the next pandemic.

In November 2022, UNICEF organized a session on COVID-19 vaccine costs and financing at the Health System Research Conference in Bogota, Colombia. The session provided an opportunity for policymakers, programme planners and health systems researchers to review existing evidence and contribute to the discourse on financing COVID-19 vaccine delivery and other essential immunization services.

Beginning in 2021, UNICEF has been leading the development of the COVID-19 Vaccine Financial Monitoring (C19VFM) database, which was continuously updated during 2022. C19VFM is actively being used for assessing available funds in countries by CoVDP and by donors when determining fund allocations. Moreover, it is used to estimate country-specific funding gaps when combined with Harvard/UNICEF delivery cost modelling estimates.

In 2022, UNICEF continued to co-chair the Funder’s Forum, bringing together partners to share information on COVID-19 vaccination policy, programme and financing strategies, thus enabling the continuous engagement of donors. In preparation for integrating COVID-19 vaccination into PHC and routine immunization services, UNICEF co-led with WHO, the development and dissemination of operational guidance. Integration will remain a major priority in 2023 requiring dedicated resources and technical support to countries.

**Diagnostics:** UNICEF’s ACT-A Diagnostics Pillar strategy was underpinned by support to low- and middle-income countries to scale up equitable access to COVID-19 diagnostics through the procurement of COVID-19 tests and provision of technical assistance on diagnostic testing.
UNICEF led the ACT-A Diagnostics Country Support Working Group, in coordination with WHO and the Global Alliance for Diagnostics, which seeks to ensure equitable access to reliable diagnosis around the world. UNICEF also hosted the Working Group Knowledge Management Hub, which aims to increase visibility, transparency, coordination and collaboration among the Working Group partners. In addition, UNICEF led the Working Group Task Force on Advocacy, Communications and Community Engagement, which works to address bottlenecks in the adoption of COVID-19 diagnostics.

UNICEF was also represented in three other ACT-A Diagnostics Working Groups on (1) Research and Development and Digital Tools; (2) Country Support; and (3) Market Readiness and Supply. As part of the Working Group on Research and Development, UNICEF contributed technical oversight to new requests for proposals on self-testing (using Ag-RDT) and multipathogen molecular tests (using nucleic acid testing assays). In addition, UNICEF contributed to WHO policies on the use of Ag RDTs for COVID-19 self-testing.

To address the low demand for testing during 2022, UNICEF led the development of a global advocacy strategy using human-centred design based on a two-pronged approach: (1) a top-down strategy targeting national policymakers to increase access to testing; and (2) a bottom-up strategy to increase demand for testing at the community level.

UNICEF will continue to explore strategies to increase demand for testing, including the roll-out of a test and treat approach, decentralized access to testing, and prioritization of hard-to-reach populations.

**Therapeutics:** Within the ACT-A Therapeutics Pillar, UNICEF continued to coordinate with other partners to promote testing and treatment for COVID-19 and to ensure that these were secured and made available to countries in a consistent and transparent manner, while creating a clear and unified position when approaching industry partners. UNICEF also implemented a comprehensive oxygen strategy aimed at providing end-to-end support to governments for oxygen systems strengthening across four pillars: planning, procurement, product delivery and programmatic use. Figure 2 is an example of the strategic framework used to guide programmes in their oxygen systems scaling.

![STRENGTHENING THE OXYGEN ECOSYSTEM](https://example.com/strengthening-oxygen-ecosystem.png)

**Figure 2:** UNICEF's oxygen systems scaling framework

UNICEF support funded by the ACT-A HAC was often complementary to resources provided to governments via the UNICEF Supplies Financing Facility (SFF), a pooled fund that supports low- and middle-income countries to access COVID-19 health supplies. Funds raised through the SFF helped procure oxygen equipment, especially oxygen-generating plants, whereas HAC funding was instrumental in ensuring the sustainable implementation of this equipment as well as broader efforts to strengthen oxygen systems and build critical capacity for oxygen equipment maintenance, operations, clinical care, and oxygen therapy.
Throughout 2022, UNICEF actively engaged in the ACT-A Oxygen Emergency Task Force chaired by Unitaid, which is part of the broader Therapeutics Pillar, as well as an oxygen donor coalition hosted by the United States Agency for International Development (USAID) to better coordinate activities. Partners worked together to define key performance indicators for measuring the reach and impact of oxygen investments through the ACT-A response and to plan the transition from ACT-A towards sustained coordination, collaboration and country support for oxygen systems strengthening.

As part of these transition activities, UNICEF supported Unitaid with stakeholder discussions to inform a Global Oxygen Alliance, to be launched in 2023 at the World Health Assembly. UNICEF also joined the advisory group of the Lancet Global Health Commission15 on medical oxygen security that aims to address gaps in oxygen research and accelerate impact towards strong oxygen systems and reduced mortality. UNICEF increased its focus and attention towards supporting countries in developing clear roadmaps and strategies for oxygen to guide investments and strengthen and sustain systems for routine care as well as public health emergency preparedness and response.

At the 2nd International Conference on Public Health in Africa in December 2022, UNICEF organized a side event16 on behalf of the Oxygen Task Force members and with the Rwanda Ministry of Health, bringing together representatives from Ministries of Health, United Nations agencies, development partners, private sector, donors and academia to discuss learnings and priorities moving forward to scale and sustain oxygen systems in Africa. In addition, UNICEF, Unitaid and FHI360 convened key actors to identify priorities and solutions to challenges in oxygen scale-up. UNICEF also met with government and private sector representatives to explore partnerships to support the continued operation of complex oxygen equipment and distribution systems.

Health Systems and Response Connector: UNICEF, together with the Global Fund for AIDS, Tuberculosis and Malaria, the World Bank and WHO, co-convened the ACT-A Health Systems and Response Connector. UNICEF’s key area of focus within the Connector was to help remove critical bottlenecks to support more equitable delivery of COVID-19 tools. This included ramping up efforts to engage communities to build trust in health systems and promote the uptake of COVID-19 tools. It also included providing support to maintain essential health services, with a special focus on high-risk population groups, and ensuring that health workers were equipped with high-quality PPE and IPC, including adequate WASH in health care facilities.

UNICEF is one of the key procurement agencies for PPE for low- and middle-income countries, supporting their access to PPE to ensure the protection of front-line health care workers, including community workers.

