WHO’s response to health emergencies

Annual report 2022
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<thead>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT-A</td>
<td>Access to COVID-19 Tools Accelerator</td>
</tr>
<tr>
<td>Ag-RDT</td>
<td>antigen rapid diagnostic test</td>
</tr>
<tr>
<td>AIRA</td>
<td>Africa Infodemic Response Alliance</td>
</tr>
<tr>
<td>AMC</td>
<td>Advance Market Commitment</td>
</tr>
<tr>
<td>EPI-WIN</td>
<td>WHO Information Network for Epidemics</td>
</tr>
<tr>
<td>EWARS</td>
<td>Early Warning, Alert and Response System</td>
</tr>
<tr>
<td>GOARN</td>
<td>Global Outbreak Alert and Response Network</td>
</tr>
<tr>
<td>ICRC</td>
<td>International Committee of the Red Cross</td>
</tr>
<tr>
<td>IDSR</td>
<td>Integrated Disease Surveillance and Response</td>
</tr>
<tr>
<td>IFRC</td>
<td>International Federation of the Red Cross of and Red Crescent Societies</td>
</tr>
<tr>
<td>IHR</td>
<td>International Health Regulations</td>
</tr>
<tr>
<td>IPC</td>
<td>infection prevention and control</td>
</tr>
<tr>
<td>IT</td>
<td>information technology</td>
</tr>
<tr>
<td>MEURI</td>
<td>Monitored Emergency Use of Unregistered and Investigational Interventions</td>
</tr>
<tr>
<td>NGO</td>
<td>nongovernmental organization</td>
</tr>
<tr>
<td>OCV</td>
<td>oral cholera vaccination</td>
</tr>
<tr>
<td>PAHO</td>
<td>Pan American Health Organization</td>
</tr>
<tr>
<td>PCR</td>
<td>polymerase chain reaction</td>
</tr>
<tr>
<td>polio</td>
<td>poliomyelitis</td>
</tr>
<tr>
<td>PPE</td>
<td>personal protective equipment</td>
</tr>
<tr>
<td>PRSEAH</td>
<td>preventing and responding to sexual exploitation, abuse and harassment</td>
</tr>
<tr>
<td>RCCE</td>
<td>risk communication and community engagement</td>
</tr>
<tr>
<td>SVD</td>
<td>Sudan virus disease</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>
1. Responding to health emergencies: WHO impact in 2022

1.1 Introduction

When the World Health Organization (WHO) launched its first consolidated global health emergency appeal at the start of 2022, an estimated 274 million people needed urgent humanitarian assistance (1). Throughout the year, the health, social and political consequences of the COVID-19 pandemic remained apparent, including increasing prices of essential commodities. These consequences were further exacerbated by the war in Ukraine and its impact on global food systems, prices and access.

The pandemic significantly disrupted routine immunization services and has left millions of children vulnerable to vaccine-preventable diseases. Various interlinked factors combined to increase the likelihood of epidemics and pandemics. In 2022, there was a drastic upsurge in the number of cholera cases after years of decline. As a marker of inequality and poverty, cholera disproportionately impacts communities with limited access to safe water, basic sanitation, hygiene infrastructure and health facilities. Cholera is fuelled by conflict, humanitarian emergencies, displacement and, increasingly, climate change. From the unprecedented drought in the greater Horn of Africa, to devastating floods in West Africa, to Cyclone Sidr in Bangladesh, climate change contributed to death and illness on a global scale in 2022.

Despite these exceptionally challenging times, thanks to the support of donors and partners, WHO was able to respond to more than 70 graded health emergencies, reaching millions of people. The Organization coordinated with teams across health ministries and United Nations agencies and worked closely with over 1600 operational partners. On the ground, working closely with communities, WHO focused on equitable access to care, and its local presence in more than 150 countries allowed the Organization to respond quickly and efficiently. WHO’s work in logistic operations helped to ensure that even the most isolated communities had access to the services and supplies they needed to save lives.

In Ukraine, WHO helped deliver babies and support mothers, despite repeated attacks on health infrastructure. After the devastating floods in Pakistan, the largest natural disaster recorded during 2022, WHO provided immediate surge capacity along with essential medical supplies. In Yemen, WHO helped to establish centres to feed severely malnourished children. In Libya, WHO delivered tonnes of medicines, medical supplies and equipment to public health facilities across the country. In response to the unprecedented humanitarian crises in the greater Horn of Africa and Sahel region of Africa, WHO significantly intensified its role as a provider of last resort and a partner in strengthening health systems.

WHO provided the evidence, tools and support needed to protect and promote health in response to the mpox (monkeypox) outbreak. Working at global, regional and country levels, WHO supported health partners and civil society organizations to develop localized response plans. The Organization also worked with Member States to adjust their national emergency response plans and transition from crisis response to an integrated, longer-term and sustainable COVID-19 programme within broader respiratory disease management strategies. Through its network of country offices, WHO is supporting countries to come together and reflect on achievements and lessons learned during the pandemic, in support of building resilient health systems.

This report provides highlights from WHO’s response to health emergencies during 2022. It outlines the increasingly critical role of WHO at global, regional and country levels, and across the key elements of effective emergency response, including emergency coordination and planning, operational and logistic support, and community engagement and protection. The huge scale and complexities of health emergencies in the 21st century require a strategic shift towards not only meeting the immediate needs of vulnerable communities, but also building community and health system resilience to all hazards – a challenge that both WHO and its partners must continue to meet.

1 The term “mpox” is now preferred to “monkeypox”, which is being phased out.
1.2 Measuring impact

Table 1 provides some examples of the impact of WHO in health emergency settings globally in 2022.

<table>
<thead>
<tr>
<th>Area of response</th>
<th>Illustrative data points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assessed for potential emergencies</strong></td>
<td>&gt; 9 million pieces of surveillance information processed by WHO every month, including: 4500 potential risks assessed, and 30 potential risks verified and actioned</td>
</tr>
<tr>
<td><strong>Delivered essential supplies</strong></td>
<td>US$ 470 million worth of health commodities delivered globally 10 000 tonnes of health commodities delivered 10-fold expansion of the WHO logistics hub in Dubai</td>
</tr>
<tr>
<td><strong>Responded to COVID-19</strong></td>
<td>1.88 billion vaccine doses delivered to 146 countries by ACT-A partners and WHO 159 million tests delivered US$ 222 million worth of therapeutics delivered</td>
</tr>
<tr>
<td><strong>Supported health care workers and facilities</strong></td>
<td>236 800 disability-related consultations carried out 5.2 million maternal health consultations provided by the Health Cluster 11 800 active mobile clinics each month 2 million consultations related to mental health and psychosocial support organized</td>
</tr>
<tr>
<td><strong>Worked to meet country needs</strong></td>
<td>600 medical doctors and nurses trained in August 2022 in Afghanistan, ensuring proper treatment of conditions such as acute watery diarrhoea following the floods 600 000 doses of oral cholera vaccine shipped to the Ministry of Public Health in Lebanon 140 public health facilities in Libya received medicines, medical supplies and equipment 6000 health care workers trained in mass casualty management and trauma care in Ukraine</td>
</tr>
</tbody>
</table>

1.3 Responding to Grade 3 health emergencies

Figure 1 presents global examples of WHO responses to Grade 3 (highest-level) health emergencies.

**UKRAINE**
Conflict
Delivered specialized medical supplies, coordinated the deployment of medical teams, and worked with health authorities to minimize disruptions to the delivery of critical health care services within Ukraine and in neighbouring countries hosting refugees.

**GREAT HORN OF AFRICA**
Drought and food insecurity
Coordinated with partners to avert the worst effects of food insecurity and provide people with the health services they need.

**ETHIOPIA**
Complex emergency
Provided emergency health support and maintained essential services including newborn, maternal, and child health services. Supported active case finding and contact tracing as part of immediate responses to the cholera outbreak.

**UGANDA**
Ebola outbreak
Established an Ebola treatment unit, deployed health workers, and provided emergency medical supplies. Facilitated training sessions with health workers on case management and infection prevention and control. Established an emergency operations centre and allocated essential items in response to floods.

**PAKISTAN**
Floods
Established an incident management system, deployed surge staff across the country, and procured essential medicines. Worked with partners to conduct situation assessments, disease surveillance, and screening for malnutrition.

**SYRIAN ARAB REPUBLIC**
Complex emergency
Provided lifesaving health care services for more than 15 million people in need. Supported integrated vaccination campaigns in response to outbreaks of cholera, polio, measles, and rubella.

**AFGHANISTAN**
Complex emergency
Significantly scaled up operations to meet increased health needs. Worked to expand coverage and increase the quality of health care services, provided lifesaving medical supplies, and continued to support polio eradication efforts.

**UKRAINE**
Conflict
Delivered specialized medical supplies, coordinated the deployment of medical teams, and worked with health authorities to minimize disruptions to the delivery of critical health care services within Ukraine and in neighbouring countries hosting refugees.

**PAKISTAN**
Floods
Established an incident management system, deployed surge staff across the country, and procured essential medicines. Worked with partners to conduct situation assessments, disease surveillance, and screening for malnutrition.

**SYRIAN ARAB REPUBLIC**
Complex emergency
Provided lifesaving health care services for more than 15 million people in need. Supported integrated vaccination campaigns in response to outbreaks of cholera, polio, measles, and rubella.

**AFGHANISTAN**
Complex emergency
Significantly scaled up operations to meet increased health needs. Worked to expand coverage and increase the quality of health care services, provided lifesaving medical supplies, and continued to support polio eradication efforts.

**UGANDA**
Ebola outbreak
Established an Ebola treatment unit, deployed health workers, and provided emergency medical supplies. Facilitated training sessions with health workers on case management and infection prevention and control. Established an emergency operations centre and allocated essential items in response to floods.

**PAKISTAN**
Floods
Established an incident management system, deployed surge staff across the country, and procured essential medicines. Worked with partners to conduct situation assessments, disease surveillance, and screening for malnutrition.

**SYRIAN ARAB REPUBLIC**
Complex emergency
Provided lifesaving health care services for more than 15 million people in need. Supported integrated vaccination campaigns in response to outbreaks of cholera, polio, measles, and rubella.

**AFGHANISTAN**
Complex emergency
Significantly scaled up operations to meet increased health needs. Worked to expand coverage and increase the quality of health care services, provided lifesaving medical supplies, and continued to support polio eradication efforts.

**Uganda**
Ebola outbreak
Established an Ebola treatment unit, deployed health workers, and provided emergency medical supplies. Facilitated training sessions with health workers on case management and infection prevention and control. Established an emergency operations centre and allocated essential items in response to floods.

**Pakistan**
Floods
Established an incident management system, deployed surge staff across the country, and procured essential medicines. Worked with partners to conduct situation assessments, disease surveillance, and screening for malnutrition.

**Syrian Arab Republic**
Complex emergency
Provided lifesaving health care services for more than 15 million people in need. Supported integrated vaccination campaigns in response to outbreaks of cholera, polio, measles, and rubella.

**Afghanistan**
Complex emergency
Significantly scaled up operations to meet increased health needs. Worked to expand coverage and increase the quality of health care services, provided lifesaving medical supplies, and continued to support polio eradication efforts.

Responding to health emergencies: WHO impact in 2022
2. Commitments to those served by WHO

2.1 Preventing and responding to sexual exploitation, abuse and harassment

Emergencies and humanitarian situations often intensify and increase the risk of sexual and gender-based violence, including sexual exploitation and abuse. Preventing, mitigating and responding to sexual and gender-based violence in humanitarian settings is both a critical priority and critical lifesaving intervention. WHO is committed to safeguarding vulnerable communities, and to preventing and responding to sexual exploitation, abuse and harassment (PRSEAH). At the global level, WHO has adopted and is implementing the United Nations policy on protection from sexual exploitation, abuse and harassment, and has adopted a policy of zero tolerance.

In line with the WHO Emergency Response Framework, WHO has prioritized and mainstreamed PRSEAH in all its emergency operations, including in priority fragile, conflict-affected and vulnerable settings. PRSEAH focal points and technical specialists have been embedded in respective incident management teams in all Grade 3 and priority Grade 2 events, with PRSEAH technical specialists deployed to support emergency response operations in the Democratic Republic of the Congo, Ethiopia, Pakistan, Ukraine, and the Sahel region of Africa.

A department for the prevention of and response to sexual misconduct has been established, and nearly 30,000 WHO personnel have attended global webinars, town hall meetings, and other engagement activities. Regional PRSEAH workshops for WHO personnel, focal points and partners have been completed in five of the six WHO regions, with workshops scheduled to begin in 2023 in the Region of the Americas.

Global and regional initiatives are being supported and expanded locally. One example is in Ethiopia, where more than 20 million people need humanitarian assistance due to the conflict that started at the end of 2020. The conflict has left many injured, and there are increasing reports of sexual violence and rape. WHO has deployed an international PRSEAH technical expert and is working with national focal points and gender-based violence experts to mainstream and strengthen protection measures. An interagency network has been established to help embed PRSEAH activities in ongoing crisis response operations, with an initial focus on strengthening reporting mechanisms and referral systems.

On 19 October 2022, a mother stands for a portrait with her two-year-old son Yoso, who she took for a check-up from the Eltomale Site Mobile Health and Nutrition Team in Chifra, Afar.

© WHO / Martha Tadesse
2.2 Gender, equity and human rights

WHO catalyses, supports and coordinates gender mainstreaming, equity and human rights approaches. There is a growing body of evidence demonstrating that people of diverse gender identities do not experience health emergencies and their impacts in the same way. Gender norms, pervasive gender inequalities, underprepared health systems, and barriers to accessing quality health care compound the risks and vulnerabilities that women, girls and gender-diverse individuals face during health emergencies. To address this, WHO is committed to addressing gender inequality across emergency preparedness, response and recovery through policies, guidance, operations and capacity-building.

During a webinar to mark International Women’s Day 2022, the WHO Regional Office for the Americas (Pan American Health Organization, PAHO) launched the report *Gendered health analysis: COVID-19 in the Americas*. Incorporating a gender perspective, the report focuses on the direct consequences of the virus in terms of morbidity and mortality, and on the indirect consequences for socioeconomic conditions due to public health and social measures aimed at mitigating the spread of the virus. In an attempt to explicitly analyse the gendered impacts of the pandemic, the report discusses how COVID-19 has directly and indirectly affected poverty and employment among women, along with their experiences related to caring responsibilities and accessing social protection services.

Results from collaborative research led by WHO in eight Latin American countries demonstrated that during the first two years of the pandemic, one in three pregnant women with COVID-19 did not have access to an intensive care unit and failed to receive critical care. The study, which reviewed clinical documentation related to almost 450 maternal deaths of women in the Plurinational State of Bolivia, Colombia, Costa Rica, the Dominican Republic, Ecuador, Honduras, Paraguay and Peru, was the largest of its kind to date. Key recommendations arising include the need to increase awareness for early detection of COVID-19 among pregnant women and strengthening referral pathways to avoid potential delays when accessing health care.

WHO is working to elevate the position and representation of women in emergency preparedness, response and recovery. At the local level, initiatives such as the Support Networks Project are enabling women to work on the empowerment, sorority and autonomy of adolescent girls in indigenous communities in Costa Rica.
In 2021, 50 countries committed to developing climate-resilient and low-carbon health care systems. This means having effective management systems in place, including guidance for health workers on what to do with health commodities after they have been used. It also involves the use of eco-friendly packaging and shipping, safe and reusable personal protective equipment, and recyclable or biodegradable materials, and undertaking investment in the recycling sector.

Among the small island States in the WHO Western Pacific Region, climate change is having a direct negative impact on health. Rising sea levels are reducing access to fresh water, degrading beaches and reefs, and reducing arable land for growing food. The increased frequency and intensity of tropical storms are adding to the health needs of populations, while at the same time damaging health infrastructure and disrupting the availability of essential health services.

WHO is committed to guiding and supporting countries as they move towards zero-carbon health care, and is already working with over 30 countries to achieve that aim. In the Marshall Islands, government authorities partnered with WHO and the Green Climate Fund to launch the country’s first project on enhancing resilience of the health system to respond to climate change and emerging pandemics. The project is focused on increasing the readiness of remote and outer islands to protect lives and respond to climate-related health emergencies, with initial activities seeing over 640 health professionals trained.

Fiji was among the first countries in the world to develop national guidelines on climate-resilient and environmentally sustainable health care facilities. After assessing the climate resilience of health care facilities, the Ministry of Health and Medical Services and WHO implemented several initiatives. Rainwater tanks and water filters were installed at two health facilities, helping ensure more reliable access to safe water. Four hospitals have undergone an energy audit to evaluate the reliability of the electricity supply to support critical operations, identify energy-intensive facilities or operations, and recommend solutions for energy efficiency and low-carbon processes. With the support of WHO and international partners, Fiji is in the process of installing environmentally friendly non-burning systems for health care waste management.

