

WHO's Operational Update on Health Emergencies



Hospitals in Gaza are at a breaking point. Credit: WHO

Since 7 October 2023, the escalating hostilities in Israel and the occupied Palestinian territory has taken a toll on the physical and mental health of civilians. As of 14 November 2023, 1200+ deaths, 5400 injuries, 239 hostages and 33 attacks on health care have been reported in Israel. 11,500 deaths and 29,000 injuries have been recorded in Gaza. 195 deaths and 2625 injuries have been reported in the West Bank. A total of 273 attacks on health have been reported in the occupied Palestinian territory.

WHO is supporting health authorities in both Israel and the occupied Palestinian territory. In line with International Humanitarian Law, WHO calls for unimpeded and safe access for humanitarian aid to Gaza, for patients to receive care where they are, for protection of health care at all times, and for a humanitarian ceasefire. WHO also calls for the immediate release of all hostages, along with urgent access to each of them and delivery of medical care.

WHO is appealing for [US\\$ 110 million](#) to respond to the humanitarian needs in the occupied Palestinian territory, particularly in Gaza and [US\\$ 30 million](#) for readiness in Egypt, Jordan, Lebanon and the Syrian Arab Republic. For more information click [here](#).

Please note: the situation on the ground is changing rapidly. The below article presents WHO's actions in the occupied Palestinian territory as of 1 November 2023. The following article (page 3) presents WHO's actions in Israel, as of 10 November 2023.

Ensuring access to lifesaving essential health care services in the occupied Palestinian territory

In the occupied Palestinian territory, WHO swiftly released US\$ 15 million from its [Contingency Fund for Emergencies](#) for the immediate procurement of essential medications and supplies.

On the ground, WHO and its partners are mounting a multi-pronged response, including:

- **Shipping lifesaving supplies through the Rafah crossing point:** on 14 October 2023, [WHO shipped 78 cubic metres of health supplies from its logistics hub in Dubai to Al-Arish airport in Egypt](#) — just 20 minutes from Rafah. From 20 to 25 October 2023, WHO also shipped another 40 metric tons of lifesaving emergency supplies from its Dubai logistics hub, which include trauma medicines and health supplies to treat wounded patients and patients suffering from heart disease, hypertension, diabetes and respiratory problems, as well as basic essential health supplies. As of 1 November 2023, a total of eight trucks carrying 252 pallets have entered Gaza via Rafah. The supplies have been distributed to seven hospitals (two in the north, and five in the south), and to the Palestine Red Crescent Society to support ambulance operations.

Continued on next page ...

In this issue

Response to health emergencies	2
Preparedness and readiness	12
Operations support and logistics	17
OpenWHO and learning	18
Key links and useful resources	19

Key figures on WHO's work in emergencies (as of 19 October 2023)



US\$ 74 929 866 have been released by [WHO's Contingency Fund for Emergencies \(CFE\)](#) to 19 health emergencies in 2023, including for the Türkiye/Syria earthquakes, the conflict in the occupied Palestinian territory, the Ethiopia complex emergency, the global cholera (multi-country) crisis, the Sudan conflict and the Libya flooding (as of 24 October 2023). For more information about the CFE's work in 2022, see the [CFE's 2022 annual report: Enabling quick action to save lives](#)



To date in 2023, [Standby Partners](#) have supported WHO's operations through the deployment of **34 experts** in response to **11 graded emergencies**, including for the global cholera response, the emergencies in the Democratic Republic of the Congo, Haiti, Sudan and Ukraine, and the Greater Horn of Africa Drought and Food Insecurity crisis. In total, **16 countries** have been supported by Standby Partners' deployments in 2023. The average duration of each deployment is **5 months**. Currently, **6 Standby Partners** are deployed: [CANADEM](#), the [Dutch SURGE Support](#), [iMMAP](#), [NORCAP](#), [RedR Australia](#) and [UK-Med](#). These deployments are provided free of charge to WHO and Member States. In 2022, 80 Standby Partners deployments had been recorded for 16 emergencies in 30 countries. For more information, see the [2022 Standby Partners annual report](#).