UNICEF co-led the global RCCE Subgroup that works to include the most vulnerable populations – such as migrants, refugees, people with disabilities, and host communities – in RCCE efforts, globally and at the country level. UNICEF also co-led the RCCE Collective Service that leverages active support from the Global Outbreak Alert and Response Network and key stakeholders from the public health and humanitarian sectors. It aims to build the capacity of governments and partners to prioritize, structure and coordinate their work at all levels, ensuring a lasting impact and improving both the quality and the consistency of RCCE for long-term systems strengthening.

UNICEF also co-led the global RCCE and Youth Engagement Subgroup to promote inclusion of the priorities and perspectives of youth organizations in the COVID-19 response. UNICEF co-chaired the global Vaccine Demand Hub (a global collective) and the Vaccine Confidence and Uptake Task Team. UNICEF also led the digital workstream of the Demand Hub, spearheading stakeholders’ work on social listening.

In 2023, UNICEF will continue to support countries with access to PPE supplies and integrating COVID-19 vaccine demand and wider RCCE work into routine immunization, broader PHC and national action plans.

**PROGRAMMATIC RESPONSE: RESULTS AND CHALLENGES**

**Overall response:** During 2022, ACT-A HAC funding enabled UNICEF to make great strides in increasing vaccination against COVID-19, promoting diagnostic testing and treatment, scaling oxygen systems, delivering novel and repurposed therapeutics, providing front-line workers with PPE, and promoting the uptake of COVID-19 tools through RCCE. Key activities will be extended into 2023 in line with implementation timelines and grant end-dates linked with...
the ACT-A HAC to further capitalize on the gains made in 2022 and integrate services and systems to sustainably move the agenda forward.

**Vaccines:** UNICEF prioritized vaccine delivery in LICs and LMICs, countries in humanitarian settings, and in CoVDP-supported countries, helping to turn vaccines into vaccinations.

In 2022, UNICEF contributed to the administration of 2.82 billion COVID-19 vaccine doses in 133 low- and middle-income countries, in partnership with other global and national actors who were simultaneously investing resources for COVID-19 vaccine delivery in these countries. Of note, the number of COVID-19 doses administered increased by more than 200 per cent in LICs and by 100 per cent in HRP countries by the end of 2022.

The share of the population in low- and middle-income countries supported by UNICEF’s ACT-A HAC grew from 32.7 per cent to 55.9 per cent by the end of 2022, reflecting the significant investment made in increasing vaccine delivery activities in these countries. UNICEF country offices continued to provide technical support on various COVID-19 planning, coordination and supervision activities throughout 2022. Some examples of UNICEF’s support include:¹

- Integrated COVID-19 vaccination campaigns in 45 countries with approximately 90 million COVID-19 vaccine doses co-delivered with other essential immunization/health services.
- Strengthened cold chain and vaccine transportation in 83 countries, with approximately 17,000 procured/installed cold storage equipment and approximately 980,000 cold boxes and vaccine carriers distributed.
- Strengthened Logistic Information Management Systems to track COVID-19 vaccines, safe injection equipment and PPE in 62 countries to improve data collection, reporting of COVID-19 vaccine stock consumption and expiry data in 87 countries.
- Digitalization of Logistic/Waste Information Management Systems in 45 countries, with more than 100,000 staff trained on effective logistics/waste management functions in 75 countries.
- Improved COVID-19 vaccination waste management, including setup, improvement, or maintenance of 4,126 waste treatment and disposal facilities in 23 countries.
- 300,000 COVID-19 vaccinators and support staff in 85 countries trained on various topics related to COVID-19 vaccine delivery (e.g., IPC, adverse effects following immunization, identification of missed populations, interpersonal communication for immunization, etc.).
- 590,000 vaccinators and support staff financially supported through wages/salaries/incentives in 67 countries.
- Technical/financial and other in-kind support to 57 countries where UNICEF strengthened health information systems, through the monitoring of COVID-19 uptake and availability of real-time disaggregated data.

Within CoVDP, UNICEF has been recognized for its ability to review, approve and then disburse funds quickly from the global level to countries, often within days and sometimes in less than 24 hours. An important indicator tracked by the Gavi Vaccine Alliance Board for CoVDP is the timeline during which funds are disbursed to support urgent requests from countries. UNICEF consistently performed better than the target rate of response (10 working days), usually responding to funding requests in an average of five days throughout 2022. Of the total programmable funds disbursed to countries, US$267.4 million were allocated to 33 CoVDP priority countries, including emergency funds to 15 countries.¹⁷ To align with UNICEF’s commitment to support countries in humanitarian settings, US$256.1 million was also channelled to HRP countries through UNICEF country offices.

UNICEF developed and disseminated a ‘One Budget’ guidance note with a set of operational principles for CoVDP countries and provided technical assistance to improve national capacity in developing and strengthening one budget drafts in eight countries. While the results were mixed, with different challenges faced in the various countries, the development of these budgets was influential in understanding the financial status of resources for different activities and cost items and identifying budget gaps to fully operationalize COVID-19 scale-up plans. This effort was essential to ensure coordination, prevent duplication, and optimize the allocation of new resources.

A report on COVID-19 vaccine delivery costs was published in January 2022 using the Harvard/UNICEF delivery cost modelling, entitled “Costs and Predicted Financing Gap to Deliver COVID-19 Vaccines in 133 Low- and Middle-Income Countries”. The estimates and reports have been influential sources of evidence for planning, fundraising and global

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¹ Results are based on reported data from UNICEF country offices and are still undergoing review and finalization
resource allocation. In mid-2022, UNICEF updated the cost model with new estimates on delivery costs and funding gaps based on country targets, projected absorptive capacities using historical vaccination rates for countries and new WHO global targets. The new estimates have been disseminated at different fora, including the COVID-19 Vaccine Delivery Funders’ Forum, and have been provided as inputs to guide Gavi’s COVID-19 vaccination investment strategy for 2024–2025.

Through its headquarters and seven regional offices, UNICEF also provided technical assistance on the systematic tracking of COVID-19 vaccine supplies and end-user monitoring. This enabled countries to identify bottlenecks and take corrective action on supply-related challenges specific to COVID-19 vaccine deployment. UNICEF guidance helped strengthen the cold chain in many countries through improved procurement, equipment installation, and logistics management. UNICEF also assisted countries on effective vaccine management, data reporting and the use of COVAX forecasting for planning and other supply needs.