2.3 Towards zero-carbon health care
3. Responding to public health emergencies of international concern

3.1 COVID-19

3.1.1 Situation overview

The epidemiological situation of COVID-19 remains dynamic and complex. As of 1 January 2023, over 656 million confirmed cases of COVID-19 and 6.3 million deaths had been reported to WHO. After being classified as a variant of concern in November 2021, Omicron replaced Delta as the globally dominant variant within four weeks. During the first few months of 2022 many regions experienced their highest number of weekly new cases, and several small island States recorded their first cases of community transmission. Countries that had been successful in keeping COVID-19 at manageable levels through public health and social measures were rapidly overwhelmed, with rises in hospitalizations and deaths. Over 350 million cases were reported in 2022 alone, representing approximately 53% of the total number of reported cases since the start of the pandemic. Fortunately, 2022 was also marked by a clear decoupling of case numbers and deaths, thanks to advances in clinical care management, deployment of vaccines, improved treatment, and lessons learned in responding to the pandemic to date (Figure 2).

Despite this, the threat of COVID-19 continues, with persistent inequalities in access to testing, treatment and vaccines. There remains intense transmission throughout some regions – now in the context of other circulating infectious disease threats and the resulting increased pressures on health workers and systems. As of January 2023, a recombinant subvariant (XBB.1.5), first identified in October 2022, had been recorded in 29 countries and was spreading quickly. In response, the WHO Technical Advisory Group on Virus Evolution met on 5 January 2023 to discuss the latest evidence and assess associated risks to public health. Updated recommendations for Member States were developed to better address uncertainties relating to the growth advantage, antibody escape and severity of the variant.

Figure 2. Weekly confirmed cases of COVID-19 by WHO region, 31 December 2019 – 31 December 2022

### Situation by WHO Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Region</td>
<td>272,814,122</td>
</tr>
<tr>
<td>Western Pacific Region</td>
<td>200,972,740</td>
</tr>
<tr>
<td>Region of the Americas</td>
<td>189,963,466</td>
</tr>
<tr>
<td>South-East Asia Region</td>
<td>60,764,162</td>
</tr>
<tr>
<td>Eastern Mediterranean Region</td>
<td>23,254,667</td>
</tr>
<tr>
<td>African Region</td>
<td>9,494,590</td>
</tr>
</tbody>
</table>

Source: WHO Health Surveillance

Data may be unavailable for the current day or week.
3.1.2 COVID-19 pandemic preparedness, readiness, and response coordination

In line with the updated COVID-19 Strategic preparedness, readiness and response plan to end the global COVID-19 emergency in 2022 (4), the objective for 2022 was to end the acute phase of the pandemic. WHO and Member States focused on reducing and controlling the incidence of SARS-CoV-2 infections, and preventing, diagnosing and treating COVID-19 to reduce deaths, disease and long-term consequences. As many parts of the world began to transition away from acute pandemic response to long-term and integrated management of COVID-19, WHO’s responses were modified accordingly. At the global level, WHO coordinated across partners within the Access to COVID-19 Tools Accelerator (ACT-A) Health Systems and Response Connector, supporting partner organizations and countries on critical aspects related to the uptake of COVID-19 tools. Through its regional offices, WHO convened multisectoral workshops on leveraging COVID-19 response strategies for other public health emergencies and building resilient health systems. At the country level, WHO produced short policy briefs outlining essential actions that national and subnational policy-makers can implement on COVID-19 testing, clinical management, mass gatherings, reaching vaccination targets, maintaining infection prevention and control (IPC) in health care facilities, building trust through risk communication and community engagement (RCCE), and managing the infodemic.

3.1.3 Surveillance, laboratories, and public health intelligence

Sustained support from WHO for regional initiatives proved instrumental in both quickly scaling up testing capabilities and improving the provision of quality diagnostic testing and genomic sequencing among Member States. As a result, every region has demonstrated significant improvements in laboratory capacity. At the country level, a core focus of WHO’s response has been on localization and adjusting surveillance strategies and support to reflect country needs, especially as countries shifted to focus on expanding access to rural, remote, hard-to-reach, high-risk and vulnerable populations. Globally, as of July 2022, 77% of countries can sequence the SARS-CoV-2 virus in country, and 22% have access to timely sequencing through an international referral mechanism.

Surveillance

As the pandemic moved into its third year and the virus continued to evolve, national policies on testing approaches and services were adjusted accordingly, with many countries scaling back their surveillance strategies. In response, WHO continuously revised and adjusted its global guidance on core and enhanced surveillance, ensuring Member States had access to up-to-date and best-practice recommendations. This included shifting focus to tracking severe disease through new hospitalizations and intensive care unit admissions, rather than identifying all incident cases.

WHO launched the 10-year Global genomic surveillance strategy for pathogens with pandemic and epidemic potential 2022–2032 (5), which provides a high-level unifying framework to leverage existing capacities, address barriers, and strengthen the use of genomic surveillance worldwide. To facilitate alignment and coherence and strengthen the implementation of pathogen genomic surveillance, all six WHO regions have contextualized the global strategy through the development of regional strategies and initiatives.

Through platforms such as the Global Initiative on Sharing All Influenza Data (GISAID), WHO actively supported Member States to share their data on SARS-CoV-2. As of July 2022, 177 of 194 Member States have shared SARS-CoV-2 genetic sequence data at least once since January 2020. Coordination mechanisms were established in the African Region, Region of the Americas and Eastern Mediterranean Region, with WHO providing direct financial and operational support to cover the costs of shipping specimens between laboratories, supplying reagents needed for sequencing, procuring genomic sequencing equipment, and organizing trainings on genomic sequencing generation and bioinformatic analysis. In the Region of the Americas, the PAHO-coordinated COVID-19 Genomic Surveillance Regional Network supported more than 15 shipments with specimens from eight countries with no or limited capacity, resulting in over 600 sequences from areas that would otherwise not have had this information.
Labs and diagnostics

WHO and partners worked with Member States to train the laboratory workforce, procure laboratory equipment, diagnostics and reagents; enable sample transportation; and strengthen systems supporting information and data management. As countries experienced surges in cases, WHO provided technical and operational support to ensure new diagnostic tests were rapidly integrated into national testing strategies (Table 2).

Table 2. WHO support to Member States: laboratories and diagnostics

<table>
<thead>
<tr>
<th>Type of support</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procurement support</td>
<td>WHO worked with partners to procure over 9.4 million diagnostic tests (Ag-RDTs and PCR tests) to support 74 countries. The Organization also distributed over 1.5 million Ag-RDTs from the Accra regional stockpile to 16 Member States in the WHO African Region.</td>
</tr>
<tr>
<td>Training support</td>
<td>WHO released interim guidance on the use of Ag-RDTs for COVID-19 self-testing as an additional testing approach, including implementation considerations and key research questions to inform their empirical uptake. In collaboration with FIND, the global alliance for diagnostics, WHO updated its Ag-RDT training package, including a new module on self-testing to equip health workers with the necessary knowledge on the role of self-tests in the community. WHO co-published a new online course on key considerations for SARS-CoV-2 Ag RDT implementation on OpenWHO, targeted at decision-makers at the national level. A second round of proficiency testing for SARS-CoV-2 virus detection by molecular tests (PCR) was organized for more than 3000 testing laboratories from 123 countries to monitor the quality of testing laboratories across the six WHO regions. The WHO Regional Office for the Americas worked to ensure proper use of diagnostic tests by assessing diagnostic strategies, actively supporting integration of test information into surveillance systems, and developing regional guidelines on the rational use of COVID-19 diagnostic tests.</td>
</tr>
<tr>
<td>System-strengthening support</td>
<td>At the country level, WHO’s overall response strategy focused on scaling up testing capacity and increasing community access to tests. Central to WHO’s approach was the ability for responses to be flexible and adaptable based on the specific requirements of individual countries. With the support of WHO, in Brazil, health authorities, managers, experts and technical health surveillance teams came together to discuss experiences of public health laboratories and national influenza centers between May and June 2022. WHO supported the National Laboratory Working Group of Kazakhstan to further develop and strengthen the country’s national public health laboratory system.</td>
</tr>
</tbody>
</table>

Accessible public health intelligence

WHO collects daily and weekly data from all Member States on the epidemiology of SARS-CoV-2, continuously monitors for signals of unusual events, and has used novel analytic techniques to predict surges of SARS-CoV-2 cases. Information about the pandemic is shared continuously with the public. Since the start of the pandemic, WHO has published 209 daily and 115 weekly epidemiological updates on COVID-19.

With the support of Member States and partners WHO advanced co-development of the WHO BioHub System, which is designed to promote the rapid and timely sharing of biological materials with epidemic or pandemic potential, thereby facilitating fair and equitable access to pathogens and their information for the development of effective and safe public health products. In 2022, the system continued to use SARS-CoV-2 as a test material to advance the set-up and testing of operations, refinement of documents and practices, and identification of further operational needs. The WHO Public Health Laboratories knowledge-sharing platform provides support to COVID-19 reference laboratories through disseminating best practices, guidance and recommendations to improve readiness and foster peer-to-peer exchanges.

WHO continues to provide critical support to the sentinel surveillance platform of the Global Influenza Surveillance and Response System (GISRS) to ensure it can be further leveraged to meet key monitoring needs, not only for influenza but also for SARS-CoV-2 and other respiratory viruses. As of the end of December 2022, 117 countries had integrated COVID-19 surveillance into influenza and sentinel systems, and 103 of those countries had fully functioning integrated surveillance and were reporting data from that surveillance to FluNet. Timor-Leste, for example, has adopted an integrated approach to sustain SARS-CoV-2 testing while maintaining the country’s influenza sentinel surveillance. In line with WHO’s end-to-end integration guidelines (9), several activities were carried out in 2022 in the country, including consultations to develop a strategy, a national workshop to inform stakeholders and development partners, and training workshops to build the capacity of health workers and laboratory technicians.

Ag-RDT: antigen rapid diagnostic test; PCR: polymerase chain reaction.
3.1.4 Vaccination, public health interventions, and engaged communities

COVID-19 vaccination

As of January 2023, over 1.88 billion doses of COVID-19 vaccine had been distributed to 146 countries and territories via COVAX. Through the COVID-19 vaccine delivery support system, over US$ 264 million was dispersed to 61 of the 92 countries and economies able to access COVID-19 vaccines through the Gavi Advanced Market Commitment (AMC) mechanism to introduce and scale up vaccine delivery. Several countries made significant progress in increasing full vaccination coverage rates, with the proportion of the population fully vaccinated across the 92 AMC countries increasing from 28% in January 2022 to 53% in January 2023.

WHO worked with Member States, partners and donors to ensure vaccines were turned into vaccinations, with a particular focus on high-risk groups (including health and care workers and older adults), lower-income countries, and populations in humanitarian settings. In Sierra Leone, WHO ensured mobile vaccination nurses had the necessary equipment to carry vaccines on foot to reach remote villages; in the Bolivarian Republic of Venezuela, WHO expanded routine outreach visits to include COVID-19 vaccination for 22 indigenous ethnic groups living in the Venezuelan Amazon; while in the Philippines, WHO worked with local civil society organizations to increase uptake among vulnerable populations living on remote islands. Box 1 provides examples of global and regional guidance on COVID-19, and of targeted country and area support.
Global and regional guidance

- Global COVID-19 vaccination strategy updated in July 2022, outlining goals, steps, targets and operational priorities to guide countries, policy-makers, civil society, manufacturers and international organizations.
- Interim recommendations on COVID-19 vaccinations for the WHO European Region issued by the European Technical Advisory Group of Experts on Immunization, providing clear, actionable steps for Member States to implement as part of national strategies.
- South-East Asia Regional Working Group on Immunization convened, providing guidance on strengthening catch-up campaigns, tracking unvaccinated and undervaccinated children, combining COVID-19 vaccination with routine immunization, and addressing community concerns.

Targeted country and area support

UKRAINE
- Ensuring safe vaccinations
  - 100,000 doses delivered via COVAX
  - Over 23,000 copies of guidance materials distributed
  - Capacity-building workshops held for 100 medical staff and trainers

OCCUPIED PALESTINIAN TERRITORY, INCLUDING EAST JERUSALEM
- Strengthening vaccine cold chain
  - Refrigerated vehicles, fridges and freezers, and vaccine cold boxes delivered

THE PHILIPPINES
- Improving information management
  - Collaboration with national authorities in developing and maintaining a national Vaccine Information Management System

SOMALIA
- Accelerating vaccination campaigns
  - Nine campaigns launched
  - Over 5000 outreach teams deployed
  - Vaccination services offered at outreach clinics and marketplaces

NEPAL
- Expanding vaccines to children
  - Vaccination sites established in schools and health care posts
  - School staff trained
  - Educational materials provided for children and parents

BANGLADESH
- Revitalizing routine immunization
  - Support for development of a National Immunization Strategy
  - Routine immunization and surveillance for vaccine-preventable diseases strengthened in Cox’s Bazar

Box 1. COVID-19: global, regional, country and area initiatives

Rice farmer Anna holds her vaccination card after receiving a third dose of COVID-19 vaccine from a mobile health team visiting Makontakay, Sierra Leone, on 8 December 2022.

© WHO / UNICEF / Michael Duff
As the pandemic evolved throughout 2022, national governments adjusted international travel measures accordingly. In response, WHO continued to monitor travel-related and mass gathering measures implemented by Member States and share this information with relevant stakeholders on a regular basis. Countries and areas were supported through several capacity-building activities, including a regional training workshop to strengthen exercise operations at points of entry in the United Republic of Tanzania; regional training on preparedness and response at points of entry targeting fragile and conflict-affected countries hosted by the WHO Regional Office for the Eastern Mediterranean; two bi-regional train-the-trainers workshops for the European and Eastern Mediterranean Regions on ship inspection; and the assessment of public health preparedness and response capacities at points of entry in Kosovo.

Between January 2020 and December 2022, the WHO Mass Gatherings Global Event Database featured over 5550 mass gatherings, of which over half had applied WHO’s risk-based approach in their decision-making process and modified their event in some way (for example, limited participants in attendance or physical distancing measures). WHO supported national efforts through regularly updating and disseminating policy and technical guidance on gatherings to promote an evidence-informed and risk-based approach, releasing a revised version of its mass gathering risk assessment tool in June, and an online version of the tool in December 2022. Table 3 provides examples of how events that involve mass gatherings have responded in the context of COVID-19.

Table 3. Mass gatherings and COVID-19: examples of targeted responses

<table>
<thead>
<tr>
<th>Event</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beijing 2022 Winter Games</strong></td>
<td>The Beijing 2022 Winter Games occurred amid a global resurgence of COVID-19. Following the successful operational mechanisms implemented for the previous Tokyo 2020 Summer Olympic and Paralympic Games, WHO activated its ad hoc Olympics technical working group for Beijing 2022. A three level coordination mechanism comprising information management support teams, health information management, and mass gatherings was established within WHO.</td>
</tr>
<tr>
<td><strong>FIFA World Cup, Qatar, 2022</strong></td>
<td>Ahead of the FIFA World Cup in 2022, WHO supported Qatar in conducting and reviewing risk-based assessments and simulation exercises, identifying COVID-19 precautionary measures, and delivering training. A key area of WHO’s support was assisting the Ministry of Public Health to develop and utilize best practices and innovative event-based surveillance techniques, and apply them to enhance the country’s early warning and response system, including Epidemic Intelligence from Open Sources.</td>
</tr>
<tr>
<td><strong>Arba‘een, Iraq, 2022</strong></td>
<td>In partnership with Iraq’s Ministry of Health, WHO provided technical guidance and support in conducting the WHO COVID-19 risk assessment in preparation for Arba‘een 2022, including the precautionary measures needed for events and drafting and translating RCCE messages and infographics.</td>
</tr>
<tr>
<td><strong>AFCON 2022</strong></td>
<td>Prior to the start of the Africa Cup of Nations (AFCON) 2022 in Cameroon, WHO supported the Ministry of Public Health to conduct a mass gatherings risk assessment to better inform operational planning and develop a health coverage plan in accordance with the Confederation of African Football health requirements for major sports events. A simulation exercise was conducted at the international airport.</td>
</tr>
</tbody>
</table>

© WHO Maldives

Thermal scanning, testing in Maldives

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2 All references to Kosovo in this document should be understood to be in the context of United Nations Security Council resolution 1244 (1999).

12 Responding to health emergencies in 2022
COVID-19 RCCE activities have supported regions, countries and communities through the development and dissemination of culturally appropriate risk communication interventions, guidance and materials. During 2022, WHO and partners launched over 145 videos and infographics, 75 myth busters and FAQ graphics, and 20 Q&As on several topics related to COVID-19. With the aim of jointly agreeing upon priority audiences and common COVID-19 approaches and messages, WHO convened a weekly COVID-19 Technical Communication Sync, bringing together RCCE representatives from several global health agencies. WHO, UNICEF and the International Federation of Red Cross and Red Crescent Societies (IFRC) created the Collective Service, a joint RCCE mechanism developed to increase the scale and quality of community engagement approaches.

As the COVID-19 response evolved globally and public health and social measures were adopted and implemented in different ways, RCCE interventions were updated to reflect WHO technical guidance, while respecting different policy approaches taken by Member States. In Slovenia, the Safe4ALL project, led by a local civil society organization and supported by WHO, worked with a network of representatives of civil society organizations, asylum centre staff, and volunteers to develop reliable and culturally relevant information about COVID-19 vaccination and preventive measures for refugees and migrants. The information, translated into 24 languages, was distributed to municipalities, asylum centres and civil society organizations in the country, accompanied by training for those working directly with those groups. In Guatemala, where COVID-19 was recorded at the main cause of maternal deaths in 2021, a vaccination guide was developed and translated into several local languages, with broadcasted radio spots used to support dissemination of factual vaccine information in vulnerable communities. Costa Rica relaunched the “masked superheroes” communication campaign (launched initially in 2021) to raise awareness of and encourage compliance with preventive health measures to reduce the risk of infection of COVID-19 and other respiratory diseases among children.