6 GOARN deployments are currently ongoing across WHO's six regions. Since the beginning of 2022, GOARN has supported **166 deployments**, of which **160** have been completed as of 23 October 2023.



2.1 million online data analysed by WHO and the Africa Infodemic Response Alliance between 1-30 September 2023 as part of social listening and infodemic management support to Member States.



OpenWHO totaled **8 million enrolments** for online learning available in **71 national and local languages**, including 47 courses dedicated to the COVID-19 response.

For the latest data and information on WHO's work in emergencies, see the [WHO Health emergencies page](#) and the [WHO Health Emergency Dashboard](#).



WHO delivers medical supplies to Lebanon as violence in the occupied Palestinian territory intensifies. Credit: WHO

- **Strengthening surveillance:** WHO is collaborating with the Palestinian Ministry of Health and partners, including the [United Nations Relief and Works Agency for Palestine Refugees in the Near East \(UNRWA\)](#), to ensure that disease surveillance and control measures are reinforced, especially in over-crowded schools and other collective centers where displaced persons are congregating.
- **Enhancing mass casualty response:** WHO-supported mass casualty response plans and protocols were activated in seven Gaza hospitals at the beginning of hostilities. WHO has previously provided extensive mass casualty management training to health workers in all seven hospitals.
- **Supporting case management:** surge staff deployed by Health Cluster partners are continuing to support case management in Gaza's hospitals. Two Gaza Emergency Medical Teams (EMTs) have been deployed to support Al-Shifa, Al-Aqsa, and Al Najjar hospitals to expand their respective emergency departments' capacities and open new Green Zones, which provide treatment for walk-in patients within the hospitals. WHO-provided emergency tents and equipment are being used.
- **Monitoring attacks on health care:** WHO continues to systematically [monitor health attacks](#), as well as to document and report on health needs and restrictions on health access.
- **Scaling up mental health and psychosocial services:** working with the Palestinian Ministry of Health to provide mental health and psychosocial services for the most vulnerable among the population remains a priority for WHO.
- **Pre-positioning critical medical supplies in Lebanon, in preparation for any potential health emergency:** on 15 October 2023, [two shipments arrived in Beirut](#) from WHO's logistics hub in Dubai, which include enough surgical and trauma medicines and supplies to meet the needs of 800 to 1000 injured patients. WHO is also working with the Ministry of Public Health and health partners in Lebanon to strengthen preparedness and readiness within the health system to respond to potential increases in casualties due to escalating violence. As part of these efforts, WHO is supporting the activation of the public health emergency operations centre that will facilitate improved coordination of emergency responses at both central and sub-national levels.

WHO calls for an end to hostilities and the active protection of health care and civilians against attacks. WHO also calls for unimpeded and sustained access for health and humanitarian supplies, as well as for personnel, and the evacuation of patients and the injured. WHO further reiterates its call for the respect and protection of health care.

“Even amid the chaos and suffering brought on by conflict and war, every person – without exception – has the right to health, a right that should be upheld in all circumstances and without exception.”

Dr Ahmed Al-Mandhari

WHO Regional Director for the Eastern Mediterranean

Israel's health system responds to the October 2023 attacks

On Saturday 7 October 2023, Hamas launched thousands of rockets toward Israel and breached through the perimeter fence of Gaza at multiple locations. Members of armed groups entered into Israeli towns, communities, and military facilities near the Gaza Strip, killing and capturing Israeli forces and civilians. The Israeli military declared “a state of war alert,” and begun striking targets in the Gaza Strip. Over 1200 people were left dead after the attacks, and over 5400 persons have been injured during and following the initial October attack, including due to ongoing hostilities affecting communities across Israel. Due to the direct impact of the attack on civilians, hundreds of thousands of Israelis were evacuated from southern and northern parts of the country.