In the Middle East and North Africa, for example, UNICEF initiated a COVID-19 vaccine demand forecasting and planning process (for priority countries, planned to launch in 2023), resulting in the submission of country plans that captured their monthly vaccine dose amounts. In East Asia and the Pacific, UNICEF’s Supply Division provided guidance to countries on electronic logistics management systems and helped determine optimum digital platforms.

**Malawi: New cold chain systems save COVID-19 vaccines**

"This is what a vial of Covishield looks like," Gift Tembo says, opening the fridge door to expose the range of COVID-19 vaccines. Tembo is a cold chain technician at Malawi’s Nkhotakota District Hospital. "Previously, we lost a lot of vaccines because we had inadequate space, so we used to store all vaccines in one place. With the heat here in Nkhotakota, some vaccines used to get damaged because they were all piled up," he adds.

Thanks to funding from the Government of Japan, UNICEF assisted the Ministry of Health in installing 273 newly supplied items of cold chain equipment in the country, such as fridges and cooler boxes, used to safely deliver COVID-19 and polio vaccines to remote health facilities and communities. By investing in cold chain systems, health workers are equipped to go the last mile and deliver life-saving vaccines to every child.

Anne Mwale, a health surveillance assistant at Nkhotakota district hospital, says the cold chain reinforcement has ensured that there are adequate vaccines whenever people need them. "Previously, we only used to keep limited vaccine stocks because we did not have the storage facilities. The additional fridges have ensured that we always have vaccine supplies so that people are not turned away when they want to get vaccinated," she adds.

Mumba notes that some of the fridges are solar-powered, making them ideal for some of the remotest areas with no electricity supply. "All the facilities in the district have fridges, which is very good because we don’t have to send parents back home due to lack of vaccines," she adds.
Indonesia: Supporting effective vaccine management

The Aru Islands in Indonesia’s eastern Maluku Province are home to nearly a hundred low-lying islands, where much of the commuting is done on foot or by boat. It has already been a long day for Immunization Coordinator, Yulianus Yanto Tivan Yanto, who left his home at 5:00 a.m. to collect vaccines for the Benjina Health Centre. Yanto and his team oversee several surrounding islands, spending hours every day travelling to vaccinate people against COVID-19 and other vaccine-preventable diseases.

With support from Gavi, the Vaccine Alliance, the Governments of Australia, New Zealand, Korea International Cooperation Agency and others, UNICEF provided training and technical support on effective vaccine management for health workers and staff in Maluku and other provinces to help health workers like Yanto with microplanning to deliver immunization services in remote areas.

With routine immunization coverage lower than the central government’s target, any disruptions to vaccination services in Maluku could have severe consequences for its communities. To improve vaccine uptake, door-to-door immunization services were carried out and vaccination posts were established at public spaces such as mosques, churches, and schools. By early May 2022, 1.4 million people (74 per cent of the target) had received their first dose of COVID-19.

Tunisia: Keeping vaccines safe and strengthening the cold chain

Doctor Alia Hajjem has not had a moment to rest since the onset of COVID-19. But she has no complaints. Instead, she is thankful for the massive overhaul of cold chain equipment that has been undertaken to keep all vaccines, including against COVID-19, safe since 2021.

“We have been using this refrigerator since UNICEF brought the first COVID-19 vaccines to Tunisia last year,” she said. “Even in the extremely hot summer months, the fridge kept going and kept the five types of vaccines we are using cold.”

A UNICEF-supported study showed that the cold chain for routine immunization in Tunisia was weak even before the COVID-19 pandemic hit. It was estimated that with the arrival of large quantities of COVID-19 vaccines, the cold chain could risk becoming overloaded, jeopardizing the essential routine vaccination system. With support from donors, including the Gavi Alliance, Government of Japan, and USAID, UNICEF has helped improve cold chain infrastructure to ensure vaccines remain potent during transport and when stored across Tunisia. This has lowered response costs, reduced risk of vaccine damage, and improved access to life-saving vaccines among children living in rural areas.
Nicaragua: Strengthening national cold chain capacity and scale-up of COVID-19 immunization

With the arrival of the first COVID-19 vaccine doses in Nicaragua through the COVAX mechanism, a new barrier arose for health personnel: the poor storage capacity of the country’s cold chain. Through COVAX, 4.8 million COVID-19 vaccines entered the country in 2021, which required an expansion of cold chain equipment to keep them at adequate temperature. With support from the Government of Japan, UNICEF was able to help deliver supplies to strengthen the cold chain and guarantee optimal conditions for all vaccines. Donated equipment was distributed among the 19 local Comprehensive Health Care Systems, which manage 153 health units, benefiting approximately 1.2 million people.

Dr. Cristhian Toledo, National Director of Health Surveillance in the Ministry of Health, commented that strengthening the cold chain has been essential to ensuring that more than 80 per cent of the population completed their set of vaccines against COVID-19.

Nurse Bertha said that the training she received on the new equipment to maintain vaccines, and the experience she quickly acquired in the field with COVID-19 patients, helped her gain confidence and continue her humanitarian work.

Diagnostics: In 2022, UNICEF supported the delivery of 2.1 million COVID-19 diagnostic tests (1.9 million rapid tests and almost 200,000 PCR tests). The largest financial allocations went to Lebanon, Pacific Island countries, Myanmar and Burkina Faso. By the end of the year, UNICEF’s Free Carrier-based weighted average price for these tests was further reduced to US$2.15 per test.

The provision of diagnostic tests was constrained by the level of awareness of the value of the diagnostics, pandemic fatigue, limited prioritization of testing as part of pandemic response particularly after vaccines became available, weak health systems, and other challenges that have led to a drop in global demand for testing, even in high-income countries. As outlined in the situation overview, most low- and middle-income countries never reached the testing target set by WHO for an adequate response (1 test per 1,000 people per day). As a result, UNICEF’s initial target for diagnostic tests procured and delivered was not met, and programmatic strategies shifted accordingly.

UNICEF also provided technical assistance to support the procurement and distribution of COVID-19 diagnostics in seven HRP countries (Burkina Faso, Lebanon, Mali, Myanmar, the Niger, Nigeria, and the Sudan). This has contributed to the scale-up of COVID-19 rapid testing in PHC programmes linked with health management information systems, which supported rapid testing at the community level.
In-depth discussions were held with several countries in Africa and Southeast Asia to understand the testing challenges faced by public health systems. This was an important step in identifying and planning for the technical and financial support needs of these countries. UNICEF led the development of an advocacy and communications framework, with advocacy messages and communication assets to address the barriers identified and target key stakeholders to increase the uptake of testing in countries.