Pandemic fatigue continues to impact all aspects of the COVID-19 response, and RCCE teams are continually assessing and applying data and evidence to the development of effective and timely solutions. A survey launched in 2022 seeks to gain an understanding of the social, behavioural and emotional aspects of adherence to public health and social measures in the face of pandemic fatigue. WHO hosted a half-day ideation workshop with more than 35 WHO COVID-19 technical experts and global RCCE professionals to spark ideas and innovation for COVID-19 public health and social interventions by leveraging a diverse variety of perspectives. Based on lessons learned over the past three years, WHO published a policy brief highlighting the importance of credible, trusted, relevant, timely, accessible and actionable health information, including how effective RCCE approaches and interventions have proven in COVID-19 emergency preparedness and response plans. The WHO Regional Office for Europe published a compendium of 18 case studies looking at how RCCE has been used during the pandemic. It is the first time the use of RCCE during a health emergency has been documented in such a detailed, practical way in so many diverse settings.
Infodemic management

Since the beginning of the COVID-19 pandemic, health authorities across the world have requested support in effectively responding to challenges arising from the infodemic. In response, WHO developed an integrated method for public health infodemic analysis and insight generation, able to deliver weekly analysis of social media, traditional media and other data sources to identify, categorize and understand the concerns and narratives expressed by individuals and communities. Between the start of the pandemic and June 2022, 116 weekly digital infodemic intelligence reports were produced and disseminated and 4.4 billion user-generated posts and comments on social media related to COVID-19 were analysed. In collaboration with respective ministries of health and United Nations partners, 18 countries across four WHO regions have adapted the tool for national infodemic intelligence surveillance.

A variety of capacity-building initiatives have been launched at global and regional levels. In partnership with several United Nations agencies and health authorities, WHO developed a multidisciplinary training programme aimed at equipping infodemic managers with the necessary tools to counter the infodemic. In June 2022, a new course on vaccine demand promotion trained 600 infodemic managers from 92 countries. In response to the need for credible, science-based information in a manner that is relevant to the public and decision-makers, WHO developed the WHO Information Network for Epidemics (EPI-WIN) platform. Over 75 EPI-WIN updates have been developed on topics of relevance to COVID-19 since the beginning of the pandemic, including understanding variants, evidence on public health and social measures, surveillance, testing, treatment, and vaccines and immunity. Since the start of the pandemic, scientific advances have been translated directly to the public by WHO and other experts through over 170 EPI-WIN webinars.

In the European Region, WHO published a policy brief for Member States highlighting how digital solutions can be used to improve the public health response to the COVID-19 infodemic, as part of a whole-of-society approach to health emergencies. In the African Region, the Africa Infodemic Response Alliance (AIRA) continued to address COVID-19-related rumours and disinformation by providing health facts through videos and social media posts. Using social media listening tools to understand community concerns, AIRA was able to tailor messages in 23 countries to address fertility and menstruation issues related to COVID-19 vaccination and provide clarity on vaccine testing and safety procedures.

In Iraq, WHO and partners conducted a training workshop for over 100 journalists and relevant stakeholders on media coverage for disease outbreaks and health emergencies to ensure that the Iraqi population was being provided with accurate and evidence-based information on health hazards. The training aimed to equip participants with key skills and techniques to accurately cover health topics related to disease outbreaks affecting the country, including COVID-19, cholera and Crimean-Congo haemorrhagic fever. Similar trainings have been held with media representatives in the African Region, with participants from nine countries.
3.1.5 Safe and scalable clinical care, and resilient health systems

While the COVID-19 pandemic highlighted vulnerabilities in health systems of countries across the world, it also provided fresh motivation to strengthen those systems, revitalize essential public health functions, and enhance emergency preparedness and response capacities. WHO worked with various governments and partners to foster an integrated approach to health systems strengthening that aims to build resilience by advancing universal health coverage, health security and healthier populations.

Integrated clinical care pathways and effective case management

Ensuring safe and effective care for people with COVID-19 requires the dynamic translation of available evidence into guidance, and a strategic approach to patient assessment and management across the continuum of primary, emergency, critical and rehabilitative care. Throughout 2022, WHO developed up-to-date technical guidance for clinical management of COVID-19 patients, including the COVID-19 clinical management living guidance and the COVID-19 living guideline on therapeutics. Through WHO’s clinical management of COVID-19 website, health workers were provided with access to current training resources and guidance on clinical management. In collaboration with the European Society of Intensive Care Medicine, WHO launched a critical care training course targeted at non-specialists working in intensive care, which has over 1000 enrolled trainees to date. Member States continue to contribute data to the WHO Global Clinical Platform for COVID-19. To date, there have been over 1 million contributions of anonymized clinical data from 64 countries, the findings of which are publicly available through a custom dashboard.

WHO strengthened clinical care pathways for patients through facility mapping, guiding referral pathways, and supporting the establishment of intensive care units. Together with ACT-A partners, WHO created a COVID-19 clinical care readiness framework and associated planning tool, allowing countries to identify specific barriers to timely and effective COVID-19 care and to plan and cost priority actions to mitigate system gaps. In March 2022, the WHO Regional Office for the Eastern Mediterranean developed a series of checklists of key actions to take in the context of a continuous pre-hospital and hospital emergency preparedness process to ensure an effective emergency medical service and hospital-based response. The WHO Regional Office for Africa launched a facility-based training programme for emergency and critical care targeting all Member States, beginning in countries with documented critically low capacity. Since January 2022, almost 600 health workers have been trained on topics including basic emergency care and establishing emergency medical teams.

Infection prevention and control

As part of its role in producing normative guidance, WHO supported countries to maintain and strengthen infection prevention and control (IPC) programmes and measures through conducting systematic reviews and updating IPC recommendations in the COVID-19 living guideline, providing IPC technical support and training, developing policy briefs, and publishing the *First Global Report on IPC* (8), providing data on the spread of COVID-19 in health care facilities. Timely expert advice was provided through regular videoconference meetings of the COVID-19 IPC Guideline Development Group, and engagement with partner organizations and IPC regional focal points.

WHO convened a group of international experts to address key knowledge gaps in effective application of IPC strategies and tools to reduce risk of transmission of COVID-19 in health care and community settings and built in-country capabilities through the IPC Global Community of Practice. Stronger IPC and quality of care was supported in several fragile, conflict-affected and vulnerable countries, including Ethiopia, Ukraine and Yemen, through implementing guidance and checklists on safe infrastructure and administrative controls during the reception and care of refugee populations. In Cox’s Bazar, Bangladesh, WHO and partners worked to disseminate and operationalize global IPC guidance in the local context, provided training to health and humanitarian workers, and created a pool of master trainers to rapidly respond to COVID-19 and other acute respiratory infections. To date, all 137 health facilities in the Rohingya camps and all eight subdistrict referral health facilities have IPC committees and IPC focal persons overseeing IPC in health facilities.

Responding to public health emergencies of international concern
Responding to health emergencies in 2022

The COVID-19 pandemic continues to have a profound impact on health and care workers – exposing them to higher risks of infection while working in often deteriorating conditions, and exacerbating existing inequalities. WHO continued to provide financial and logistic support in procuring essential supplies. In Libya, where the health system has already been badly disrupted by almost a decade of conflict, WHO helped facilitate the delivery of over 1.2 million pieces of personal protective equipment (PPE) to protect health workers against COVID-19 infection.

The WHO Regional Office for Africa launched a COVID-19 Fellowship Programme to support aspirational master’s degree students, PhD fellows, and emergency public health managers and leaders to advance skills and competencies for strategizing, managing and leading emergency health programmes. The WHO Regional Office for Europe trained 1600 health workers from Bosnia and Herzegovina, Bulgaria, Montenegro, North Macedonia, Romania, Serbia and Türkiye. Case studies were conducted by the WHO Regional Office for the Americas to examine the impact of COVID-19 on health and care workers and identity policy solutions and lessons learned in Belize, the Plurinational State of Bolivia, Chile, Colombia, Ecuador, Grenada, Jamaica and Peru. In Yemen, WHO and partners are supporting the Field Epidemiology Training Programme, designed to build national epidemiological capacities. Between October 2020 and July 2022, the Field Epidemiology in Action team was deployed to Papua New Guinea, with support from the Global Outbreak Alert and Response Network (GOARN), to assist the National Department of Health conduct operational research on the barriers and enablers experienced by health care workers in the collection of COVID-19 samples, with a view to strengthening national surveillance systems.

In Afghanistan, WHO strengthened emergency and critical care services through the WHO–International Committee of the Red Cross (ICRC) Basic Emergency Care course – an open-access course that trains front-line health care providers managing acute illness and injury on a systematic approach to the assessment and management of life-threatening conditions. To date, there are 37 basic emergency care trainers and 8 certified master trainers in the training pool and 337 front-line health workers have been trained, contributing to improving care for everyday and surge emergencies.

WHO has continued to increase its provision of free online courses on OpenWHO to empower health workers, responders, decision-makers and the public with real-time knowledge on COVID-19. In Myanmar, WHO supported the development of an online Myanmar channel and a local Viber community to strengthen local capacity in responding to public health emergencies, starting with COVID-19. In collaboration with WHO country offices, OpenWHO launched country-specific learning channels for Armenia and Poland, with 15 countries now able to access online courses in their official languages.

Box 2 provides examples of the role of OpenWHO in supporting and enabling the workforce response to COVID-19 and other health emergencies.

**Box 2. OpenWHO: supporting and enabling the workforce response to health emergencies**

OpenWHO has supported the workforce response to health emergencies, including COVID-19, through a range of initiatives (as at the end of December 2022):

- OpenWHO hosted 190 courses on key public health topics, including 46 for the COVID-19 response.
- OpenWHO courses were available in 65 languages, including 19 of the 20 most commonly spoken languages worldwide and the official languages of 44 out of 46 of the least developed countries.
- In August, the platform reached 7 million course enrolments, bringing knowledge about the pandemic and beyond to learners around the world.
- The most popular course continued to be the introduction to COVID-19, which had 1.1 million enrolments and was available in 45 languages.

**Mental health and psychosocial support**

WHO worked with partners to develop and disseminate resources in multiple languages and formats to help different groups cope with and respond to the mental health impacts of COVID-19. Developed in collaboration with the Qatar Foundation and the World Innovation Summit for Health, *Our duty of care: a global call to action to protect the mental health of health and care workers* examined the impact of the pandemic on the mental health of the health and care workforce, offering a framework and policy solutions for employers, organizations and policy-makers to better protect the mental health and psychological well-being of workers. In recognizing the importance of quality mental health care for children and adolescents, the WHO Regional Office for Europe launched a new programme to respond to the mental health challenges arising from the negative impacts of the pandemic, while also addressing the consequences of the current humanitarian crisis in Ukraine and its impact on the mental health of the millions of young people affected. In Malaysia, WHO and partners piloted the Relate Me project, a digital community designed to enable users to connect and share with other members through a user-friendly social media platform. Run by locally elected community health workers, the programme offered individual and group chats so participants could build relationships with health workers and their peers simultaneously.

Protecting, supporting and enabling the health workforce

Our duty of care: a global call to action to protect the mental health of health and care workers (9) examined the impact of the pandemic on the mental health of the health and care workforce, offering a framework and policy solutions for employers, organizations and policy-makers to better protect the mental health and psychological well-being of workers. In recognizing the importance of quality mental health care for children and adolescents, the WHO Regional Office for Europe launched a new programme to respond to the mental health challenges arising from the negative impacts of the pandemic, while also addressing the consequences of the current humanitarian crisis in Ukraine and its impact on the mental health of the millions of young people affected. In Malaysia, WHO and partners piloted the Relate Me project, a digital community designed to enable users to connect and share with other members through a user-friendly social media platform. Run by locally elected community health workers, the programme offered individual and group chats so participants could build relationships with health workers and their peers simultaneously.
3.1.6 Research and development, and equitable access to countermeasures and essential supplies

Countermeasures and essential supplies

WHO continued to reduce shortages of medical equipment globally during 2022, thereby strengthening the capacity of national health systems to respond to immediate needs generated by the pandemic, while preparing for future requirements. As global markets for these essential supplies restabilized, supply capacity in most countries increased significantly, and in December 2022 WHO closed the COVID-19 Supply Portal, harmonizing COVID-19 response efforts with other ongoing emergencies.

Under the ACT-A diagnostics and therapeutics pillars, WHO and partners ensured the procurement and deployment of COVID-19 tools to enable equitable global access to safe, effective, quality-assured, and affordable vaccines, therapeutics, and diagnostics to protect the vulnerable and manage COVID-19 effectively, delivering over US$ 634 million of essential supplies to support the COVID-19 response in 184 countries by the end of 2022. The Partners Platform was instrumental in supporting the ACT-A initiative to allocate COVID-19 therapeutics during 2022, with over 100 countries expressing an interest in participating, and over 70 countries confirming orders of lifesaving therapeutics via the platform.

Since the beginning of the pandemic, access to medical oxygen has been a significant global challenge. In response, WHO established global and regional initiatives, including the Oxygen Scale-up Initiative, designed to procure and deploy oxygen in 26 low- and middle-income countries, and the regional Live Oxygen Platform, developed to show oxygen production capacity and requirements in real time in the Eastern Mediterranean Region. In Yemen, 14 oxygen stations were installed in October 2022, bringing the total production capacity to 2200 cylinders of oxygen per day.

Research and development

Global COVID-19 research priorities were updated in February 2022 during the third COVID-19 Global Research and Innovation Forum. A critical priority is to better understand post-COVID-19 condition (also known as “long COVID”) to help inform patient care, management and rehabilitation guides. In the Region of the Americas, WHO established a working group on post-COVID-19 condition to generate a better understanding of the condition, develop patient care algorithms for health services, and advance patient management and rehabilitation guides. A brochure on the condition was distributed to countries, containing tips on understanding it, actions people can take, and advice on diagnosis, prevention and treatment. The WHO clinical platform continues to collect and analyse information related to post-COVID-19 condition to support research on the topic and has more than 600 000 cases of patients who have had the disease.

Similarly, to raise awareness and identify common solutions, the WHO Regional Office for Europe and Long COVID Europe organized a side event during the 72nd session of the WHO Regional Committee for Europe. As part of the event, participants called upon WHO to promote research and take action to combat inequalities and barriers to the equal treatment of people with post-COVID-19 condition. Member States were encouraged to work together to design standardized clinical trials, set up treatment protocols and surveillance systems, and raise awareness on the importance of vaccination and the benefits of rehabilitation.
### 3.2 Mpox (monkeypox)

#### 3.2.1 Emergency coordination

WHO has provided the evidence, tools and support needed to protect and promote health in response to the outbreak at global, regional and country levels. This includes supporting Member States, regional public health agencies, local authorities, and relevant professional and civil society organizations and community groups to develop localized plans appropriate to their specific context, based on the framework provided in the strategic preparedness, readiness and response plan. Working in collaboration with internal and external partners, temporary recommendations were issued on a range of topics, including surveillance, laboratory testing, clinical care, IPC and RCCE. Interim guidelines were regularly updated based on evolving evidence. Table 4 summarizes emergency coordination activities for mpox, by WHO region.

**Table 4: Summary of emergency coordination activities for mpox, by WHO region**

<table>
<thead>
<tr>
<th>Region</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Region</td>
<td>Organized country support missions to Central African Republic, Democratic Republic of the Congo and Ghana to support national response efforts and initiate high-level advocacy and technical engagement with ministries of health and key stakeholders.</td>
</tr>
<tr>
<td>Region of the Americas</td>
<td>Held high-level meetings with the Undersecretary for Health Prevention and Promotion, and the Directorate for the Epidemiological Surveillance of Communicable Diseases of the General Directorate of Epidemiology in Mexico</td>
</tr>
<tr>
<td>South-East Asia Region</td>
<td>Published an interim technical brief with priority actions for enhancing readiness. Conducted a rapid assessment of all countries to inform readiness planning and WHO coordination in the region.</td>
</tr>
<tr>
<td>European Region</td>
<td>Developed and disseminated a regular surveillance bulletin with the European Centre for Disease Prevention and Control. Jointly hosted regular webinars for Member States to provide a platform for information sharing on recent trends, clinical presentation and management, high-risk or vulnerable populations, contact tracing and vaccination. Hosted a subregional training workshop on outbreak management, control and elimination, with the aim of building local public health capacity for managing mpox outbreaks by improving preparedness, readiness and response actions through better coordination and planning.</td>
</tr>
<tr>
<td>Eastern Mediterranean Region</td>
<td>Technical workshops held to review the Gulf population’s exposure to risk and capacities to detect and respond to mpox.</td>
</tr>
</tbody>
</table>

WHO continues to closely monitor the latest available data, supporting international coordination and enabling information sharing among Member States and other engaged partners. In the period 1 January 2022 to 1 January 2023, just under 84,000 laboratory-confirmed cases of mpox and 75 deaths were reported to WHO from 110 countries, territories or areas, in all six WHO regions.