Victims of the 7 October 2023 attacks. Credit: WHO/Europe

As of 10 November 2023, 25 attacks on health care have been recorded in Israel, with 19 related deaths. Over 200 Israeli hostages remain in captivity, including women, children and older people, with many reportedly suffering from pre-existing health conditions requiring continuity of care. WHO and UN partners have repeatedly called for their immediate and unconditional release.

The day after the 7 October 2023 attacks, Dr Hans Henri P. Kluge, WHO Regional Director for Europe offered WHO's support to the Israeli Ministry of Health. During the first week of November 2023, the WHO Regional Director travelled to Israel, where he met with Israeli health officials, visited several health facilities involved in the response to the attacks, and met with the families of hostages. During his visit, the Regional Director committed to an immediate scale up of WHO engagement with Israel in the area of mental health.

Conflicts and other health emergencies can have long-lasting consequences for people's mental health, especially as situations are prolonged. After the 7 October 2023 attacks, it is anticipated that hundreds of thousands of individuals and families need urgent mental health psychosocial support to address the immediate emotional suffering and to prevent future post-traumatic symptoms. The ongoing conflict has had a profound impact on the mental well-being of Israelis and is expected to reverberate throughout the population for years to come.

In response to these pressing concerns, WHO has mobilized dedicated teams to engage further with Israel and collaborate on national efforts to strengthen the resilience of individual families and communities through mental health interventions. WHO will also engage with a range of civil society organizations involved in the response at the community level.

“Mental health problems appear to be rapidly spreading among the country's population. The human suffering is immense. People just don't feel safe anymore, and this is a complete change in their recent history. (...) Survivors, the injured, psychiatrists, doctors, first responders and soldiers – all their accounts are horrific. The shadow of national shock and grief has plunged this country into night. When mental health perishes, so does physical health.”

Dr Michel Thieren

WHO Special Representative to Israel

For more information, click [here](#).

WHO provides emergency support to the Armenia refugee response

Since September 2023, WHO has been supporting the Ministry of Health of Armenia with the health response for refugees from the Karabakh region. The UN estimates [US\\$ 97 million are needed to provide urgent humanitarian aid and protection to refugees and host communities until March 2024](#), out of which US\$ 10.8 million are needed for health. For more information, click [here](#).



WHO-trained psychologists providing mental health support to burns patients. Credit: WHO/Spartak AVETISYAN

Since 20 September 2023, over 101 800 people have been displaced from the Karabakh region into Armenia. Compounding the humanitarian impact of this population movement, a large explosion occurred at a fuel depot in Berkadzor on 25 September 2023, killing 170 people and leaving over 200 people with moderate to severe burns requiring advanced medical care.

WHO immediately activated its emergency systems, enabling a prompt response on the ground in support of the Armenian Ministry of Health. Its immediate objective is to support critical life-saving operations and the broader public health response.

Initial priorities and challenges for the health response were quickly outlined in the [Public Health Situation Analysis](#) and the inter-agency and multi-stakeholder [Refugee Response Plan for Armenia](#). These challenges include insufficient capacity of the rural health system to meet the needs of the surged population, as well as difficulties with ensuring refugees have sufficient access to information on how to access essential health services. Infectious disease outbreaks remain a risk for refugees and host communities alike, as Armenia continues to face an outbreak of measles and winter months are likely to have increased circulation of respiratory viruses. Burn patients affected during the fuel depot explosion will also require post-surgical physical and psychological rehabilitation, as well as tailored mental health support as they recover.

To date, WHO has taken the following key actions as part of the overall immediate response:

Establish Emergency Medical Teams (EMT) and EMT Coordination Cell

WHO and the Armenian Ministry of Health quickly established an Emergency Medical Teams Coordination Cell (EMTCC) to bring in specialized care from across the world and provide the best possible medical services for the burn patients. To date, WHO has supported the deployment of four EMTs, respectively from Israel, Italy, the United Kingdom of Great Britain and Northern Ireland and the United States of America. These EMTs have been working in medical centers and hospitals across Yerevan to strengthen hospital capacity and provide rehabilitation services, surgeries and wound management.