Specifically, the Country Support Working Group, led by UNICEF, reviewed more than 300 national advocacy projects to scale up COVID-19 testing and support the roll-out of test and treat approaches. A total of 21 national advocacy strategies in 19 low- and middle-income countries were approved for ACT-A HAC funding through FIND and Unitaid to support the scale-up of test and treat approaches. UNICEF is continuing this work through the Country Support Working Group, including by facilitating knowledge exchanges through communities of practice and country-specific deep dives. These 21 organizations are also being utilized to harness synergies with other ongoing work, for example the diagnostics advocacy dissemination and the development of the global advocacy strategy.

During the year, UNICEF also worked to integrate diagnostics into existing social listening mechanisms and behavioural surveys (in collaboration with the RCCE stream) to monitor conversations, track rumours and identify trends and influencers related to COVID-19 diagnostics. This information helped strengthen advocacy and communication aimed at counteracting barriers to the adoption and scale-up of COVID-19 diagnostics in low- and middle-income countries.

Despite availability of funds, and affordable and reliable diagnostic tests, insufficient awareness of the value of diagnostics will continue to hinder public health emergency preparedness and response going forward. To try and address these challenges, UNICEF is developing a global advocacy strategy and associated toolkit using a human-centered design approach aimed at two key populations: communities as beneficiaries of diagnostic services to generate demand for testing, and government decision makers to prioritize diagnostics as an essential health systems component, particularly for pandemic preparedness and response.

In 2023, UNICEF will continue to maintain global supply arrangements for a wide range of quality-assured COVID-19 diagnostics, encompassing rapid tests for professional and self-use as well as PCR tests for automated and manual use, along with matching extraction kits and sample collection kits.

Work initiated in 2022 will continue with funding from ACT-A HAC grants that have been extended into 2023. Specifically, UNICEF will finalize and roll-out the global advocacy strategy, toolkit, and related communication assets. UNICEF will also launch other advocacy material aimed at increasing knowledge around the importance of testing, including a video of an operational research project integrating COVID-19 into malaria testing in Suriname.

**Lebanon: Integrating COVID-19 testing for long-term sustainability in Sarepta**

The Lebanese health care system is dominated by the private sector, with 80 per cent of hospitals and 67 per cent of PHC centres privately owned or run by NGOs or other stakeholders. COVID-19 diagnostic testing is integrated into services provided at the hospital level both in public and private sectors, in addition to private laboratories/diagnostic centres and rapid testing available at the pharmacy level. In the current economic crisis that Lebanon is facing, the demand for health care services has shifted to the more affordable public sector both by host and refugee communities.

In 2022, UNICEF Lebanon received US$1.2 million worth of COVID-19 diagnostic supplies through the ACT-A HAC from the Government of the United States, to initiate the integration of COVID-19 rapid testing in communities, ensuring availability in refugee and migrant settings.
Since the beginning of the pandemic, there have been challenges around testing at the community level and through PHC, which were only exacerbated with the onset of the economic crisis. People could no longer afford the transportation cost of reaching hospitals and laboratories, let alone the cost of the test itself. The availability of diagnostic supplies from UNICEF enabled COVID-19 testing in health centres that catered to both the local and refugee population. It has also encouraged PHC centres to conduct outreach activities and streamline COVID-19 testing in existing home-based service delivery initiatives.

Similarly, the provision of PCR tests and related supplies in schools and hospitals ensured sustainability around testing and was critical for the detection of any potential resurgence of the disease. “I didn’t have the money to do the test when I felt some COVID-19 symptoms. Now, after I did it for free in Sarepta PHC, I am feeling much better as it came with negative result; also, it took only 10 seconds!!” says Yousef Khaliefe, beneficiary at Sarepta PHC clinic.

Myanmar: Medical teams helping to change lives in the Hlaing Thar Yar township

When manual labourer Ma Wai discovered she was pregnant, her husband became the only breadwinner, which left little money to spend on essential health care. After giving birth to a healthy baby boy, Ma Wai fell ill with COVID-19 like symptoms.

“I was worried about COVID-19 infection and the transmission to my baby. And I was afraid that transport and testing services would cost too much, so I dared not to go to the clinics,” she explained.

But this all changed when a community worker encouraged her to attend a mobile medical clinic. Supported by UNICEF, the clinic offers free COVID-19 testing and treatment to people living in Yangon’s poorer suburbs.

Ma Wai, who tested negative for COVID-19, was treated by the clinic’s doctors for a respiratory tract infection. She now hopes the mobile health team will provide more high-quality health care services to vulnerable communities.

“Free health care services, including COVID-19 testing, are not easily accessible for us. I think it would be great if the health team can visit people like me, especially as these days so many of us are struggling to live,” she said.

Therapeutics: In 2022, UNICEF supported the implementation and operation of complex oxygen equipment, including oxygen plants, technical assistance to national stakeholders, and procurement related to scale-up in 36 countries across seven regions. ACT-A HAC funding was also used to sustain a technical team of experts across UNICEF headquarters, regional and country offices, supporting UNICEF and governments in at least 40 countries across all aspects of oxygen systems scaling (see Figure 2).

During 2022, ACT-HAC funding allowed UNICEF to provide strategic support to countries, including those that had received complementary funds via the ACT-A Supplies Financing Facility for procurement of oxygen equipment, especially oxygen-generating plants, which require additional and often complex efforts to be installed, maintained and operated properly.

For example, during 2022, UNICEF prioritized capacity building within countries to capitalize on investments made in the previous year to ensure sustainability. Through UNICEF’s long-term agreements for engineering services, HAC funds allowed countries including, Afghanistan, Burkina Faso, Burundi, the Niger, Nigeria and Uganda, to access these services and build a workforce of engineers and technicians to maintain oxygen systems. These services also included technical assessments and repair of oxygen systems and equipment and helped identify personnel training needs.
Another major effort during the year was UNICEF’s support to the installation of oxygen-generating plants through the innovative ‘Plant in a Box’. Initiated in 2021, these pressure swing absorption oxygen plants, primarily funded through the Supply Financing Facility, have everything needed to produce large volumes of medical grade oxygen, including accessories supplied in the right quantities, installation of equipment, integrated two-year maintenance services and staff training.