WHO supported genomic sequencing and testing across all six regions through providing diagnostic capacity and trainings and ensuring centralized procurement and shipment of diagnostic kits. As of October 2022, WHO had procured and allocated over 39,000 tests for 58 Member States. A mechanism for shipping samples internationally for confirmatory testing was established, with 85 samples shipped to reference laboratories from 10 countries to date. Table 5 summarizes activities to support surveillance-related activities for mpox, by WHO region.

**Table 5: Summary of surveillance-related activities for mpox, by WHO region**

<table>
<thead>
<tr>
<th>Region</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region of the Americas</td>
<td>Developed and disseminated laboratory guidelines on virus detection and diagnosis. Provided molecular diagnostics training to 31 countries and territories. Supported the procurement and distribution of laboratory supplies and reagents to enable testing. Developed a dashboard to facilitate data visualization, analysis and follow-up of cases.</td>
</tr>
<tr>
<td>South-East Asia Region</td>
<td>Supported countries to establish event-based surveillance, including hotline numbers. Disseminated regional guidance on laboratory testing. Established regional referral laboratories in India and Thailand for PCR testing and sequencing. Procured and allocated laboratory reagents and positive control materials.</td>
</tr>
<tr>
<td>European Region</td>
<td>Conducted a needs assessment on laboratory capacities. Supported procurement and distribution of supplies and reagents for molecular diagnostics in 18 countries. Implemented national case-based reporting through the European Surveillance System.</td>
</tr>
<tr>
<td>Western Pacific Region</td>
<td>Supported 12 countries and areas to complete the IHR survey for monitoring and evaluation of the mpox response. Regional stockpile activated and ready to dispatch consumables.</td>
</tr>
</tbody>
</table>

Taking account of approaches and lessons learned during the COVID-19 pandemic, WHO and partners supported national authorities to ensure surveillance, epidemiological investigation and contact tracing for mpox. At the global level, WHO developed a clinical characterization case report form to standardize data collection on the clinical features of suspected and confirmed cases. Technical support was provided to Member States to activate clinical and public health incident response systems, and to implement and update the Go.Data tool for case notification, investigation and contact tracing. WHO launched a global epidemiological report that is updated at least twice weekly, and a dashboard to provide the latest aggregate cases and deaths reported by Member States, updated daily.
WHO worked closely with affected communities to develop RCCE strategies for preventive, risk reduction and other social measures. In June 2022, WHO published interim guidance for RCCE, outlining the recommendations, considerations, and methods to raise awareness, manage risk perception, maintain trust, and proactively support people at risk to make informed decisions to protect themselves and others from mpox. Guidelines on IPC for the management of mpox in people in situations of vulnerability, including prisons and other custodial facilities, were developed, and WHO and the European Centre for Disease Prevention and Control created a resource toolkit to support national authorities and event organizers in the planning and coordination of mass and large gathering events.

WHO worked with partners to strengthen mpox responses for people living with HIV, including mapping health services to establish links between urgent care, sexual health, diagnostic and laboratory services, and HIV prevention and care; developing surveillance guidance and standard operating procedures for health facilities and health workers; designing information management systems to enable timely data linkage, analysis and action; and working with existing community networks to reach and support priority groups.

Two courses were developed and made available online via OpenWHO, with over 62,900 enrolments in the introductory course as of January 2023. The advanced epidemiology course, which aims to provide public health professionals, policy-makers, and health workers with information and resources to prevent, detect, and treat mpox, ensure optimal patient care and IPC, and mount an effective outbreak investigation and response, currently has over 42,400 enrolments.

WHO utilized EPI-WIN in working with global communities of practice to inform stakeholders and the general population on mpox, and provide real-time intelligence on challenges and best practices. Several EPI-WIN webinars were held with various community stakeholders, including in the transport and tourism sector, and with the multifaith organization Religions for Peace. Three EPI-WIN updates were developed in August 2022 on the evolving epidemiological situation, transmission, and how to mitigate the risk of mpox during small and large gatherings. Six EPI-WIN webinars focused on issues pertaining to stigma around mpox, transmission, public health measures to put in place for gatherings, and managing patients in cruises and in the travel and tourism industry. All webinars included regional perspectives and had participation from over 70 countries and territories. Table 6 summarizes activities, by WHO region, related to community protection, awareness raising and information sharing with regard to mpox.

Table 6. Summary of activities related to community protection for mpox, by WHO region

<table>
<thead>
<tr>
<th>Region</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>South-East Asia Region</td>
<td>- Information session held with national authorities on approaches to RCCE for mpox</td>
</tr>
<tr>
<td></td>
<td>- Integrated mpox into region’s routine digital listening, data gathering, and analysis mechanisms</td>
</tr>
<tr>
<td>European Region</td>
<td>- Organized a series of informal webinars with organizations and civil societies working with at-risk communities</td>
</tr>
<tr>
<td></td>
<td>- Organized a webinar on best practices on RCCE</td>
</tr>
<tr>
<td>Western Pacific Region</td>
<td>- Coordinated and disseminated messages targeting at-risk groups through effective channels and trusted influencers</td>
</tr>
<tr>
<td></td>
<td>- Developed content and materials for health care facilities</td>
</tr>
<tr>
<td></td>
<td>- Conducted social listening at the regional level</td>
</tr>
</tbody>
</table>

The MPOWER Programme at HIV Ireland works with members of the gay, bisexual and men who have sex with men (gbMSM) community to design and implement activities to help reduce HIV and other sexually transmitted disease infections. Since May 2022, they have been collaborating with authorities to create different responses at different stages of the mpox outbreak, using their team of volunteers to distribute flyers and posters to places frequented by at-risk communities, including bars, clubs, sex-on-premises venues and at Pride events.

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Responding to public health emergencies of international concern

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Responding to public health emergencies of international concern

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3.2.4 Safe and scalable care

Based on interim rapid response guidance, WHO supported countries to implement appropriate IPC measures to mitigate and control transmission of the disease in health care and community settings, and provided capacity-building for countries through the development and delivery of training to health workers. In supporting countries to have early access to effective treatments, WHO updated its ethical framework for use of unproven clinical interventions outside clinical trials during public health emergencies (the Monitored Emergency Use of Unregistered and Investigational Interventions (MEURI) ethical framework), and entered into an agreement with the producer of tecovirimat (an antiviral drug) to ensure access to the treatment in low- and middle-income countries. Table 7 summarizes activities related to safe and scalable care for mpox, by WHO region.

Table 7. Summary of activities related to safe and scalable care for mpox, by WHO region

<table>
<thead>
<tr>
<th>Region</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region of the Americas</td>
<td>Supported Member States on how to implement WHO’s MEURI protocol</td>
</tr>
<tr>
<td>South-East Asia Region</td>
<td>Organized a technical webinar on clinical management</td>
</tr>
<tr>
<td></td>
<td>Facilitated countries to submit an expression of interest to access tecovirimat donations</td>
</tr>
<tr>
<td>European Region</td>
<td>Provided support to Member States on how to access tecovirimat treatment courses through a WHO stockpile</td>
</tr>
<tr>
<td>Western Pacific Region</td>
<td>Supported two Member States to adapt IPC guidelines to the local context</td>
</tr>
</tbody>
</table>

3.2.5 Countermeasures and research

WHO supported countries with the roll-out of medical countermeasures through guidance, training and capacity-building, the procurement of vaccines and therapeutics, and integration of vaccines and therapeutics research with the ongoing public health response. Several resources were developed and disseminated, including interim guidance on vaccines and immunization; recommendations for ethical surveillance; and catalysing ethical research during emergencies. WHO continues to work with Member States through their national immunization technical advisory groups to review the evidence and develop policy recommendations for the use of vaccines as relevant to the national context. Table 8 presents examples of activities in this area, by WHO region.

Table 8. Summary of activities related to countermeasures and research for mpox, by WHO region

<table>
<thead>
<tr>
<th>Region</th>
<th>Activities</th>
</tr>
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<tbody>
<tr>
<td>Region of the Americas</td>
<td>As of 29 December 2022, delivered 65,800 vaccine doses to the Bahamas, Brazil, Chile, Ecuador, El Salvador, Honduras, Jamaica, Panama, Peru, and Trinidad and Tobago</td>
</tr>
<tr>
<td></td>
<td>Supported development of a vaccine effectiveness trial in Colombia</td>
</tr>
<tr>
<td>European Region</td>
<td>Developed a policy brief on vaccination</td>
</tr>
<tr>
<td></td>
<td>Published a peer-reviewed article in collaboration with the European Centre for Disease Prevention and Control describing the epidemiological situation</td>
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</tbody>
</table>
With over 100 public health events each year, the WHO African Region faces the highest burden of public health emergencies globally. The region is home to several country-specific, multidimensional challenges, with protracted and emerging conflicts driving humanitarian crises in 13 countries and territories. These emergencies are exacerbating the risks of disease outbreaks and nutritional crises, stretching already overworked health systems. During 2022, WHO worked closely with Member States and partners to prevent, detect and respond to a wide range of emergencies, including several acute outbreaks of poliomyelitis (polio), yellow fever, cholera, Ebola virus disease and meningitis.

Through its network of country offices supported by a regional office, WHO was able to rapidly respond to emergencies, providing fast and effective responses through established partnerships grounded in years of local knowledge. After an outbreak of Rift Valley fever in Mauritania, WHO organized daily meetings of the One Health technical committee, conducted community outreach activities, sprayed affected livestock, provided essential medicines and PPE, strengthened diagnostic and management capacities at health facilities, and actively mobilized partners for material and financial support.

Technical experts from the WHO Regional Office for Africa were rapidly deployed to Malawi after the first case of wild poliovirus type 1 was detected. Working with national authorities they provided immediate surge support, including active case finding, establishing environmental surveillance systems, conducting risk assessments and supporting education campaigns. When cases were later detected in Mozambique, WHO and partners planned and delivered a multicountry response strategy, focusing on a mass immunization campaign that administered over 36 million doses across four countries. In Zambia, almost 500,000 vulnerable children received oral polio vaccines in two days as part of a “mop-up” phase. In building from lessons learned and supporting cross-cutting capacity, WHO provided technical and financial support to expand key surveillance systems by integrating acute flaccid paralysis and environmental surveillance into existing national systems, and transitioning essential surveillance functions supported by polio teams into multidisease surveillance and response.

Initially contained to southern regions following two natural disasters, the protracted cholera outbreak in Malawi rapidly spread throughout the country, requiring a comprehensive end-to-end response. In ensuring the timely and effective deployment of emergency supplies, WHO procured cholera kits for testing and case management, acquired oral vaccine doses to protect at-risk populations, distributed enough antibiotics to treat over 1200 patients, and supplied over 1000 litres of fuel to support distribution. To ensure the availability of a well trained workforce, over 800 health care workers were trained in lifesaving critical care skills nationwide. Community sensitization meetings were held at fishing villages in cholera hot spots, reaching people residing in temporary and semi-permanent households. WHO also supported the Ministry of Health in preparing for the next emergency through strengthening disease surveillance systems, updating rapid assessment tools, and stockpiling cholera supplies in central medical stores.

Uganda: Ebola Disease outbreak in Mubende district, September 2022. Government Official Ivan Mawa and WHO Information Officer, Elise Tchotchoua Yonkeu, counsel Rose Nakagwa, a mother of one and wife to Ebola virus survivor Alex Ssebayigga, at their home in Lulungo Village, Kabulasoke trading centre, Madudu subcounty, Mubende district. © WHO / Jimmy Adriko
4.1 Democratic Republic of the Congo

Protracted complex emergency

The Democratic Republic of the Congo is home to one of the largest populations of displaced persons in the world and the largest on the African continent. As of December 2022, almost 5.7 million people have been internally displaced due to attacks, armed clashes and intercommunity conflict. Multiple humanitarian crises have weakened the health system, while attacks on health workers, facilities and patients are causing insecurity and distrust. Natural disasters have significantly damaged existing health infrastructure and resources, further reducing the capacity of health personnel to respond to public health emergencies.

In addition to COVID-19 and mpox, the country experienced several epidemic outbreaks in 2022, including cholera, measles, polio, plague, meningitis, and typhoid and yellow fevers. As part of ensuring an end-to-end response, WHO supported national authorities in all aspects of the emergency response, from partner coordination and technical expertise to operational support and logistics. As part of the roll-out of the third edition of the Integrated Disease Surveillance and Response technical guidelines, trainings were held for over 1000 health care workers from community, provincial and district health facilities. An additional 52 laboratory technicians were trained on the correct collection, storage and transportation of samples. Technical teams comprising national and international experts were deployed to assist with active case search and investigation during outbreaks of polio.

The country faced its 14th and 15th Ebola outbreaks between April and July 2022, and between August and September 2022. WHO experts based in the local country office supported national authorities with an immediate response through increased testing, contact tracing, IPC measures, and case management and treatment, and worked with communities to support public health measures to prevent spread of the disease. Rapid response teams were deployed to conduct detailed community investigations to identify primary cases and their contacts, and define the risks of exposure in various settings. A ring strategy for vaccination was implemented, targeting contacts, contacts of contacts, and front-line health care workers.

WHO provided operations and logistics support – sending a cargo plane with essential supplies and ultracold chain equipment at the onset of the outbreak, procuring IPC kits, distributing GeneXpert cartridges for use in conducting PCR tests, assisting in the rehabilitation of the emergency operations centre, and deploying WHO logisticians to support overall response operations. Investments in laboratory systems, strengthened as part of the response to COVID-19, meant that the country was able to confirm positive cases via real-time PCR tests and conduct genomic sequencing to trace origins of the circulating strain.

WHO consultant Dr Levis Bolekola during a polio vaccination campaign on the small islands around Kinshasa on the Congo River. The campaign was launched by the Ministry of Health with the support of WHO and partners, targeting children under 5 years old.

© WHO / Eugene Kabambi
4.2 Ethiopia

Complex emergency

Ethiopia continues to face multiple complex humanitarian emergencies. Severe drought in southern and north-eastern regions worsened during 2022, with over 24 million people affected and at least 9.9 million in need of emergency food assistance. As of October 2022, 2.2 million children were acutely malnourished due to the drought, with over 760,000 assessed as severely malnourished. Several acute events during the year, including flooding and outbreaks of COVID-19, cholera, measles and meningitis, continued to place significant stress on the health system. The effects of the conflict in northern parts of the country are compounded by access constraints and chronic food insecurity, hampering the health and well-being of millions. This is causing internal displacement and negative health consequences, including the heightened risk of disease transmission and the breakdown of health facilities and social services. Disrupted health delivery systems and overstretched health services in towns and cities hosting internally displaced persons have put the most vulnerable people at increased risk of disease and death from common causes of illness.

As part of its overall humanitarian response, WHO and partners developed a drought response plan and airlifted over 105 tonnes of emergency medical supplies. WHO provided technical and financial support to national authorities and 10 implementing partners to scale up mobile health and nutrition services, deployed over 100 experts across the country, provided emergency essential drugs and medical supplies to facilities with shortages, and supported strengthening the early warning system through active disease surveillance and the early detection of new events with proper reporting, emergency preparedness and rapid response.

WHO was able to provide an immediate response to the cholera outbreak in August. A surge team was deployed with experts from the Ethiopian Public Health Institute, regional health bureaus, and WHO to support with active case search and contact tracing. As part of operational and logistic support, seven treatment units were activated in affected areas, and cholera kits, medical supplies, and water, sanitation, and hygiene materials were procured and distributed. Over 70 health care workers were trained on case management, and RCCE activities were conducted at markets, schools and community gatherings. WHO continued to provide leadership and partner coordination through daily cholera response meetings, assisting with regional coordination and supporting implementation of the national elimination plan.

Ethiopia has faced acute outbreaks of meningitis since 2017, often coinciding with flare-ups of armed conflict or following natural disasters. In 2022, WHO provided predeployment training for rapid response teams and capacity-building for laboratory staff on cerebrospinal fluid collection procedures. In response to a measles outbreak that began in January 2022, WHO actively participated in the national technical working group established by the Ministry of Health and helped implement several actions as part of the outbreak response plan, including active case searching, mass vaccination, integrated nutritional screening, and strengthening the capacity of health workers in effective case management. As part of the immediate response, tents for isolation centres were procured, allocated, erected, and equipped with essential supplies, with a focus on areas close to refugee settlements. WHO also provided leadership and technical expertise as part of cross-border coordination activities with Somalia and Kenya.

On 19 October 2022, Mohammad stands in front of the Eltomale Site Mobile Health and Nutrition Team in Chifra, Afar. Mohammad came to be tested for malaria after having a high fever for a few days.

WHO supports mobile health and nutrition teams in Afar directly or through partners. The pictured mobile health team is one of five teams that WHO directly supports by covering operational costs, providing medical supplies and training.

© WHO / Martha Tadesse
South Sudan is experiencing a protracted humanitarian crisis due to prolonged political conflict, recurrent subnational violence, flooding, acute food insecurity and associated infectious disease outbreaks. As of September 2022, an estimated 8.9 million people needed humanitarian assistance – including 2.2 million internally displaced persons and almost 1.5 million people affected by flooding. Malnutrition levels have risen, with an estimated 1.4 million children suffering from acute malnutrition. The health system is overburdened due to continual shocks and limited health financing by the government, severely restricting the ability of national authorities to adequately respond to health emergencies.