WHO has also supported the deployment of Belgium's First Aid and Support Team (B-FAST) to carry out a medical evacuation assessment. Under the [European Union Civil Protection Mechanism](#), Bulgaria, Germany, Italy, and Spain have supported further medical evacuations. As of 23 October, 19 patients have been evacuated to various countries, including Belgium, Bulgaria, France, Italy, Spain, and the United States of America to receive life-saving health services.

Continued on next page ...



Medical evacuation of burns survivors in Yerevan, Armenia. Credit: WHO/Spartak AVETISYAN

Scale-up mental health and psychosocial support

Providing mental health and psychosocial support (MHPSS) for refugees is an absolute priority for WHO. In this respect, WHO trained 10 psychologists in psychological first aid, who will support the emergency MHPSS team providing psychosocial interventions for burn patients and their families. Another 10 psychologists were trained to support the mental health hotline, which provides callers with accessible, timely and much needed access to trained mental health professionals.

Strengthen primary healthcare and vaccination rollout

WHO trained 40 biomedical student volunteers from Yerevan State University and Erebuni Medical Academy on risk communication and infectious diseases. They will support national medical teams as part of the nationwide catch-up immunization campaign planned from 17 October to 17 December 2023, by raising awareness about the importance of vaccines among at-risk groups and the general public.

Furthermore, WHO has developed a poster and a factsheet with frequently asked questions about registration in primary health care centres, which will help refugees navigate the Armenian health system.

Ensure supplies and logistics

WHO delivered 10 burn modules from its trauma and emergency surgery kits, which will be sufficient to meet the advanced care needs of 500 burn patients. WHO also dispatched five noncommunicable diseases kits containing essential medicines

and insulin for 50 000 people over three months. Since mid-September 2023, WHO has dispatched 1672 kilograms of emergency medical supplies worth US\$ 71 300+.

Ensure health sector coordination

WHO co-chairs health sector meetings with the Armenian Ministry of Health to coordinate and facilitate emergency response activities across a wide range of agencies and partners.

“Armenian doctors have been incredibly welcoming. I know they had a very hard past few weeks, so it has been very rewarding to work alongside them. My hope for my work here is that we can really provide these patients with the best possible outcome. I also hope that we build into the capacity of the healthcare system, that we really provide support to the doctors and nurses with burn expertise.”

Sasha Thew

Lead of the USA Samaritan's Purse EMT

Moving forward, WHO will continue to actively support the Ministry of Health of Armenia and all health workers to ensure health remains at the heart of the response and all refugees have access to the essential services they need.

Supporting the response to the earthquakes in Herat, Afghanistan

An estimated 114,000 most affected people are in urgent need of life-saving health assistance following series of earthquakes in western Afghanistan between 7 and 15 October. The WHO-led health sector appeals for [US\\$ 7.9 million to ensure affected communities will be provided with essential health services in the next six months](#). For up-to-date information on the situation following the earthquakes which hit the Herat region in October 2023, click [here](#).



Earthquake in Herat province, Afghanistan. Credit: WHO / Zakarya Safari

On 7, 11 and 15 October 2023, three major earthquakes struck the western Herat region of Afghanistan, causing widespread devastation in a country already facing one of the world's largest humanitarian crises. Women, children and vulnerable populations are gravely affected by the disaster. As of 19 October 2023, 1482 deaths and 2100 injuries have been reported and 3,330 households have been destroyed.

Based on initial assessment, 40 health facilities have been damaged, affecting the delivery of health services for approximately 580,000 people.

WHO's Country Office in Kabul and field office in Herat rapidly mobilized resources and extended immediate life-saving support for the affected population. Within a few hours of the first earthquake, WHO and 19 health partners were on the ground, providing healthcare services to the affected populations.