The flexibility of ACT-A HAC support enabled UNICEF’s global team of experts to work closely with countries throughout the year to select the correct plant size for their needs (often using the UNICEF oxygen system planning tool), ensure the receiving facilities were prepared to install and then operate the plants, as well as distribute and deliver oxygen to patients. Efforts funded by HAC also included construction of plant rooms, procurement of power generators, installation of solar power, and piping systems for oxygen distribution.

These UNICEF-supported plants, once fully operational and assuming they will run about 20 hours/day, have the capacity to produce over 58 million litres of oxygen per day and can help save the lives of more than 300,000 newborns and children every year. The benefits of investment in oxygen go far beyond COVID-19 case management. Oxygen has helped improve the quality of maternity inpatient care as well as in and outpatient care for children with malaria, pneumonia and other life-threatening conditions. It is also critical for neonatal intensive care units, surgical care (such as caesarean sections), and other major operations.

Oxygen concentrators remained an important element of oxygen systems, particularly in PHC settings. In 2022, ACT-A HAC funds helped fill any gaps in procurement not covered by UNICEF’s ACT-A Supplies Financing Facility, including 853 oxygen concentrators that were delivered to eight countries with HRP. These concentrators have a production capacity of roughly 12 million litres/day. If fully allocated and functional, they can provide oxygen to an estimated 43,000 patients with severe COVID-19 every year.

Many countries have increasingly recognized the need for comprehensive oxygen strategies; thus, UNICEF supported the development of strategies in more than 25 countries predominantly in the regions of Eastern and Southern Africa, West and Central Africa, and the Middle East and North Africa. UNICEF’s Oxygen System Planning Tool was instrumental in using facility-level data to calculate oxygen needs. In 2022, the tool was used in more than 20 countries across four regions, complemented by UNICEF-led webinars as well as introductory and in-depth training sessions, informing both national roadmaps and strategies, in addition to regional- or facility-based planning and costing of oxygen sources.

While the ACT-A HAC funding had immediate impact as countries were facing COVID-19 surges, many HAC-funded oxygen activities will continue into 2023. UNICEF will continue its efforts to ensure access to quality oxygen products and related services through ongoing tenders for pressure swing absorption plants, oxygen concentrators, consumables and accessories. In addition, UNICEF is continuously innovating its product improvement through lower energy consumption to better suit low resource settings.

ACT-A HAC funding was also used to procure and deliver 14.6 million Dexamethasone tablets to seven low- and middle-income countries in 2022. Additionally, to support access to affordable oral novel therapeutics, UNICEF established...
contracts with pharmaceutical companies for generic Molnupiravir and Nirmatrelvir /Ritonavir in addition to having contracts with the suppliers of the originator products. In 2023, UNICEF will continue to focus on deployment of COVID-19 therapeutics to recipient countries, managing shifts in global demand while transitioning from innovator to generic products.

**Bolivarian Republic of Venezuela: Improving oxygen therapy service in Caracas**

Thanks to ACT-A support from the Government of the United States and other flexible donor funds, UNICEF helped strengthen the oxygen therapy service at the Hospital Materno Infantil del Este Doctor Joel Valencia Parparcén in Caracas, which treats more than 2,200 children with respiratory problems each year.

“My son arrived at the hospital with pneumonia. We came from Guatire, and it was not possible to stabilize my baby’s situation there, but here we were able to obtain the service. Without it, my child would not have continued”, says Heidibe Arias, mother of one of the patients who received oxygen treatment and who has been in the hospital facility for more than six days. “My child has made progress with the treatment. This service has worked not only for me and my baby but for all the children who have been here,” she says.

“Before UNICEF’s intervention, only three or four oxygen vents were working and that did not allow us to provide the desired support to the families that required it”, say José Manzanilla, Administrator of the Hospital. Rehabilitation of health facilities, as UNICEF did for oxygen therapy, increases the scope and quality of hospital care at this institution and decreases the number of patients who are referred to other health centres. During 2022, UNICEF evaluated oxygen availability and needs in 17 hospitals prioritized for COVID-19 care where maternal and child health services were also being delivered. Six of these hospitals were already receiving support to rehabilitate their oxygen systems, including repair of gas piping and replacement of broken or missing equipment. This effort will benefit an estimated 26,800 patients every year.

**Myanmar: Bridging oxygen gaps and meeting acute needs**

In 2022, UNICEF ACT-A resources, including funds from the Government of Norway, supplemented funds from ECHO and the UN Central Emergency Response Fund, to install four oxygen plants (including 200 oxygen cylinders) and power transformers in Hinthada, Taunggyi, Loikaw and Kalay. Plant operations are being initiated pending certain licenses and oxygen cylinders are being filled with oxygen and distributed to nearby facilities. This effort will provide oxygen to approximately 800,000 people.

To allow for a transition period to fully hand over plant operations and re-supply consumables and other equipment at the four sites, funding was used to procure essential equipment for oxygen delivery such as tubing, nasal prongs, face masks and pulse oximeters. These items are expected to arrive in February 2023. In addition, this funding contributed to the initial costs of transport, operation, labour and the procurement of essential protective items such as fire extinguishers and safety shoes for oxygen cylinder handlers. To support long-term sustainability, UNICEF’s local partner will take responsibility for the costs associated with plant operations.
Mongolia: Ensuring access to life-saving oxygen treatment through capacity building

In Mongolia, flexible funds received from the Government of Italy were used to support the “Strengthening the Medical Oxygen System” project, co-implemented by UNICEF and the Government of Mongolia, which supports the development and roll-out of the oxygen supply strengthening plan. Funds were used to engage Assist International to refine the curriculum on oxygen maintenance and use, and to train 50 engineers/technicians and 20 technical staff from the Ministry of Health and other public health authorities. In addition, UNICEF facilitated capacity building for the Medicine and Medical device Regulatory Agency on the use of the UNICEF oxygen systems planning tool and provided inputs to the development of the oxygen supply systems strengthening plan.

Health Systems and Response Connector

PPE: In 2022, UNICEF continued to supply quality PPE to countries in need, enabling essential health care workers and other front-line workers to protect themselves and deliver care safely while administering COVID-19 vaccinations, tests, and treatments as well as caring for patients hospitalized by COVID-19. In 2022, UNICEF shipped US$64.8 million worth of PPE items to 44 countries under the COVAX Advance Market Commitment. As a result, UNICEF was able to deliver 40 million days’ worth of quality PPE to protect health workers as they supported the roll-out of new COVID-19 tools.