The country faced multiple and concurrent disease outbreaks during 2022, including measles, rubella, malaria, cholera, hepatitis E, anthrax and suspected meningitis. With support from WHO and humanitarian partners, the national emergency preparedness and response technical working group is coordinating the implementation of an Integrated Disease Surveillance and Response (IDSR) and Early Warning, Alert and Response System (EWARS) network for timely detection of alerts from health facilities and camps for internally displaced persons. The mass measles outbreak that began in February 2022 continues to predominantly affect children aged under 5 years and those living in refugee camps and informal settlements. In response, WHO trained health care workers on vaccination procedures and adverse events in the days leading up to the mass immunization campaign in March 2022, which reached over 755,000 children. Social mobilization campaigns were run to enhance community awareness on case reporting and routine immunization. WHO also helped procure and allocate over 1.5 million oral cholera vaccine doses and provide logistic and health-related support in vaccinating over 792,000 people by the end of the year.

Food insecurity in the country continues to worsen, driven largely by climatic shock, conflict, disease outbreaks, pests, and the cumulative effects of prolonged years of asset depletion and the loss of livelihoods. The escalating flooding that began in May 2021 continued to worsen during 2022, with the country declaring a natural disaster in September and requesting the international community to support the humanitarian response in flood-affected counties. Affected populations have either been displaced or cut off from basic services. Fifty-two health facilities have been destroyed or are inaccessible to their catchment populations due to impassable roads. WHO supported effective health cluster partner coordination to ensure the provision of curative health services to 2.9 million people. Over 1,760 emergency health kits were procured and allocated to health facilities to support 1.4 million people for three months to ensure the continuity of health and nutrition service delivery to populations affected by floods, acute food insecurity and conflict.

WHO National Health Coordinator Salim Mohamednour (left) speaks to community leaders from Nivasha settlement on 21 April 2022.

This “open area” refugee settlement is one of the largest in Khartoum State. Khartoum’s open areas are informal sites hosting South Sudanese refugees with significant humanitarian needs. Providing services in these settlements is challenging, and health services are scarce and dependent on humanitarian funding.
On 20 September 2022, Uganda declared an outbreak of Ebola virus disease caused by the Sudan Ebola virus species (termed Sudan Ebola virus disease, or SVD). WHO worked closely with the government as part of the response, providing advice, supplies and specialists. WHO participated in national and district task force meetings, along with daily pillar meetings, helping to ensure rational, effective response mobilization based on international best practice embedded in localized knowledge. Joint Ministry of Health and WHO situation reports were issued daily, enabling rapid dissemination of critical information on the outbreak. WHO staff were deployed to national and district levels to strengthen case management, RCCE, IPC and surveillance.

WHO and partners supported the Ministry of Health in establishing an Ebola treatment unit at the regional hospital where the first case was detected, and deployed health workers and emergency services to the site. WHO provided Ebola kits with enough medical supplies to health workers and emergency services to the site. WHO and partners provided extensive capacity-building for health care workers and local authorities involved in providing psychosocial support to suspected and confirmed cases and their families, pre- and post-test counselling, and community resettlement plans for survivors and negative suspected cases.

IPPC measures were implemented and monitored in health care facilities and communities. With the support of WHO, IPC mentorships in 19 health care facilities were established. Over 60 health care workers were trained as IPC mentors and allocated to different health facilities to cascade the mentorship model, supported by information, education and communication materials. RCCE activities supported by WHO included radio spot messages, information and education materials, and partnerships with local leaders, church clergy, and village health teams to raise awareness on signs and symptoms of SVD and how to access testing and care. WHO provided technical and financial support to local authorities involved in providing psychosocial support to suspected and confirmed cases and their families, pre- and post-test counselling, and community resettlement plans for survivors and negative suspected cases.

As part of its role in ensuring that health systems can prevent and respond to shocks, crises and emergencies, WHO and partners provided extensive capacity-building opportunities for health care workers and local authorities. Over 880 village health teams and contact tracers were trained in SVD standard case definitions, alert verification, and reporting to support surveillance; 143 health care workers were trained in effective case management; over 150 staff were trained on safe SVD sample collection; and orientation sessions were held for Ebola treatment unit hygienists on cleaning and decontamination procedures and use of PPE. Fourteen laboratory staff and five district focal points were trained in sample collection, packaging, transportation, biosafety and biosecurity.

In support of the Ministry of Health, WHO and partners developed a plan to accelerate research during the outbreak, to ensure access to investigational vaccine doses, and to facilitate scaling up and access to any subsequent licensed vaccine. A symposium was organized on SVD management, attended by health care workers across the country and international consultants, enabling the sharing of experiences from the field.

While responding to Ebola, the country faced several concurrent emergencies during 2022, including COVID-19, mpox, Crimean-Congo haemorrhagic fever and anthrax. Following an outbreak of yellow fever, WHO trained health workers in case detection, procured supplies for epidemiological assessment, and deployed national and district rapid response teams. Parts of the country continue to face significant drought and food insecurity, and correspondingly high rates of severe and moderate acute malnutrition. In response, WHO advocated increased linkage with other nutrition-sensitive programmes and identified priority areas for support during monitoring visits to health facilities, including nutrition screening and capacity-building for health care workers on the management of nutrition data. Heavy flash flooding that occurred in July 2022 displaced over 5600 people, severed over 400,000 people from the national water grid, and heavily damaged existing sanitation infrastructure, increasing the risk of waterborne diseases. In the immediate days after the floods, WHO and the Red Cross supported the government to conduct a joint rapid assessment to assess the impact and magnitude of the disaster. An emergency operations centre was established, and essential non-food items, including shelter and wash kits, were distributed.
The greater Horn of Africa is one of the world’s most vulnerable geographical areas in terms of climate shocks and food insecurity. The region is host to a large pastoralist population and over 18 million internally displaced persons and refugees, and is experiencing one of the worst food insecurity situations in decades, with an estimated 46 million people facing food crisis and famine, and approximately 11 million children aged under 5 acutely malnourished. Disruptions and displacement are affecting access to basic hygiene and sanitation, with outbreaks of infectious diseases on the rise – during 2022 outbreaks of anthrax, dengue, malaria, Ebola, measles, cholera, hepatitis E, meningitis, leishmaniasis and yellow fever were recorded.

Emergency response efforts focus on ensuring affected populations can access essential health services, treating sick children with severe malnutrition, and preventing, detecting, and responding to infectious disease outbreaks. Following a risk assessment in May 2022, WHO regraded the emergency to the highest level (Grade 3), significantly scaling up emergency response activities across the seven countries. WHO has provided technical and operational expertise through internal and external surge mechanisms; deployed 75 experts; established an incident management team in Nairobi; coordinated meetings to consolidate objectives, approaches and advocacy among partners; and procured and allocated essential medicines and emergency kits. Along with countering the consequences of malnutrition, WHO is helping countries to prepare for outbreaks of diseases such as cholera, measles and malaria. This includes improving surveillance systems for communicable diseases to identify and respond to new outbreaks quickly.

WHO provided comprehensive, end-to-end support in responding to several outbreaks of cholera that occurred during the year. In Sudan, WHO undertook a risk mapping of potential cholera hot spots to prepare and initiate preventive oral cholera vaccination (OCV) campaigns. WHO supported health authorities by supplying rapid response kits to health facilities, conducted water quality testing and vector control interventions, and disseminated hygiene materials. In South Sudan, WHO and partners provided refresher training, established case definitions, and strengthened reporting tools to enhance surveillance. OCV campaigns were implemented in cholera hot spots and supported by risk communication and awareness activities, with over 1 million doses of OCV administered by the end of the year. As part of preparedness, 159 cholera investigation kits were prepositioned across all regions in Ethiopia. In Uganda, 60 health workers were trained on OCV activities, and 40 health workers were trained to strengthen mortality surveillance. Box 3 summarizes WHO activities in the greater Horn of Africa, by category.
Coordination and leadership
- A surge team was established to support the health needs of the population in Djibouti.
- Cross-border collaboration mechanisms were established in Ethiopia and emergency operations centres established at the zonal level.
- WHO helped coordinate health partners' responses to floods, conflict and outbreaks in Sudan.
- WHO deployed staff and recruited a surge team in Uganda, conducted a partner mapping exercise to improve coordination, and supported the Ministry of Health to develop and institute an incident management team structure for response activities.
- WHO participated in Kenya's humanitarian technical working group through regular partner coordination meetings.

Health operations and technical expertise
- Outreach services were supported in drought-affected districts in Somalia. In August, over 46 000 children received different childhood vaccines, 3645 pregnant women received tetanus–diphtheria vaccine, and more than 1.7 million people were reached with health promotion messages.
- WHO trained 157 vaccinators to administer measles vaccines and trained over 310 community workers in peripheral activities, including social mobilization, in Djibouti.
- WHO distributed 492 interoperability emergency health kits, which will support over 452 000 people for three months in South Sudan.
- Thirty-three cartons of PPE were delivered to Sudan's malaria department, along with 1500 mosquito nets and other medical supplies, including antibiotics, intravenous fluids and oral rehydration solution. An additional supply of 334 rapid response kits and 75 interoperability emergency health kits were distributed to respond to the health needs of 1 million people for three months.
- Essential supplies were procured and allocated in Uganda, including medicines, PPE, weekly surveillance report forms and COVID-19 antigen test kits.

Prevention and control of epidemics
- In Ethiopia, the integrated disease surveillance and response system is in place, with ongoing WHO support to ensure alerts are investigated promptly. Over 470 people have been trained for rapid response and more than 80% of alerts are investigated within 48 hours.
- In Djibouti, a supplementary measles vaccination campaign was conducted in September 2022, reaching over 45 500 children.
- As part of a nationwide integrated vaccination campaign in Somalia, over 2.5 million children received their measles vaccine and 2.8 million received the oral polio vaccine.
- 30 pumping machines for vector control activities were delivered to Sudan, and are expected to serve 1.5 million individuals.
- In Uganda, district surveillance focal persons have been supported to conduct active surveillance and sensitize health facilities on the need for screening for epidemic-prone diseases. More than 15 suspected cases of mpox have been investigated in refugee-receiving and hosting districts. As part of continued efforts to support COVID-19 testing, over 45 000 PCR test kits were provided to the central public health laboratory.

Nutrition response
- Seven nutrition focal points were deployed across Djibouti’s six regions to help health facilities provide high-quality nutrition-related care.
- In Ethiopia, over 17 tonnes of paediatric severe acute malnutrition kits were procured and distributed. Over 400 health workers were trained in management of severe acute malnutrition and infant and young child feeding, with on-site mentorship at stabilization centres to improve case management.
- In South Sudan, 25 health care workers were trained on management of severe acute malnutrition.
- Sudan received 33 severe acute malnutrition kits along with case management training for nutrition staff.
- Nutrition commodities were procured and distributed in Kenya.

Essential health services delivery
- In Ethiopia, 120 health workers were trained on the management of gender-based violence, and technical support was provided to the Ministry of Health on the development of national guidelines. Four WHO officers were deployed to assist the mental health and psychosocial support network at the subnational level, and 208 health workers were trained on mental health and psychosocial support.
- Mobile outreach clinics were deployed in South Sudan, helping to increase access to essential health and nutrition services.
- In Uganda, a district health facility functionality assessment was conducted. The WHO regional hub conducted integrated support supervision in three facilities where 10 health workers and 20 village health teams were mentored on disease surveillance and cold chain management.
- To ensure capacity of the workforce in providing minimum packages of care, training was provided to 28 rapid response teams, 80 community health workers and 22 laboratory personnel in Somalia.
The Sahel region of Africa is facing an unprecedented humanitarian crisis due to armed conflict, food insecurity, climate change, disease, loss of livelihoods and political instability. More than 33 million people required lifesaving assistance during 2022. Large-scale population displacements strained already weakened health and social support systems, with many internally displaced persons forced to move repeatedly, further exposing them to health risks.

In February 2022, WHO graded the Sahel as a Grade 2 acute emergency and established an incident management team in Dakar. All six countries in the region established dedicated incident management teams, coordinated by the incident management team in Dakar. WHO intensified its role both as a provider of last resort and as a partner in strengthening health systems, and strengthened and scaled up its response capacity through filling 62 positions in key response functions, while over 2000 clinical personnel working in the region were trained in integrated disease surveillance and response, cholera management, nutrition, surveillance, mental health and PRSEAH.

Limited access to safe drinking-water and basic sanitation, combined with the effects of malnutrition, intensified the number and scale of disease outbreaks in the region. Cases of COVID-19, mpox, cholera, yellow fever, measles, meningitis, Lassa fever and polio were reported during the year. Vaccination campaigns were held in response to reported cases in Cameroon and Chad. WHO provided technical advice and trained vaccine supervisors in Chad, where an initial campaign reached over 1.1 million individuals. In responding to cholera in Cameroon, WHO helped update an outbreak investigation protocol, conducted a water, hygiene and sanitation rapid assessment, trained health care professionals on the adequate sampling and transportation of samples, and assisted in an OCV campaign that reached over 178 000 people.

WHO and partners worked to strengthen access to health services for vulnerable populations, reaching over 8 million people during the year. In Burkina Faso, technical and financial support helped rehabilitate maternity wards, while in Mali, multipurpose mobile clinics were deployed to areas with high numbers of internally displaced persons. Along with supporting the provision of basic health care services for internally displaced persons in Chad through 11 fixed and five mobile clinics, WHO strengthened the outreach of mobile services following the devastating floods in July 2022. A warehouse in Mali was rehabilitated to support procurement and allocation for the region – distributing health emergency kits to care for internally displaced persons to Burkina Faso, essential medicine and reproductive health kits to Chad, and medical response commodities to Nigeria as part of the efforts to combat the Lassa fever outbreak.

As part of ensuring information for action, WHO worked with health authorities and partners in the six countries to strengthen epidemic surveillance and health management information systems. In Chad, training was provided to 20 monitoring focal points covering all sites for internally displaced persons to strengthen epidemiological surveillance.

Residents of a displacement camp in Ménaka, Mali, wait to be vaccinated against COVID-19 in December 2022.

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5. Responding to health emergencies in the Region of the Americas

The WHO Region of the Americas is vulnerable to a wide variety of emergencies and disasters of increasing scale and frequency – between 2000 and 2019, some 152 million people were affected by over 1200 disasters. The region is prone to natural disasters, including seismic activity, volcanic eruptions, landslides and the effects of climate change. Several countries are facing complex and multifaceted crises related to poverty, displacement, food insecurity and (increasingly) violence. With its rich ecosystem, the region continues to have a diverse disease profile, including recurrent outbreaks of chikungunya, Zika virus disease, yellow fever, measles, diphtheria, and, more recently, COVID-19, mpox, and cholera.

Through its Regional Office for the Americas (Pan American Health Organization, PAHO), WHO responded to over 25 public health emergencies during 2022, including flooding in Suriname, pneumonia cases due to unknown causes in Argentina, and the re-emergence of cholera in Haiti. These acute events occurred in the context of several complex emergencies and continued mass migration, including the humanitarian crisis in the Bolivarian Republic of Venezuela, violence in the Plurinational State of Bolivia, continued internal armed conflict in Colombia, and rises in instability and insecurity in Ecuador, Mexico, Peru and Central America. Between January and November 2022, PAHO’s Regional Strategic Reserve in Panama allocated 334 tonnes of essential medical supplies worth US$ 9.3 million to 36 Member States, ensuring rapid responses to emergencies.

In Colombia, WHO supported field health teams, epidemiological surveillance activities, and improvements to water and sanitation, and provided medical supplies and medicines in response to the health needs of over 30 000 people affected by floods and 14 000 people displaced due to armed conflict. Following several tropical storms in El Salvador, WHO provided technical assistance to the Ministry of Health and the Health Sector Technical Commission as part of immediate response planning, provided training on responding to multihazard emergencies, and assisted in re-equipping 14 health units to restore their operational capacity in providing primary health care services. In Honduras, WHO has led on the coordination of the health cluster to ensure effective responses to different health emergencies, including consolidating a network of volunteer collaborators working in local communities for the prevention of, control of, and response to health emergencies.

COVID-19 vaccination in a school in the community of Coclesito, in the indigenous territory of Ngäbe Buglé, Panama, in October 2021.

© PAHO / Gerardo Cárdenas
In response to rising levels of civil unrest and violence in Haiti, WHO distributed medicines and medical supplies to hospitals involved in the case management of people wounded by violent gang conflict, supported the National Ambulance Centre with the provision of supplies, fuel, and ambulance repairs to ensure patient transportation, and worked with local authorities at La Paix University Hospital to rehabilitate trauma operations and relocate the emergency room. After a resurgence of cholera cases in October 2022, WHO supported the Ministry of Public Health and Population in strengthening and scaling up epidemiological surveillance and laboratory capacity. Cholera treatment centres were established and stocked with essential medical supplies, while training was provided to nurses and sampling teams performing rapid diagnostic tests. Mass communication campaigns on cholera awareness and prevention were implemented, with over 90,000 printed brochures and posters distributed in Ouest department alone. Community health workers were redeployed to assist in vaccination campaigns.

As part of improving health emergency information, WHO supported the Ministry of Public Health and Social Assistance in Guatemala in mapping and identifying the risks and vulnerabilities of migrants traversing Guatemalan territory, migrants’ health conditions, and access to health services, as well as identifying key actors working on migration and health issues in the country. Training was provided to risk management and technical teams and health service providers responsible for the care of the migrant population, including with regard to psychosocial and mental health support. WHO assisted in the procurement and allocation of equipment, materials and supplies to 76 post-emergency and post-disaster health facilities; equipment and basic supplies required for the health care of people on the move; and items to rehabilitate 17 health facilities damaged by tropical storms.