By 17 October 2023, WHO and Health Cluster partners, had reached 32,500+ individuals impacted by the earthquake with trauma care and rehabilitation services, primary health care and mental health and psychosocial support (MHPSS) services as well the provision of medicines and medical supplies.



WHO is present on the ground to support the response to the Earthquake in Herat. Credit: WHO / Zakarya Safari

Continued on next page ...

Key elements of WHO and its health partners' response to the earthquakes in Afghanistan include:



Health cluster coordination. As the lead for the health cluster, WHO has mobilized 19 partners in Herat to provide immediate health services. As of 19 October 2023, 10 coordination meetings have been convened by the Health Cluster to ensure synergy of the health response efforts.



Mass casualty management, trauma and hospital care. Within hours from the first earthquake, WHO teams have been on the ground to support Herat Regional Hospital with hospital care for the injured, delivery of emergency and surgical kits and by activating the mass casualty management protocol. WHO also coordinated the deployment of mobile health and nutrition teams in affected areas and supported an assessment of damage to hospitals health facilities.



Primary health care: 33 health teams were mobilized to provide primary health care and MHPSS to 29 affected villages and another 29 mobile health and nutrition teams from various partner organizations are ready for deployment. As of 17 October 2023, close to 4,500 consultations had been recorded, including 708 psychosocial counseling and 509 trauma consultations.



Reproductive maternal and child health: in collaboration with the Afghanistan Society of Obstetrics and Gynecology, WHO deployed a female team of 11 midwives and 10 medical doctors from Kabul to Herat. Another 10 midwives and eight doctors have also been deployed to various affected villages.



Surveillance: WHO is working with the National Disease Surveillance Response team to enhance preparedness for potential communicable disease outbreaks such as measles, acute respiratory infections, tetanus and acute watery diarrhea. Five WHO-supported surveillance support teams have also been deployed in Zindajan district for active surveillance. As of 26 October 2023, 56 children under ten years have been vaccinated against measles and various rapid diagnostic kits have been deployed.



Mental health and psychosocial support services (MHPSS): WHO deployed two MHPSS experts to engage in capacity-building activities and coordinate the MHPSS technical working group. As of 26 October 2023, WHO had trained 58 health professionals, including seven female doctors and nurses, from eight districts in Herat province to escalate mental health services in earthquakes-affected areas.



Risk communication and community engagement (RCCE). WHO is working with the Ministry of Public Health to assess the needs for RCCE in affected communities. The team visited six villages in Zindajan to conduct focus group discussions and design interventions to reach people with life-saving information.



Operations support and logistics: WHO has so far deployed mobile health and nutrition teams, as well as 30 metric tonnes of medicines and medical supplies to Herat Regional Hospital and other health facilities. WHO is also supporting the Herat pre-hospital referral and ambulatory service to facilitate the quick transfer of patients to hospitals, including by providing fuel for ambulances, and has provided more than 100 tents to replace damaged health facilities.



Prevention of Sexual Exploitation and Abuse: a joint partners' team will be deployed to conduct a sexual exploitation and abuse risk assessments, produce communication material, train frontline responders and create a dedicated helpline.

WHO's response to the Herat earthquakes is supported by OCHA's Afghanistan Humanitarian Fund, the Asian Development Bank, the Bill & Melinda Gates Foundation, the European Civil Protection and Humanitarian Aid Operations (ECHO), the German Federal Government, the US Agency for International Development (USAID) and the World Bank.

Even with the support of WHO and partners, challenges remain. As the harsh winter approaches, the cold weather will intensify the vulnerability of affected people, especially those staying in temporary shelters. Poor infrastructure, overcrowded conditions with limited winter clothing and blankets, as well as shortages of water and food will increase the incidence and severity of infectious diseases, including COVID-19, influenza, measles, and acute watery diarrhea. Urgent action is required to alleviate the suffering of people who have already endured substantial hardships.

Moving forward, WHO will continue to support health authorities to ensure access to essential health services for all affected populations.