Given the market volatility at the onset of the COVID-19 pandemic, UNICEF undertook a comprehensive forecasting exercise to identify needs for PPE in consultation with UNICEF country offices. UNICEF then established a strategic stockpile of PPE to ensure supply availability to support the emergency response to the pandemic and meet the increasing demand in a timely manner by engaging directly with large manufacturers to ensure access to production capacities, by diversifying the supply base and by focusing on compliance with the technical requirements and quality standards. As a result, UNICEF has PPE supplies prepositioned in UNICEF supply hubs in Copenhagen, Guangzhou, Panama, and Dubai that continue to be used to rapidly respond to PPE needs in countries globally.

In December 2022, the Government of Germany contributed US$14 million to UNICEF for the establishment of a PPE stockpile to ensure urgently needed PPE items can be sent free-of-charge to countries included in the ACT-A HAC scope. In 2023, UNICEF will continue to meet PPE demand globally by utilizing any remaining funds mobilized through the ACT-A HAC in line with grant implementation timelines.

Sierra Leone: Ensuring continuity of service during COVID-19 and routine vaccination campaigns

Providing health workers with access to PPE is vital to ensuring they can deliver services while keeping themselves safe and reducing the spread of infectious diseases. The lack of PPE supplies in health centres creates significant health risks to patients and health workers, especially for facilities in large catchment areas.

In Sierra Leone, UNICEF has been working closely with the Ministry of Health and Sanitation to help ensure the continued delivery of vital health services to people – especially children – during the COVID-19 pandemic, while ensuring the safety of health care workers.

“As a midwife, I am exposed to a lot of human fluid while performing my duties. Those fluids are huge sources of infection. Therefore, it is crucial for me and other people I work with to be equipped with protective items like masks, gloves, goggles and gowns to ensure my safety and protect my patients, family and community,” says Nurse Regina Kabba, a midwife at the King Harman Road Government Hospital, in Freetown, Sierra Leone.
In 2022, UNICEF delivered over US$755,000 worth of PPE across Sierra Leone, with funding from the Government of the United States and other donors. This PPE was critical to protect health care workers and aid the continuity of essential health and nutrition services, including COVID-19 vaccination campaigns and routine immunization against preventable diseases.

“Because most PPE is disposable, it is consumed fast. The arrival of this consignment here and at other health facilities has given us assurance for our safety and that of the people that come to seek medical care,” said Nurse Edith Kulagbanda, midwife and Deputy IPC Focal Person at the King Harman Road Government Hospital in Freetown.

“For us, safety comes first. We need to stay well to be able to help others. These tools will go a long way in helping us ensure that.”

**Tajikistan: Preventing the spread of COVID-19 through continued access to PPE**

Tajikistan, with the support of development partners, has made remarkable progress in the prevention of COVID-19. To reach this objective, UNICEF has been playing a key role in maintaining access to PPE, ensuring that essential health workers and vaccinators are protected.

In 2022, UNICEF delivered over US$900,000 worth of PPE items, including masks, gowns, coveralls and goggles. The PPE was distributed across Tajikistan to protect front-line health care workers responsible for the continuity of essential health services, including routine immunization against preventable diseases, such as measles, and ongoing COVID-19 booster immunization campaigns.

“We all know that without PPE, it is impossible to ensure the safety of our front-line health care workers amid COVID-19. They are one of the most vulnerable groups during the spread of the infectious diseases,” explained Deputy Minister of Health and Social Protection of Population and Chief Sanitary Doctor, Dr. Abdukholik Amirzoda.

“As COVID-19 is still around, we continue to encourage people to take the vaccine and help stop the spread of the pandemic. Meanwhile, we continue taking preventive measures and staying safe thanks to the PPE,” shares Dr. Nematullo Avezov, Deputy Head Doctor of the Infectious Diseases Hospital in the city of Penjikent.

**RCCE:**

In 2022, UNICEF worked with partners in 133 low- and middle-income countries to implement people-centred behaviour change interventions, build national capacity, and strengthen systems to increase the uptake of COVID-19 tools. Overall, RCCE has been understood and accepted as a useful system by government and local partners, providing insight into the awareness, knowledge, and opinions of the population towards COVID-19.

Compared to 2021, there was an increase in government leadership around RCCE that was guided by national RCCE strategies and designed and endorsed by the relevant ministries. By the end of 2022, every low- and middle-income country supported by the ACT-A HAC had established a fully functioning inter-agency RCCE Working Group, a critical mechanism that can not only be used to coordinate RCCE activities but also to prepare communities and public authorities for potential new outbreaks and support them to effectively manage health emergencies in the future.

In 2022, UNICEF support focused heavily on building the technical capacity of partners in-country – government, civil society, community-based, and the private sector – to embed RCCE into existing structures that can be activated in
the event of a health crisis and where verified information regarding life-saving practices and basic services can be found. Specifically, UNICEF created a repository of RCCE planning tools that were available to all partners, provided in-depth training and information-sharing forums on how to effectively implement RCCE activities, and established a global help desk responding to country needs and providing relevant expertise. In addition, UNICEF developed a range of RCCE materials and guidance, including communications packages, that were accessible to all partners.

With ACT-A HAC funds, UNICEF continued to support community influencers and local leaders, youth, and other networks to build trust in basic services, promote public health and social measures aimed at stopping COVID-19 transmission, and tackle misinformation and rumours around COVID-19 vaccines. One key strategy that emerged in 2022 was the increased engagement with faith-based leaders, reflecting the important ties between community health and faith-based influencers. New and strengthened partnerships supported vaccine promotion in hard-to-reach areas and among the most vulnerable groups.

UNICEF continued to rely on extensive and comprehensive social research to inform its RCCE activities throughout the year and supported the development of research tools to identify the drivers influencing vaccine uptake. In 2022, UNICEF conducted 10 rounds of research combining offline social listening and community rapid assessments to collect qualitative and quantitative data. These findings were critical to addressing emerging issues, myths and misinformation and were regularly shared governments and field teams to inform targeted interventions.

By the end of 2022, the most significant challenge to successfully continuing RCCE work was the lack of political will and community interest in the face of competing health priorities, such as new disease outbreaks like cholera and monkey pox. This has directly impacted the allocation of national resources, resulting in limited staff for vaccination, and a declining or ad-hoc cooperation among key stakeholders.