In response to the prolonged sociopolitical and economic situation in the Bolivarian Republic of Venezuela, WHO deployed more than 100 professionals to the 24 states of the country and established six coordination support offices. WHO coordinated the integration of activities of more than 60 national and international partners as part of the health cluster, strengthening co-leadership of the technical health round tables with relevant health authorities. Training in IPC was implemented through the hospitals network, while health supplies and medicines were delivered to highly vulnerable indigenous communities as part of building resilience and response capacities.

After the declaration of mpox as a public health emergency of international concern, WHO hosted weekly webinars for health care providers and medical allies. Providing information on critical topics including IPC, clinical management, and risk communication and community engagement, the webinars provided an effective means of disseminating emerging evidence. Working in close collaboration with the Ministry of Health in Peru, WHO and partners convened a working group on mpox to bring together health authorities and community organizations; supported the deployment of nearly 100 mobile teams to bring information on prevention to the streets, bars and nightclubs of Lima; and established an mpox hotline and instant messaging channels to answer questions about infection, transmission and testing.

The COVID-19 pandemic has disproportionately affected Member States in the Region of the Americas – disrupting economic and social development, exposing and amplifying challenges and health inequalities, stretching health systems, and reversing almost three decades of progress against vaccine-preventable diseases. In consideration of the region’s complex migration dynamics, WHO has continued to protect the health of migrants through interventions in points of entry, surveillance, risk communication and essential health services. In Colombia, WHO supported implementation of rapid testing and contact tracing for COVID-19 in rural areas with limited access to health services, and among vulnerable populations. As of November 2022, more than 26,000 Ag-RDTs had been allocated, benefiting over 6500 migrants and 11,000 people without any type of health insurance. Working with health cluster partners, in the Bolivarian Republic of Venezuela WHO has provided an end-to-end approach to COVID-19 – delivering medical supplies to more than 110 health institutions, installing seven GeneXpert machines to support the decentralization of epidemiological surveillance, and acquiring more than 3.1 million vaccine doses in 2022 alone.
6. Responding to health emergencies in the South-East Asia Region

The WHO South-East Asia Region is vulnerable to health emergencies caused by natural disasters as well as emerging and re-emerging infectious and zoonotic diseases. During 2022, Member States experienced several earthquakes, cyclones and floods, along with outbreaks of mpox, dengue, cholera, measles, vaccine-derived polio, and severe acute hepatitis of unknown cause in children. The region experienced a drastic surge in COVID-19 cases at the start of the year due to the Omicron variant, stretching the capacities of many health systems. As in other regions, the health effects of the pandemic were followed by severe socioeconomic consequences and human suffering.

In collaboration with its extensive network of partners and stakeholders, WHO provided high-level technical and operational support to its 11 Member States throughout 2022. Prior to the first reported case of mpox in the region in July 2022, WHO worked with local authorities to strengthen emergency preparedness and response, including by conducting readiness assessments; sharing guidance on surveillance, case investigation, contact tracing, clinical management and IPC; procuring supplies for laboratory diagnostics and testing; and developing resources for community engagement. Several training sessions were held with public and private clinicians on how to identify and report mpox, as well as appropriate treatment options. Technical briefing sessions were held with national IHR focal points, and a technical brief on enhancing readiness was developed and disseminated. In view of limited testing capacities in the region, WHO coordinated with four laboratories to serve as regional referral laboratories. Technical support was provided to laboratories as part of building national capacities, while logistic support was provided in procuring essential commodities that were in high demand.

In response to several acute events during the year, including cholera, measles, polio and dengue, WHO supported national governments in conducting rapid risk assessments to assess risks and identify priority actions. Several countries were supported in their national OCV campaigns. Information and updates on confirmed acute public health events or potential events of concern were disseminated through platforms, including the Event Information Site for IHR National Focal Points and Disease Outbreak News. Following floods in Bangladesh, which affected more than 4.3 million people, WHO provided emergency drugs and supplies to replenish emergency medical stocks that were depleted. WHO field-based staff at divisional and district levels supported local health officials in flood-affected areas in disease surveillance and coordination, while at the national level, WHO worked with the Ministry of Health and Family Welfare to collect and share information on the event. Table 9 summarizes WHO activities in response to public health emergencies in Bangladesh, Myanmar and Sri Lanka.
6.1 Bangladesh

WHO supported the government to respond to COVID-19, while continuing to deliver an effective health response to the Rohingya crisis.

Several COVID-19 vaccine catch-up campaigns were conducted. Rapid risk assessments for dengue were conducted, referral pathways reviewed, and test kits procured and distributed. In response to cases of diphtheria, WHO and partners convened a special surveillance and case management meeting. An OCV campaign was implemented following an outbreak of cases around Dhaka.

WHO worked with the government to integrate EWARS with the District Health Information System, providing the Ministry of Health and Family Welfare with real-time access to data on the health situation in Cox’s Bazar.

A Multidisciplinary Skills Lab was launched. Providing training to health care workers, the lab is designed to improve the quality of responses in emergencies. In June 2022, 80 health care workers received training on acute watery diarrhoea in preparation for the upcoming rainy season. WHO organized and conducted two rounds of mental health training. Over 200 rapid response personnel were trained in pandemic influenza preparedness.
6.2 Myanmar

WHO facilitated access to essential health services from non-state partners, especially in conflict-affected areas, and supported the development of a public health situational analysis to identify current health status and potential health threats.

As part of a joint WHO and European Union project, essential supplies and training on how to use them were provided to a health clinic in a non-government-controlled area—enough to treat over 270 patients from January to May 2022.

RCCE materials on safety during monsoons and floods and protection from influenza were developed and disseminated. WHO continued to promote and support efforts aimed at community engagement and training on active tuberculosis case finding, contact investigation, and IPC.

WHO worked with partners to coordinate COVID-19 diagnosis, surveillance, IPC, case management, vaccination, community engagement, support for stockpiling of medicines and PPE, and training for front-line staff.

WHO launched an online Myanmar channel in OpenWHO and a local Viber community to strengthen local capacity in responding to public health emergencies.

6.3 Sri Lanka

WHO continued to support the health system through supporting local procurement and allocation systems to ensure access to essential medicines, including blood thinners, antibiotics, vaccines and cancer chemotherapy drugs. With financial support from partners, as of October 2022, the number of out-of-stock essential medicines had reduced to 150, from a peak of 200 in June 2022.

As part of emergency preparedness, the Disaster Management Centre in partnership with WHO conducted two 10-day sessions of the Basic Search and Rescue Training Course based on International Search and Rescue Advisory Group guidelines. Full-scale simulation exercises on search and rescue provided an opportunity to validate and enhance preparedness and response plans, procedures, and systems for natural disasters, while building capacity among multisectoral first responders.
Nazibola Bidzinashvili, 59, is auxiliary staff at the Neolab Clinic where she works as a cleaner in Tbilisi, Georgia. She has long COVID. Her symptoms include pain in her throat and a rash on her legs and hands. She says she feels weak, tired, struggles with memory and insomnia and also has perspiration problems. “The hardest thing during this whole time was being isolated,” she said. “I couldn’t see my grandchildren or my friends or anybody.”

©WHO/Hedinn Haldorson
The WHO European Region comprises 53 diverse Member States across a large geographical area. It is highly interconnected through trade, transport and population movement, and an emergency in one country often impacts several of its neighbours. The region continues to face many public health emergencies, including natural disasters and the effects of climate change, and protracted emergencies associated with regional conflicts, disputed territories and an ongoing refugee migration crisis. During 2022 WHO responded to multiple emergencies, including COVID-19, mpox, the Ukraine conflict and consequent refugee crisis, circulating vaccine-derived poliovirus outbreaks, and protracted conflict with sporadic escalations between Armenia and Azerbaijan. These recurrent and concurrent emergencies have demonstrated that Member States of the region remain vulnerable to the full range of emergency hazards, irrespective of their level of health system maturity or economic development.

Populations in Armenia and Azerbaijan continue to be affected by the protracted conflict in and around Nagorno-Karabakh, with sporadic escalations in violence during 2022. In response, WHO provided direct health service provision, along with capacity-building opportunities for the health workforce. In Armenia, WHO trained health care providers from 18 primary health facilities in conflict-affected regions with the aim of reducing psychosocial suffering among individuals affected by the conflict.

In Azerbaijan, health services were provided in conflict-affected regions via mobile health teams, including multidisciplinary mobile mental health and psychosocial support outreach teams. In Türkiye, which hosts the largest refugee population in the world, WHO continued training health professionals. In total, over 50 training sessions were conducted during 2022 on a variety of topics, including breastfeeding counselling, emergency obstetric care, psychosocial support in emergencies, rational antibiotic prescription, and tobacco and substance addiction counselling. With the support of WHO, seven refugee health training centres provided over 557,000 primary care consultations to Syrian refugees, and community health support staff provided almost 28,000 home care consultations.

Locally acquired cases of mpox were initially detected in the WHO European Region in May 2022; as of the end of the year, 45 countries and areas had reported over 25,500 cases. With the overall aim of controlling mpox and ultimately eliminating it from the region, WHO supported activities across eight priority objectives and developed a series of policy briefs to support country preparedness and response strategies. Given the central role of sexual transmission in this outbreak, a sexual rights approach, which includes reduction of stigma and discrimination, has permeated all WHO’s response activities. WHO provided 60 technical support activities across 18 Member States in the areas of surveillance, communications, public health, clinical management and vaccination; produced eight technical guidance documents, fact sheets or toolkits for European countries; and shared 22 news stories on the personal experiences of patients, health care workers and other response stakeholders. Table 10 summarizes WHO activities in response to mpox in the European region.

In Kharkiv the bombardment began on the first day of the war, February 24. Health workers moved their patients, their beds, their equipment and themselves down to the bomb shelters built in the basements decades before during the Cold War era.

© WHO / Anne Pellichero
<table>
<thead>
<tr>
<th>Area of intervention</th>
<th>Activities</th>
</tr>
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<tbody>
<tr>
<td><strong>Formulate, implement and monitor appropriate evidence-based control and prevention policies</strong></td>
<td>Delivered targeted messages on risk management using innovative mechanisms and communication channels, and involving key stakeholders. Partnered with a community-based organization to provide outreach services and information. Developed public health advice and Q&amp;A for priority groups, including gay, bisexual, and other men who have sex with men. Developed a toolkit and web tool with interactive dashboard to provide individuals with reliable information in advance of attending mass gatherings.</td>
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<tr>
<td><strong>Establish safe and high-quality diagnostics, including virus characterization</strong></td>
<td>Provided focused country support to 18 Member States that lacked diagnostic capacity or the supplies needed to provide an adequate response to the outbreak. Organized 36 shipments of laboratory supplies and testing kits. Procured over US$ 1.2 million of supplies. In collaboration with partners, distributed over 190 000 real-time PCR kits. Established a new training programme for laboratory staff.</td>
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<tr>
<td><strong>Optimally manage cases, including those with severe disease</strong></td>
<td>Provided training on clinical management across the region through online and in-person webinars and workshops. Carried out 13 webinars, trainings and workshops among over 400 health care workers from six countries. In response to severe cases, rapidly brought clinical teams and public health authorities together to share detailed clinical information and analysis in a confidential setting to increase understanding of severe mpox complications.</td>
</tr>
<tr>
<td><strong>Implement IPC systems to minimize the risk of onward transmission in health care settings</strong></td>
<td>Incorporated attention to IPC components into all programmatic work to increase national and facility-based IPC programmes. Closely monitored the risk of exposure for health care workers, with specific communications made on the safe and appropriate collection of samples from patients following a small number of sporadic occupational exposures.</td>
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<tr>
<td><strong>Establish strong case-based national surveillance and report all cases to national and regional surveillance systems to monitor transmission levels</strong></td>
<td>Worked with countries and the European Centre for Disease Prevention and Control to analyse case-specific data and publish weekly surveillance bulletins, providing real-time, case-based information and epidemiological analysis.</td>
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<tr>
<td><strong>Ensure high vaccination uptake in the highest-risk population groups</strong></td>
<td>Produced guidance specific to European countries on the use of vaccination, as well as guidance on addressing vaccine hesitance and demand.</td>
</tr>
<tr>
<td><strong>Ensure the availability of safe and effective vaccines and antivirals for priority groups</strong></td>
<td>Established a rapid request mechanism for tecovirimat and a coordination process with European Union institutions to increase access. Facilitated the exchange of knowledge on the safety and effectiveness of countermeasures.</td>
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<tr>
<td><strong>Prevent the establishment of a new animal reservoir in the WHO European Region</strong></td>
<td>In partnership with the World Organisation for Animal Health in Europe, conducted active monitoring of notified cases in animal populations, and regularly disseminated findings through joint monthly surveillance reports.</td>
</tr>
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</table>

**Table 9. Summary of WHO activities in response to mpox in the European Region**
Responding to COVID-19 remained a priority for WHO, with several countries experiencing surges in hospitalizations due to both Omicron and an increasing number of other respiratory viruses, including influenza and respiratory syncytial virus. Actions in 2022 focused on three core areas: preparing for and responding to surges in infections; transitioning away from the acute phase of the emergency; and planning for the long-term control of COVID-19, including managing post-COVID-19 condition ("long COVID"). WHO continued to support countries with their vaccination efforts at all levels. Based on a comprehensive review, the European Technical Advisory Group of Experts on Immunization updated its vaccination strategy in July 2022. In Slovenia, WHO partnered with a network of civil society organizations to develop reliable and culturally relevant information on COVID-19 vaccination and preventive measures for refugees and migrants. Working with the Ministry of Health and civil society partners in the Republic of Moldova, WHO implemented several awareness-raising campaigns to promote vaccination by mobilizing students, young people and prominent football players.

WHO provided direct support to countries in assessing the impact of COVID-19 on health systems, essential health services, and population health, and identifying areas for restoring and maintaining service delivery and strengthening emergency preparedness and response. Several resources documenting lessons learned were developed and shared in 2022. These included an overview of the strategic, technical and operational support provided to Member States during the first two years of the pandemic, a compendium of case studies on risk communication and community engagement, a policy brief on improvements and developments to strengthen infodemic management, and an increasing number of resources dedicated to better understanding post-COVID-19 condition. In partnership with the Ministry of Health of Greece, WHO launched a new programme to support the quality of mental health services for children and adolescents in all 53 countries of the region, along with hosting a workshop on maintaining and improving mental health services in the Nordic and Baltic subregions.

Significant efforts were placed on developing and sustaining resilient population-based surveillance systems for SARS-CoV-2, influenza, and other respiratory viruses, with WHO and the European Centre for Disease Prevention and Control publishing technical guidance on operational considerations for respiratory virus surveillance in the region. Routine diagnostic surveillance for COVID-19 has been augmented with environmental surveillance of wastewater in many locations. At the country level, WHO supported Kazakhstan’s national laboratory working group to develop national laboratory policy and strategic plans to address COVID-19 lessons learned.
On 24 February 2022, the Russian Federation military offensive commenced in Ukraine. Since then, intense hostilities have been escalating, triggering one of the world’s fastest-growing displacement and humanitarian crises. To date, more than one third of Ukraine’s population have been affected: 17.7 million people have been internally displaced, and almost 18 million people, mostly women and children, have fled across the border to neighbouring countries. As of January 2023, over 7000 civilian casualties and almost 11 500 civilian injuries have been recorded by the Office of the United Nations High Commissioner for Human Rights. Critical civil infrastructure is being increasingly targeted, reducing access to health care, while attacks on health facilities continue.

Guided by four objectives, WHO worked to ensure time-critical, lifesaving, multisectoral assistance, and non-discriminatory access to emergency and essential health services and priority prevention programmes. WHO activated six hubs in areas with the biggest needs and vulnerabilities. Along with scaling up emergency operations within Ukraine, WHO mobilized its emergency medical teams in neighbouring countries and established a field hub for refugee operations in Poland. A system to rapidly procure, deliver and distribute supplies was established. As of 29 December 2022, WHO had delivered over 2144 tonnes of supplies to the Ukrainian humanitarian response, valued at over US$ 51.6 million.

WHO supported multicountry campaigns to prevent and respond to vaccine-preventable diseases across Czechia, Hungary, the Republic of Moldova, Romania and Ukraine. In Ukraine, WHO has conducted physical assessments of the conditions and capacities in clinical diagnostic laboratories to ensure that routine surveillance for COVID-19 and other infectious diseases remains functional. In partnership with the government, ongoing polio vaccination campaigns were implemented, with a particular focus on internally displaced populations. The response has included support to refugee-receiving countries to ensure vaccination of Ukrainian refugees, strengthening capacity to detect importation of polio and other vaccine-preventable diseases, and preparedness planning for outbreak response.

WHO remains committed to building capacity of the workforce – as of the end of 2022, over 10 000 health care workers had been trained in Ukraine. In collaboration with the Ministry of Health, WHO scientific guidance has been translated into the country’s official languages, and 22 courses are now available in Ukrainian on OpenWHO. Training has been provided on trauma and mass casualty management, vaccine-preventable and other infectious diseases, proper use of assistive technology, and mental health and psychosocial support. By building the capacity of multidisciplinary humanitarian workers and scaling up evidence and community-based mental health interventions, WHO has so far reached more than 240 000 people in need of mental health and psychosocial support services, including at least 6400 individuals with severe mental health conditions. Box 4 summarizes activities supported by WHO in response to the crisis in Ukraine.
Box 4. Activities supported by WHO in response to the Ukraine crisis: summary of examples

Responding to the Ukraine crisis (as of December 2022)

Access to emergency and critical medical care is strengthened

- **30 490 consultations** provided by WHO-coordinated EMTs in Ukraine, Poland, and the Republic of Moldova

- **33 960 patients** treated with trauma and emergency surgery kits

- **1.7 million patients** treated with interagency emergency health supply kits

- **4.7 million people** with chronic diseases supported with noncommunicable disease kits

- **1644 medevac** operations successfully conducted

The bombardment is a terrible reality health care workers still struggle to understand. Every day the director of the children’s hospital in Kharkiv finds pieces of shrapnel from the cluster bomb that shattered his hospital.

© WHO / Anne Pellichero
Mother and child are going to the borehole to get water in Garowe, Puntland, Somalia

© WHO / Mukhtar Sudon
8. Responding to health emergencies in the Eastern Mediterranean Region

The WHO Eastern Mediterranean Region is highly diverse, with large disparities in socioeconomic status and health system capacities among its Member States. Profoundly impacted by emergencies from a wide range of hazards, nine countries and territories are currently experiencing large-scale humanitarian crises largely driven by conflict. As of December 2022, over 127 million people in the region needed humanitarian assistance, representing 39% of the global humanitarian burden. The region is prone to natural disasters of increasing frequency and severity. Floods in Pakistan were the largest natural disaster recorded globally in 2022, impacting over 33 million people. An additional 42 public health events occurred within this wider emergency context, including repeated disease outbreaks across the region, a snowstorm in the Syrian Arab Republic, an earthquake in Afghanistan, floods in Yemen and Lebanon, and conflict escalation in the Gaza Strip.

In addition to COVID-19 and mpox, the region recorded several disease outbreaks during 2022, including measles, cholera, polio, Crimean-Congo haemorrhagic fever and dengue. Repeated outbreaks of vaccine-preventable diseases highlight the challenges in maintaining essential health services amid recurrent, often concurrent, public health emergencies. WHO provided technical support to establish or enhance event-based surveillance and implemented Epidemic Intelligence from Open Sources in 10 countries. Table 11 presents a summary of WHO responses to disease outbreaks in the region.

*Children in front of a tent set up outside their house which was damaged by flooding in Madyan in Pakistan’s Swat valley on 1 September 2022.*

©WHO / Mobeen Ansari
<table>
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<tr>
<th>Disease</th>
<th>Scale</th>
<th>Responses</th>
</tr>
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<tbody>
<tr>
<td>Cholera</td>
<td>Multicountry</td>
<td>WHO supported the Ministry of Public Health in Lebanon to develop a national cholera preparedness and response plan; procured and prepositioned additional cholera supplies; and provided reference laboratories, prisons, and hospitals designated for cholera treatment with laboratory reagents, treatment kits and rapid diagnostic tests. Nurses and doctors were deployed as surge capacity to hospitals in the most affected areas. A series of training sessions was supported to improve the early detection and reporting of suspected cases, enhance clinical management, and raise awareness among the public and front-line health workers on cholera prevention and control. In the Syrian Arab Republic, WHO supported the Ministry of Health and health partners with a multipillar response plan. Surveillance and diagnostic capacity were scaled up across the country together with critical water, sanitation and hygiene interventions. Vaccination campaigns targeting vulnerable populations were rolled out. WHO procured and delivered to Iraq an urgent consignment of medicines and medical supplies, including infusion sets, antibiotics, and intravenous fluids, to cover the needs of a population of approximately 5000 people for a duration of three months. WHO worked with partners in Somalia to provide training on case management, improve infection protection and control, establish oral rehydration centres in health facilities, and conduct several OCV campaigns.</td>
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<tr>
<td>Crimeaan-Congo haemorrhagic fever</td>
<td>Iraq</td>
<td>WHO worked with the Ministry of Health to train and deploy rapid response teams, procure essential laboratory supplies to ensure testing, train health workers on case management, and conduct RCCE activities to raise awareness of the disease.</td>
</tr>
<tr>
<td>Dengue</td>
<td>Afghanistan</td>
<td>Technical support was provided to the activities of health authorities and partners, including surveillance, deployment of rapid response teams, case management, risk communication and community engagement, and capacity-building workshops for health workers. WHO distributed 2000 rapid diagnostic tests and 7020 Gravitraps for vector surveillance and vector control activities in highly affected districts.</td>
</tr>
<tr>
<td>Polio</td>
<td>Multicountry</td>
<td>WHO significantly scaled up polio immunization campaigns, focusing on nomadic populations, seasonal workers, and cross-border communities in Afghanistan and Pakistan; implemented a supplementary immunization campaign for all children aged under 5 in Bethlehem and Jerusalem to provide an extra dose of protection; supported two successful nationwide campaigns in Sudan, which reached over 95% of children aged under 5; and worked with partners to roll out four polio vaccination campaigns in Somalia.</td>
</tr>
<tr>
<td>Measles</td>
<td>Multicountry</td>
<td>WHO supported nationwide vaccination campaigns in Afghanistan by providing technical advice, training health care workers, covering costs for operations, and providing supplies and logistics. The Organization also worked with the Ministry of Health in the Syrian Arab Republic to plan, supervise, train and equip the workforce prior to launching integrated polio, measles and rubella vaccination campaigns.</td>
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</table>
8.1 Afghanistan

Complex emergency

Afghanistan remains one of the most complex humanitarian emergencies in the world. The withdrawal of international forces and transfer of the government to de facto authorities in August 2021 had a further devastating impact on the country, particularly on the health care system. Health facilities remain understaffed and underresourced, with shortages of medicines and supplies affecting the delivery of essential health care services, and many rural areas have no health facilities. Women and children continue to bear the highest burden, and are increasingly at risk of poor health outcomes, specifically in the context of reproductive, maternal, newborn and child health.

WHO vastly scaled up its operations in 2022 to match health needs in the country, establishing a strong network of eight suboffices and over 900 affiliated staff, and helping to relaunch the Sehatmandi Project to ensure the ongoing provision of basic health services. WHO coordinates more than 60 health cluster partners to deliver timely, effective and efficient health services to over 10.7 million people, and co-leads the health strategic thematic working group. As of December 2022, WHO helped to ensure the full functionality of 1209 health facilities by financially supporting over 14 000 health workers and delivered over 2200 tonnes of essential medicines and medical supplies. Over 1.2 million people living in underserved areas were reached through a network of 148 mobile and primary health care facilities and 15 hospitals. Almost 47 000 malnourished children with medical complications were supported through access to care.

Several major disease outbreaks affected the country, including outbreaks of acute watery diarrhoea, COVID-19, measles, dengue fever, Crimean-Congo haemorrhagic fever, and malaria, which remains endemic. In response, WHO deployed 121 surveillance support teams and 34 outbreak rapid response teams across the country. Forty COVID-19 diagnostic testing sites were established in all 34 provinces, and WHO assisted in immunization efforts, with almost a quarter of the eligible population vaccinated against COVID-19. Working with the Ministry of Public Health, WHO provided technical advice, training, financial support, and supplies and logistics in support of the mass measles vaccination campaign that took place in March 2022.

Significant resources continue to be dedicated as part of polio eradication efforts. WHO deployed a team of technical experts to review existing surveillance systems, assess their functionality, and make specific recommendations for maintaining and improving surveillance. Following the earthquake in June 2022, WHO’s polio team were rapidly redeployed to assist in relief efforts, providing critical information to help map the location of communities and assess the number and extent of potential casualties, as well as destruction to homes and buildings. Polio teams assisted in attending the injured, providing trauma care and dressing wounds.

On 27 November 2022, a daily meeting is held at Mawturk Hospital in Kabul for resident doctors to report to seniors and supervisors and receive feedback on their performance.

In partnership with EU ECHO, Türkiye and other donors, WHO and partners provide a range of support for the operation of this 250-bed hospital, from covering staff salaries to providing heating in winter to delivering essential supplies, including medicines for the treatment of children with malnutrition.

© WHO / Kiana Hayeri
8.2 Pakistan

Floods

Pakistan is prone to a variety of natural disasters. Between July and August 2022, the country experienced severe monsoon rains and flooding that affected 116 out of 160 districts. Over 33 million people – that is, one in seven – were affected by the floods, including nearly 8 million displaced and over 12,800 injured. Three million acres of crops and over 1.2 million livestock were destroyed. At least 2000 health facilities were damaged, and medicine stocks were acutely depleted. Severe damage to road infrastructure impacted referral mechanisms, with limited access to essential health care in flood-affected districts. In the weeks following the floods, cases of acute watery diarrhoea, skin and eye infections, malaria, typhoid, cholera, dengue, measles and diphtheria increased dramatically, along with continued transmission of COVID-19.

WHO established five priorities as part of response activities: ensure a well-coordinated national and subnational response; rapidly expand access to the integrated package of essential health services in 32 priority districts; strengthen and expand disease surveillance, outbreak prevention and control; immediately ensure effective management of children suffering from acute malnutrition, and enhance national surveillance; and support water quality surveillance and improved water, sanitation and hygiene in damaged facilities.

Following the declaration of a national emergency, WHO activated the incident management system and deployed 80 national and 14 international surge staff to support responses at community, facility, district, provincial and national levels. In September 2022, WHO established three hubs and 10 emergency operations centres to bring response coordination closer to the field. As co-chair of the Health Sector Coordination Committee, WHO actively participated in several situation assessments, including needs assessments in various districts, and assessments of diagnostic, routine and emergency health service availability.

In partnership with the government, WHO helped establish an emergency disease surveillance system in flood-affected districts that were not previously connected to the central health information system. Over 230,000 rapid tests for dengue, malaria, hepatitis A and E, and chikungunya were distributed for field identification, and approximately 33,000 serological tests were donated to public health laboratories for confirmatory testing of suspected cases. On-site trainings of laboratory and field surveillance staff were conducted on sample collection, transportation, quality management, biosafety and field diagnostics. WHO actively participated in the nutrition cluster’s coordination and response planning activities, helping to screen over 67,000 children for malnutrition. Almost 8000 children with severe acute malnutrition with medical complications were treated in a nutrition stabilization centre.

As of 21 November 2022, WHO had distributed medicines and medical supplies worth US$ 2.18 million, including water purification kits, water tanks, tents and oral rehydration solution. Working with local partners, WHO provided US$ 10 million to support health facilities in treating the injured, while over 1300 medical camps were established in flood-affected areas, reaching more than 5 million people. Table 12 provides examples of WHO responses to priority needs in Pakistan.
<table>
<thead>
<tr>
<th>Sector or disease</th>
<th>Responses</th>
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| Reproductive, maternal, neonatal, child and adolescent health services | Deployed 12 technical officers to implement reproductive, maternal, neonatal, child and adolescent health and nutrition activities  
Distributed over 60,000 safe delivery kits and 40,000 dignity kits to strengthen existing health care facilities in the most affected districts  
Supported the integration of key reproductive, maternal, neonatal, child and adolescent health messages into training modules for community health workers in flood-affected districts, reaching more than 500 workers as of 30 October 2022  
Repurposed mobile health teams to conduct outreach and facility-based medical interventions on reproductive, maternal, neonatal, child and adolescent health and nutrition services |
| Nutrition | Upgraded 24 nutrition stabilization centres  
Provided essential equipment for nutrition stabilization centres, including inverters, refrigerators, anthropometric instruments, kitchen items, stoves, registers and monitors  
Trained health workers on inpatient management of children with severe acute malnutrition with medical complications  
Distributed 50 tents to displacement camps for nutrition counselling and infant and young child feeding corners |
| Water, sanitation and hygiene | Provided water purification tablets and waste bins  
Installed water filtration units in two hospitals with a capacity for the provision of 5000 gallons per hour of safe drinking water  
Provided solarized water filtration plants in five hospitals  
Trained health workers on IPC in health facilities |
| Cholera | Expanded sentinel surveillance sites from 330 to 813 sites across 126 districts  
Deployed three laboratory specialists to strengthen laboratory capacity  
Trained health workers on case management of the oral cholera vaccine  
Supported mass immunization campaigns |
| Malaria | Supported the establishment of a national coordination task force  
Procured and allocated malaria diagnostic tests and antimalarial medicines  
Deployed field entomologists and malaria intervention experts on case management and surveillance  
Distributed 1.2 million long-life insecticide nets |
| Dengue | Provided case definition and treatment guidelines  
Supported daily monitoring of trends in flood-affected districts  
Provided rapid diagnostic and antigen test kits |
| Measles and rubella | Deployed district disease surveillance officers and district monitors  
Supported mass immunization campaigns |
Decades of conflict, terrorism, recurring climatic shocks, disease outbreaks, instability and widespread poverty have collectively weakened many institutions across Somalia, especially the health system, which remains fragile, underresourced and understaffed. The country is currently facing one of the most severe droughts in its history, with a looming famine and possibility of severe loss of life due to hunger, malnutrition and disease. Currently, 7.8 million people are affected and 3.6 million are displaced as they search for food, water, shelter, health care and any assistance available. Approximately 1.4 million children are facing acute malnutrition, including 329,500 who are likely to become severely malnourished. The drought is increasing endemic-prone diseases, with surges of cholera, measles and acute diarrhea disease reported in 2022. 

During the year, WHO supported 281 primary health care facilities and deployed 148 mobile outreach teams to respond to the health needs of millions of people. As leader of the health cluster at federal and state levels, WHO is strengthening local partnerships to maximize health benefits and build resilience. In ensuring the provision of basic health services in hard-to-reach districts, WHO collaborated with 55 cluster partners, including 21 international nongovernmental organizations (NGOs), 30 national NGOs and United Nations partners.

To maintain operational capacities of the health sector, WHO provided essential medical supplies to health facilities, including emergency health kits, trauma kits, cholera kits, severe and acute malnutrition kits to treat children with health complications of malnutrition, PCR testing machines and testing kits, genomic sequencing devices, laboratory consumables, face masks, biosafety cabinets, oxygen concentrators, and office and IT equipment to establish emergency operations centres. These supplies helped to strengthen emergency responses to public health priority diseases, including pneumonia, cholera, measles and malaria, and to provide lifesaving health services through the provision of primary health care services. In March 2022, WHO and partners handed over a duplex pressure swing adsorption oxygen plant, capable of filling 100 40-litre oxygen cylinders a day - enough to serve up to 25 intensive care patients at once.

WHO supported federal and state health ministries by deploying 101 integrated outreach teams in drought-affected districts to vaccinate vulnerable populations against measles, polio, diphtheria, pertussis, hepatitis B, childhood tuberculosis, tetanus and COVID-19, in addition to providing oral rehydration salts, zinc, vitamin A and basic medical consultations. Building on the success of COVID-19 surveillance, WHO deployed 2164 community health workers and 237 district rapid response teams in 79 districts across seven states to help strengthen community-based disease surveillance. CHWs play a critical role in active surveillance, visiting around 300,000 households every month to screen children with signs of measles, pneumonia, diarrhoea, cholera, malaria and acute malnutrition.

WHO and partners conducted five rounds of polio vaccination campaigns in 2022, vaccinating 3.6 million children aged under 5 years, and an additional 2.4 million children aged 5–10 years. As part of the country’s extensive polio transition strategy, WHO provided technical support to local authorities on converting existing human and logistic structures developed for polio eradication to integrated health and nutrition teams for improved routine immunization, data-driven surveillance, risk communication and community engagement. In response to the cholera outbreak, WHO supported 64 stabilization centres, eight cholera treatment centres, and 15 oral rehydration points. Training sessions were provided to health workers in the management of severe acute malnutrition with medical complications cases, health facilities were supported through the provision of medical supplies, and laboratory capacity was strengthened with critical supplies to support bacteriological testing in the states.

Table 13 summarizes WHO achievements in responding to the protracted complex emergency in Somalia.
### Strengthening essential health services
(key achievements as of 25 November 2022)

- **2.5 million children** vaccinated against measles
- **1.3 million children** vaccinated with an additional dose
- **71 000 zero-dose children** received the Penta-1 vaccine
- **27 000 pregnant women** received tetanus and diphtheria vaccine
- **88 822 children** received vitamin A supplements
- **30 000 oral rehydration tablets** distributed among drought-affected families

### Responding to cholera
(key achievements as of 30 September 2022)

- **Over 897 000** people aged 1 year and above received at least one dose of the cholera vaccine in nine drought-affected districts
- **12 734 patients** received treatment in facilities supported by WHO
- **1.2 million people** were reached with cholera preventive messages across 25 drought-affected districts reporting cholera cases

© WHO
The Syrian Arab Republic is experiencing a protracted political and socioeconomic crisis that has resulted in a severe deterioration of living conditions. The already fragile health system is overstretched with additional strain from the COVID-19 pandemic. Nearly one quarter of hospitals and one third of primary health care centres remain non-functional and unable to respond to growing health needs. There is a chronic shortage of health care staff driven by displacement, death and injury, particularly in the north-east. As the crisis enters its 12th year, 6.9 million people remain internally displaced and 5.6 million people have fled the country as refugees, the vast majority to neighbouring countries. Half a million children are chronically malnourished and outbreaks from epidemic-prone diseases are increasing.