To mitigate the impact of these developments, UNICEF is increasingly focused on integrating RCCE into existing health services and networks. In 2023, UNICEF will continue updating technical guidance and communication materials in line with the evolving situation as well as investing in qualitative research and evidence-generation. The human-centred design approach together with online and offline social trackers are key areas where countries will require continuity in order to capitalize on gains made in 2021 and 2022. Technical support and training on emergency preparedness will also continue, complementing national efforts to utilize all systems during an emergency.

Africa: “Give it a Shot” challenge regional campaign

UNICEF launched the first ever U-Report #GiveitAShot challenge, calling on all 13.3 million U-Reporters in Africa to help get COVID-19 vaccines to the un-vaccinated. U-Report is a social platform and messaging tool created by UNICEF that works with SMS, Facebook Messenger, Viber, Telegram and WhatsApp to empower young people around the world to engage with and speak out on issues that matter to them. It works by gathering opinions and information from young people on topics they care about. U-Reporters respond to polls, report issues and are educated on updated information and evidence. The data and insights received from U-Reporters are shared with communities and connected to policymakers who make decisions that affect young people.

By improving access and confidence in COVID-19 vaccines, the #GiveitAShot challenge aimed to activate young people to motivate those eligible in their community to get vaccinated. COVID-19 information and advocacy messages were disseminated via SMS, Facebook Messenger and other communication channels with an initial focus on six countries (Côte d’Ivoire, Ghana, Kenya, Nigeria, South Africa and Zimbabwe). Weekly messages were sent on U-Report to encourage young people to learn about COVID-19 vaccines and they were encouraged to share their knowledge and updated evidence with friends, family and community members.
Plurinational State of Bolivia: Using RCCE to raise vaccination rates across municipalities

In 2022, UNICEF supported the Ministry of Health and municipal governments to develop, update and roll-out RCCE interventions and communication materials to combat misinformation and to update communities on the importance of getting COVID-19 vaccines, thanks to ACT-A HAC funds. Many people in the country were hesitant about getting vaccinated for COVID-19 as there were many rumours circulating concerning post-vaccine effects.

These perceptions were quickly changed with updated fact-based evidence shared through multiple RCCE interventions. National COVID-19 vaccination campaigns were also promoted through RCCE interventions that included contests, street theatre, material, radio, and activities run during fairs and public events.

One strategy used in November 2022 to promote vaccination was to challenge municipalities’ vaccination rates against each other, taking advantage of the attention generated by the soccer World Cup. This managed to exceed the vaccine coverage goal for the month, according to official data.

RCCE studies conducted in the Plurinational State of Bolivia show that health personnel continue to be the primary reference for people to learn about vaccines, their effects, and their efficiency in COVID-19 prevention. Indeed, health personnel play a crucial role in spreading messages not only to patients in health centres, but also through social networks, mass media, and mobilization actions in communities.

Kazakhstan: Fighting the spread of misinformation through media training

UNICEF, in partnership with the Ministry of Health of the Republic of Kazakhstan and the MediaNet International Centre for Journalism, with financial support from USAID, provided health sector press officers with a training entitled “Countering misinformation about the immunization status in Kazakhstan.” This mixed format training included the participation of press officers from the country’s 17 district health departments. The training covered fact-checking, advanced search functions, ethical considerations in reporting, and practical tools for developing content to nurture positive attitudes towards vaccination. The trained participants reported improvement in their knowledge of fact-checking and creative content development, which is expected to contribute to fighting the spread of misinformation and increasing positive attitudes towards vaccination.

Lailim Akhmetzhanova is the official spokesperson for the Almaty Region Health Department and attended the training. “The training was special in that we focused on the topics that we really needed: how to work with Google and Yandex maps, how to properly use statistical data when working on journalistic investigations, how to identify deep fakes and so on.” She continued, “the training helped me realize that references to anonymous sources are never acceptable, no matter how trustworthy these sources may seem to a journalist. All sources for fact-checking work must meet the criteria of open sources.”

“On the second day, we learned about false information checking tools like InVid, YouTube Data Viewer, RevEye, Google Maps, and others. We were taught how to apply them...
Zimbabwe: Children’s COVID-19 vaccination campaign

When it was his turn to get his first dose of the COVID-19 vaccine, 12-year-old Tichaona closed his eyes in anticipation of pain. Within seconds it was over, and painless. “People were lying to me, there is nothing to fear,” he said, referring to rumours spread about the vaccine.

The last time the mobile vaccination team visited St Paul’s Senkwasi Primary School in March, Tichaona and many other students fled to nearby bushes to avoid being vaccinated. “I was afraid because we were once told it’s for adults only. Some people also told us it is painful and that we would get sick or die if we got vaccinated. Those were all lies,” he said. “Initially we went through some resistance,” said Nyasha Mwasunda, the District Medical Officer for the largely rural Zhombe district. “Parents were worried that it was not safe. They were not sure why we were now saying the vaccine is safe for children when initially we said they should not be vaccinated.” Religious beliefs were another major hindrance, he said.

After awareness campaigns were intensified in Zhombe district to educate communities on the safety, benefits and updated evidence around COVID-19 vaccines, parents began allowing their children to be vaccinated.

Tichaona, has gone from being a COVID-19 vaccine objector, to now trying to convince other children to get vaccinated in hopes that higher numbers would boost the chances of being allowed back into the sports field. “I miss soccer and the inter-school competitions. Vaccination is the answer; we can all play knowing we are safe,” he said.

Annex – Summary of programme results

<table>
<thead>
<tr>
<th>Sector/Pillar</th>
<th>2022 Target</th>
<th>Results 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaccines²⁹</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per cent of the population in low-income countries who received complete primary series against COVID-19³⁰</td>
<td>24%</td>
<td>22.8%</td>
</tr>
<tr>
<td>Number of COVID-19 vaccines doses administered in low- and middle-income countries⁷²</td>
<td>4.26 billion</td>
<td>2.82 billion³³</td>
</tr>
<tr>
<td>Per cent of the population in countries with a Humanitarian Response Plan who received complete primary series against COVID-19³⁴</td>
<td>39%</td>
<td>39.1%³⁵</td>
</tr>
<tr>
<td>Diagnostics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of COVID-19 diagnostic tests procured and delivered in countries with Humanitarian Response Plans⁵⁶</td>
<td>11 million⁷⁷</td>
<td>2.1 million</td>
</tr>
<tr>
<td>Number of countries with Humanitarian Response Plans that have scaled up COVID-19 testing with technical assistance from UNICEF²⁸</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Therapeutics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of countries with Humanitarian Response Plans that have scaled up oxygen treatment systems with technical assistance from UNICEF²⁹</td>
<td>20</td>
<td>23</td>
</tr>
<tr>
<td>PPE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of days’ worth of quality PPE delivered to protect health workers in countries with Humanitarian Response Plans as they support the roll-out of new COVID-19 tools³⁰</td>
<td>81 million³¹</td>
<td>40.5 million³²</td>
</tr>
</tbody>
</table>
Number of countries under the COVAX Advance Market Commitment that received quality PPE to enable the safe roll out of new COVID-19 tools