Since January 2022, WHO has delivered 114 trucks of medical supplies at a value of US$ 11.4 million into the north-east, bringing health care supplies and medicines to those that need it most. After the snowstorm at the start of the year, WHO immediately deployed mobile teams and ambulances to ensure the provision of essential health services.

With financial support from donors, WHO procured lifesaving treatments in the first days of the cholera outbreak and delivered a 60-tonne shipment of cholera kits, oral rehydration solutions, rapid diagnostic tests, and medical supplies for intravenous rehydration treatment, in addition to chlorine for water purification. The shipments, airlifted from WHO’s logistics hub in Dubai, enabled health authorities and partners to provide treatment for 2000 severe cholera cases and almost 190 000 cases of diarrhoea with mild symptoms. In Aleppo governorate, WHO trained 100 health care workers on surveillance, IPC measures, and case management. The capacity of cholera treatment units was expanded through the delivery of 30 patient beds and needed accessories, while five laboratories received financial and technical support through WHO to activate bacteriological testing and rapidly detect and identify epidemic diseases and outbreaks in hard-to-reach and high-risk areas. Two million doses of the oral cholera vaccine were approved for use in November 2022, and over 1.9 million people were vaccinated during the campaign, representing 98% of the targeted population in selected high-risk governorates.

With support from WHO and partners, the Ministry of Health launched a polio, measles and rubella vaccination campaign, aiming to vaccinate 2.4 million children aged under 5 years in all Syrian governorates, with a special focus on camps and informal settlements. More than 1030 health facilities and 790 mobile medical teams, supported by nearly 9500 health workers, were mobilized as part of the campaign. WHO assisted the Ministry of Health with planning, supervision, and training health workers prior to the campaign, along with support for the independent post-campaign evaluation. WHO-supported mobile vaccination teams are present in camps and informal settlements – particularly in the north-east – targeting over 28 000 children aged under 5 every few months. In response to the measles outbreak, WHO organized a measles surveillance and outbreak response workshop. The three-day training covered measles infection, prevention and control, case management, community engagement, and enhanced surveillance, with a special focus on surveillance reporting quality.

8.4 Syrian Arab Republic

Complex emergency

The Syrian Arab Republic is experiencing a protracted political and socioeconomic crisis that has resulted in a severe deterioration of living conditions. The already fragile health system is overstretched with additional strain from the COVID-19 pandemic. Nearly one quarter of hospitals and one third of primary health care centres remain non-functional and unable to respond to growing health needs. There is a chronic shortage of health care staff driven by displacement, death and injury, particularly in the north-east. As the crisis enters its 12th year, 6.9 million people remain internally displaced and 5.6 million people have fled the country as refugees, the vast majority to neighbouring countries. Half a million children are chronically malnourished and outbreaks from epidemic-prone diseases are increasing.

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With support from WHO and partners, the Ministry of Health launched a polio, measles and rubella vaccination campaign, aiming to vaccinate 2.4 million children aged under 5 years in all Syrian governorates, with a special focus on camps and informal settlements. More than 1030 health facilities and 790 mobile medical teams, supported by nearly 9500 health workers, were mobilized as part of the campaign. WHO assisted the Ministry of Health with planning, supervision, and training health workers prior to the campaign, along with support for the independent post-campaign evaluation. WHO-supported mobile vaccination teams are present in camps and informal settlements – particularly in the north-east – targeting over 28 000 children aged under 5 every few months. In response to the measles outbreak, WHO organized a measles surveillance and outbreak response workshop. The three-day training covered measles infection, prevention and control, case management, community engagement, and enhanced surveillance, with a special focus on surveillance reporting quality.

The Syrian Arab Republic is experiencing a protracted political and socioeconomic crisis that has resulted in a severe deterioration of living conditions. The already fragile health system is overstretched with additional strain from the COVID-19 pandemic. Nearly one quarter of hospitals and one third of primary health care centres remain non-functional and unable to respond to growing health needs. There is a chronic shortage of health care staff driven by displacement, death and injury, particularly in the north-east. As the crisis enters its 12th year, 6.9 million people remain internally displaced and 5.6 million people have fled the country as refugees, the vast majority to neighbouring countries. Half a million children are chronically malnourished and outbreaks from epidemic-prone diseases are increasing.

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With support from WHO and partners, the Ministry of Health launched a polio, measles and rubella vaccination campaign, aiming to vaccinate 2.4 million children aged under 5 years in all Syrian governorates, with a special focus on camps and informal settlements. More than 1030 health facilities and 790 mobile medical teams, supported by nearly 9500 health workers, were mobilized as part of the campaign. WHO assisted the Ministry of Health with planning, supervision, and training health workers prior to the campaign, along with support for the independent post-campaign evaluation. WHO-supported mobile vaccination teams are present in camps and informal settlements – particularly in the north-east – targeting over 28 000 children aged under 5 every few months. In response to the measles outbreak, WHO organized a measles surveillance and outbreak response workshop. The three-day training covered measles infection, prevention and control, case management, community engagement, and enhanced surveillance, with a special focus on surveillance reporting quality.
8.5 Yemen

Protracted complex emergency

The aftermath of years of conflict and deepening humanitarian crisis in Yemen resulted in significant disruptions to public and social services for millions of people in 2022. With more than 50 active front lines, the escalating conflict is causing an increasing number of injuries, trauma and deaths, along with mass displacement. Vector-borne diseases are surging, including dengue fever and malaria, and severe acute respiratory infections such as COVID-19. The national health care system is collapsing, and is facing a lack of specialist services and staff. Less than half of health facilities remain fully functional and those that remain open lack qualified staff, medicines, and medical equipment, such as masks and gloves. An estimated 24 million people (75% of the population) will require humanitarian assistance in 2023, with 19 million individuals already facing food insecurity. Children are suffering the most, with some 2.2 million already acutely malnourished, including nearly 500 000 children suffering from severe acute malnutrition, many with medical complications. Widespread malnutrition is increasing susceptibility to outbreaks of cholera and other communicable diseases.

WHO continues to play a leading role in advising and supporting Yemeni health authorities, partners and community health workers in their efforts to sustain essential and lifesaving health facilities and services throughout the country and reach the most vulnerable populations. WHO is ensuring lifesaving medical and nutrition care for children suffering from severe acute malnutrition with medical complications. With support from partners, WHO provided essential medicines, equipment, and 192 paediatric kits for treating childhood illnesses to eight high-priority hospitals in Yemen – enough for treating some 18 000 cases of severe acute malnutrition among children. Training was provided to health workers on treating and mitigating the occurrence of severe acute malnutrition. Nutrition and health care knowledge for children, adolescents and mothers was disseminated through social media, TV and radio to more than 3 million people in Yemeni districts faced with overall acute malnutrition rates of more than 15%.

In response to the cholera outbreak and heightened risk of other infectious diseases, WHO and partners supported health facilities in high-risk areas through installing incinerators for the safe disposal of medical waste. Awareness training about proper medical waste management was conducted at all the facilities. PPE, disinfection and hygiene improvement supplies were distributed to 280 health care facilities to prevent hospital-acquired infections among staff, patients and visitors. Water quality monitoring and surveillance has been initiated or improved in 33 cholera high-risk districts. WHO is rehabilitating and improving infrastructure instrumental to water safety and quality at 45 targeted health care facilities. The upgrades have included fixing sinks, toilets, and plumbing, and installing water tanks. The programme has also included delivering more than 24.5 million gallons of fresh water by truck to 80 health care facilities.

Given the high burden of conflict-related trauma, WHO and partners worked closely with the Ministry of Public Health and Population to sustain and strengthen the pre-hospital referral system through the provision of 11 ambulances, 33 trained paramedics and drivers, 14 operating staff, and a dedicated 24/7 dispatch centre for the 195 emergency telephone number. Operational support for fuel and medical equipment was provided, along with capacity-building to improve the quality of health care provision. With financial support from donors, WHO supplied vital training, equipment and supplies, thereby enabling medical facilities to improve trauma, emergency, and blood bank services for thousands of Yemeni citizens in conflict zones. A new trauma centre was built to increase capacity to treat wounded or injured people. In collaboration with the Ministry of Public Health and Population, WHO trained 113 front-line workers in pre-hospital management of trauma patients. Oxygen stations were installed in main hospitals across the country, providing critical support to hospitals for administering anaesthesia and treating medical emergencies, including severe cases of COVID-19, major trauma, cardiac arrest and shock. WHO provided training to hospital staff on how to utilize, monitor and maintain them efficiently. During the first half of 2022, hospitals where oxygen stations were installed provided medical services for almost 400 000 patients, supporting an estimated 9000 major surgeries and 121 000 deliveries.

In response to the floods in July 2022, which affected over 35 000 households, WHO provided emergency health and laboratory supplies, supported specialized trauma teams, and joined field missions with national health authorities and other humanitarian partners. WHO supported four specialized trauma teams and six on-duty ambulances. Thirty-four epidemiological early warning detection points were established in Marib, one of the most affected governorates, where thousands of shelters for displaced families were destroyed. Additional essential emergency health supplies were also released to the rapid response and emergency medical teams. Along with its constant monthly supply of fuel to 11 hospitals, WHO and the subnational health cluster provided the Central Public Health Laboratory with equipment and trained 25 laboratory technicians on the microscopic diagnosis of malaria. Additional cholera kits, intravenous fluids, rapid diagnostic tests for cholera, and supplementary modules of the interagency emergency health kit were procured and allocated.

Therapeutic Feeding Centre (TFC) at Al-Sadaqah hospital in Aden during the European Civil Protection and Humanitarian Aid Operations (ECHO) team visit to the hospital in November 2022.
WHO’s Country Liaison Officer, Dr Yutaro Setoya, surveys the damage caused by the volcanic eruption and tsunami in the Kanokupulu area of Tonga’s main island of Tongatapu.

© WHO / Okoloni Kalonihea
Home to almost 1.9 billion people across 37 diverse countries and territories, the WHO Western Pacific Region is vulnerable to a variety of natural disasters. The impact of climate change on health in the region is significant, with small island States making up two thirds of countries globally that suffer the highest relative loss from disasters – yet contributing the smallest carbon footprint. Natural disasters, made worse through the effects of climate change, place those in vulnerable settings at increased risk of adverse health outcomes, including injury and death, and increased risk of infectious disease outbreaks.

WHO supported Member States in their COVID-19 response through surveillance, testing and sequencing activities, vaccination efforts, RCCE, operations support and logistics, and technical guidance for public health and social measures. As part of its coordination role, WHO established and developed partnerships, providing Member States with technical support from a range of regional expertise, including emergency medical teams, the Pacific Joint Incident Management Team, and GOARN.

Given the diversity of countries and territories in the region, the extent and impact of COVID-19 varied significantly, with many Pacific nations facing their first waves of community transmission in 2022. In Samoa, after the first community case was detected in March 2022, WHO and partners delivered over 15 tonnes of lifesaving COVID-19 supplies to support health workers and treat patients. When the first cases of COVID-19 were reported in Temotu province, Solomon Islands, in November 2022, the Solomon Islands Emergency Medical Team, trained and supported by WHO, was rapidly deployed to provide immediate surge capacity. Four WHO experts and members from the Fiji Emergency Medical Assistance Team were deployed to Tuvalu days after its first case of community transmission was detected, along with around 800 kilograms of medical supplies. With technical support from WHO, a new laboratory was opened in Tonga in December 2022, capable of conducting real-time PCR testing for COVID-19, as well as priority pathogens such as influenza and dengue.

The region experienced three distinct COVID-19 waves during 2022, requiring many Member States to adapt their COVID-19 preparedness and response efforts. Using a risk-based approach, WHO supported governments in modifying border measures based on the local epidemiological situation, capacity of the health system, volume of travellers, and vaccination coverage. In Cambodia, WHO worked with the government to update border control measures in response to the Omicron variant and assisted in establishing an emergency operations centre and incident management system at national and provincial levels. To counter misinformation, distrust and growing “COVID fatigue”, WHO worked with a variety of partners to implement RCCE activities, including tailored messaging on staying safe during Ramadan in Malaysia; launching a back-to-school safety programme in the Lao People’s Democratic Republic; using social listening tools in Fiji to understand public views on COVID-19; and conducting over 200 information sessions with business owners in the capital of Papua New Guinea, including dedicated sessions for women-led businesses.
As vaccines became readily available during the year, WHO supported targeted vaccination campaigns to “reach the unreached” throughout the region. On a remote island in the Philippines, WHO partnered with a non-profit organization to better understand barriers to accessing vaccines. In response, teams of local health care workers were deployed to conduct a variety of RCCE activities, resulting in vaccination rates in target villages almost tripling in the months afterwards to 79%. The Government of Viet Nam, with the support of WHO, used its mobile vaccination teams to conduct home visits for older adults and people with disabilities who were unable to travel to health facilities. Mobile communication officers were equipped with loudspeakers and communication materials to share reliable health advice in local languages for people living in remote ethnic minority communities. WHO provided technical advice to the Ministry of Health in Malaysia in the development of tailored information materials, translated into local languages, to ensure all communities had equal access to information on vaccines. As of January 2023, these combined efforts have resulted in over 1.71 billion people in the region receiving their last dose of their primary vaccine series for COVID-19.

The region experienced several acute emergencies in parallel to the pandemic, including sporadic outbreaks of avian influenza in China, leptospirosis in Fiji, dengue in the Lao People’s Democratic Republic and Viet Nam, flooding in Malaysia and Viet Nam, the volcanic eruption and tsunami in Tonga, cholera and typhoons in the Philippines, drought in Kiribati and Tuvalu, and mpox in multiple Member States, including Australia, Cambodia, Japan, Malaysia, New Zealand, the Republic of Korea, Singapore and Viet Nam. Table 14 summarizes WHO activities in response to selected emergencies in the Western Pacific Region.

<table>
<thead>
<tr>
<th>Emergency</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volcanic eruption and tsunami</td>
<td>- Provided critical communications infrastructure</td>
</tr>
<tr>
<td></td>
<td>- WHO-trained Tonga Emergency Medical Assistance Team deployed within two days</td>
</tr>
<tr>
<td></td>
<td>- Undertook medical evacuations</td>
</tr>
<tr>
<td></td>
<td>- Provided essential health services</td>
</tr>
<tr>
<td>Tonga</td>
<td></td>
</tr>
<tr>
<td>Multiple acute emergencies</td>
<td>- Strengthened early detection of infectious diseases</td>
</tr>
<tr>
<td>The Philippines</td>
<td>- Ensured access to safe drinking-water</td>
</tr>
<tr>
<td></td>
<td>- Coordinated with health cluster partners</td>
</tr>
<tr>
<td></td>
<td>- Provided mental health and psychosocial support services</td>
</tr>
<tr>
<td>Drought</td>
<td>- Supplied 150,000 water purification tablets and 500 water testing kits</td>
</tr>
<tr>
<td>Kiribati and Tuvalu</td>
<td>- Provided water, sanitation and hygiene supplies: jerrycans, rainwater tanks, portable toilets, water purifiers</td>
</tr>
</tbody>
</table>

Table 13. WHO activities in response to selected emergencies in the Western Pacific Region


Annexes

Annex 1. Responding to health emergencies in 2022: financial analysis

Figure A1.1 WHO’s health emergency operations and appeals: 2022 financing and utilization, including COVID-19 (US$ million)

Total funding available for emergency operations and appeals in 2022: US$ 2.721 billion

Total utilization under emergency operations and appeals in 2022: US$ 1.746 billion

Responding to health emergencies in 2022

Annex 1. Responding to health emergencies in 2022: financial analysis

Figure A1.1 WHO’s health emergency operations and appeals: 2022 financing and utilization, including COVID-19 (US$ million)
Figure A1.2 WHO’s health emergency operations and appeals: 2022 financing by major office (US$ million)

Total funding available for emergency operations and appeals in 2022: US$ 2.721 billion

Figure A1.3 WHO’s response to COVID-19: financing and utilization in 2022 (US$ million)

Total funding available for WHO’s COVID-19 response in 2022: US$ 1.679 billion
Total utilization for WHO’s COVID-19 response in 2022: US$ 1.106 billion
### Annex 2. List of contributors to WHO's emergency appeals and operations in 2022

<table>
<thead>
<tr>
<th>Funding source name</th>
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<td>Asian Development Bank</td>
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<td>Australia</td>
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<td>Austria</td>
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<td>Azerbaijan</td>
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<td>Bill &amp; Melinda Gates Foundation</td>
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<td>Canada</td>
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<td>Caribbean Development Bank</td>
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<td>China</td>
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<td>Contributions received by PAHO (for emergency response excluding COVID-19)</td>
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<td>Czech Republic</td>
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<td>Democratic Republic of the Congo</td>
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<td>European Commission</td>
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<td>Ford Foundation</td>
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<td>Foundation for Innovative New Diagnostics (FIND)</td>
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<td>United Kingdom of Great Britain and Northern Ireland</td>
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<td>World Food Programme</td>
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**Please note:** The list of contributors above pertains to contributions made in 2022. Carry over funding received prior to 2022 is not reflected in this table.

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3 Contribution from the International Development Association
4 Contribution from the African Development Bank
5 Contribution from the World Bank
6 Contribution from the Islamic Development Bank