<table>
<thead>
<tr>
<th></th>
<th>92</th>
<th>44</th>
</tr>
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</table>

**RCCE**

Number of low- and middle-income countries that implemented ACT-A related RCCE interventions based on social and behavioural evidence

<table>
<thead>
<tr>
<th></th>
<th>133</th>
<th>133</th>
</tr>
</thead>
</table>

Per cent of individuals who would get vaccinated once a vaccine is available and recommended

<table>
<thead>
<tr>
<th></th>
<th>90%</th>
<th>91%</th>
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</thead>
</table>

**Links**


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1. **Link to revised appeal**: The 2022 ACT-A HAC appeal was increased in April 2022 from US$933 million to US$1,272 million to correct for the carry-over of funds from the 2021 ACT-A HAC appeal in the Vaccine Pillar, which had already been taken into account when calculating the needs to support vaccine delivery roll-out in 2022. Specifically, the 2022 ACT-A HAC need of US$575 million for the Vaccine Pillar was based on detailed costing and agreed with ACT-A partners and importantly took into account funds that had already been received and allocated to countries in 2021. The new 2022 new Vaccine Pillar appeal requirement of US$914 million took into account the carry-over amount of US$338.6 million for the Vaccine Pillar from the 2021 appeal, together with the 2022 needs of US$575 million. In this way, UNICEF was able to correctly calculate the funding gap of the 2022 HAC appeal, which was consistent with those presented by ACT-A partners and with UNICEF's methodology of reporting carry-over from related HAC appeals.

2. Funds carried over from the 2021 ACT-A HAC appeal indicate funds that were raised against the previous 2021 ACT-A appeal but are considered against the 2022 ACT-A HAC appeal and count towards closing the funding gap. We note that for this ACT-A HAC appeal, the carry-over of US$361 million from the 2021 ACT-A HAC appeal was significant, given the receipt of funds late in 2021 and that many activities were planned for extension into 2022, supported by funds received in grants tagged towards this appeal. The November 2022 revised ACT-A HAC appeal, including the updated budget, targets and indicators, can be found at this link: [Access to COVID-19 Tools Accelerator (ACT-A) Appeal | UNICEF](https://www.unicef.org/appeals/access-covid-19-tools-accelerator-act).

7. **Weekly Epidemiological Update on COVID-19 - 13 July 2022 (who.int)**
10. **COVID-19 Vaccine Delivery Partnership, data as of 21 December 2022.**
11. [https://www.fndx.org/covid-19/test-tracker/](https://www.fndx.org/covid-19/test-tracker/)
12. [COVID-19 Test tracker - FIND (finddx.org)](https://www.fndx.org/covid-19/test-tracker/)
15. [https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(22)00407-7/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(22)00407-7/fulltext)
17. The 15 recipient countries in 2022 were Burkina Faso, Chad, Cote d'Ivoire, the Democratic Republic of the Congo, Djibouti, Ethiopia, Gabon, Guinea-Bissau, Malawi, Nigeria, Sierra Leone, Solomon Islands, Somalia, South Sudan, and the Sudan, and include urgent funding needs funded by GAVI but channeled through UNICEF for disbursement to five countries: Burkina Faso, Guinea-Bissau, Nigeria, Solomon Islands, and the Sudan.
Based on UNICEF's updated global COVID-19 vaccine delivery cost model, it was predicted that LICs could realistically achieve a 24 per cent population coverage of the COVID-19 vaccine primary series by the end of December 2022, predictions that relied on historic absorption data of each country. Therefore, UNICEF adjusted this target.

For 2022, based on UNICEF's updated global COVID-19 vaccine delivery cost model, it was predicted that low- and middle-income countries could realistically administer 4.26 million doses of COVID-19 vaccine (including two doses of primary series and one booster dose). These predictions were based on best historic absorption data for each country and assumed only a proportion of the country’s target for primary series coverage were targeted for boosters. Therefore, UNICEF revised this number to align to the updated global predictions of country vaccine administering capacity.

Priority was given to countries with HRPs and where situations of concern were deemed “critical risk” or “high risk.” Given lower than anticipated demand, the diagnostics targets were reduced to 11 million, and the programme response shifted to pilot test and treat strategies. Priority was given to Burkina Faso, Cameroon, Central African Republic, Chad, the Democratic Republic of the Congo, Mali, the Niger, Pakistan, the Sudan and Yemen.

Priority was given to countries based on review of requests by the global and regional technical teams and where additional resources could have immediate catalytic impact.

In 2022, UNICEF expanded the scope of countries to include the 92 countries eligible for the COVAX AMC.

UNICEF models progress towards this indicator according to the estimated costs based on a methodology used by the ACT-A Hub to provide a community-based front-line worker with basic PPE for one day. It should be noted that there are many assumptions, and also that there is marked variation in the type of PPE needed (such as masks, eye protection, gloves, gowns and disposable bags to safely store and discard contaminated items) and the costs vary significantly.

Priority was given to countries with HRPs and where situations of concern were deemed "critical risk" or "high risk." For PPE, the country scope expanded in coverage in 2022 to include countries rolling out COVID-19 vaccines to support the PPE needs of vaccinators, in addition to other frontline and health care workers providing COVID-19 treatment, testing and care to patients. Therefore, UNICEF increased the PPE target to 81 million to align with the expanded scope.

RCCE interventions include engaging with communities, influencers, local groups, media and front-line workers for behaviour change. Interventions also involve the creation of engagement platforms, participation, feedback and accountability mechanisms, as well as capacity building and evidence generation (e.g., via social listening, monitoring of rumours, monitoring uptake of practices). There was a focus on building sustained community trust.

UNICEF contributed to progress towards this target with other partners.

Source: the collective service, September 2022.