WHO/EURO holds a face-to-face training on Early Warning, Alert and Response (EWAR) in Emergencies in the Czech Republic



Participants to the EWAR in Emergencies Face-to-Face Training, Czech Republic, September 2023. Credit: WHO

Health emergencies, disasters and conflict can challenge any health system, including the most robust. To enable rapid response to health emergencies, WHO continues to support countries to strengthen their capacities in early detection and rapid risk assessment of public health threats from all hazards.

In recent years, Member States in the WHO European Region have faced significant emergencies with considerable health consequences, including the COVID-19 pandemic and the Ukraine crisis. These events have underscored the need to enhance signal detection and surveillance capacities, skills and methods in rapid risk assessment as well as the principles of public health response. Together, these functions represent the Early Warning, Alert and Response (EWAR) system in a country.

It is against this backdrop that the WHO Country Office for the Czech Republic, in collaboration with the WHO Regional Office for Europe, the WHO Headquarters and the Istituto Superior di Sanita, Italy conducted the first pilot training for EWAR in Emergencies. Held from 28 to 31 August 2023 in the Czech Republic, this in-person workshop brought together 25 public health officers from the Ministry of Health, the National Institute of Public Health as well as representatives of Regional Public Health Authorities.

The workshop focused on skills needed to implement and rapidly scale up EWAR in health emergency response, and aimed to familiarize Czech epidemiologists and public health experts with existing tools and resources to facilitate EWAR's implementation. These include the [WHO EWAR in Emergencies Operational Guide](#) published in January 2023, the [Epidemic Intelligence from Open Sources](#) initiative, as well as WHO's [Early Warning, Alert and Response System \(EWARS\) in a Box tool](#).

Over four days, participants were challenged to apply EWAR core principles through interactive teamwork and a simulated

emergency scenario. As a result, participants enhanced their knowledge and skills in the areas of surveillance methodologies, surveillance rapid assessment in emergencies, hazard prioritization, signal and information management, risk assessment and characterization, as well as rapid public health investigation.

“Time is crucial during any emergency. We have been proud to host this EWAR workshop delving into how to detect, respond and save lives faster. These EWAR strategies play a pivotal role in preparedness and effective crisis management. Thanks to the WHO team and national technical experts’ commitment during the intensive one-week discussions and hands-on training we are ready to build a resilient health system.”

Dr Zsofia Pusztai

WHO Representative to the Czech Republic

This workshop was financially supported by the US Centers for Disease Control and Prevention. Moving forward, similar workshops will be organized in other European countries and will initially focus on those receiving Ukrainian refugees. WHO's EWAR in Emergencies Operational Guidance will also be translated into all official UN languages by early 2024.

For more information, please write to Lauren MacDonald (macdonaldl@who.int). For more information on the regional workshop click [here](#). For further information on global training initiatives, click [here](#).

Health Resource Availability Monitoring System (HeRAMS): Operational status of the health system in Ukraine

The [Health Resources and Services Availability Monitoring System \(HeRAMS\)](#) initiative aims to provide decision-makers and health stakeholders with vital and up-to-date information on the availability and accessibility to essential health resources and services, and help them identify gaps and determine priorities for intervention. HeRAMS can be rapidly deployed and scaled to support emergency responses as well as routine health information systems, ensuring continuity between emergency and response, health systems strengthening and universal health coverage. As of September 2023, [HeRAMS is deployed in 25 countries across the world](#). HeRAMS has been deployed in Ukraine since November 2022, to help monitor overall health system functionality, including potential damage to infrastructure and basic amenities, populations accessibility to essential health resources and services as well as barriers impeding service delivery.



WHO organized a HeRAMS workshop in Ukraine. Credit: WHO

From November 2022 to May 2023, HeRAMS collected data from 2,333 healthcare facilities across all of Ukraine's oblasts, except parts of those under the temporary military control of the Russian Federation, including areas of Donetsk, Khersonska, and Zaporizka oblasts, as well as the Luhanska oblast and the Autonomous Republic of Crimea. These 2,333 health care facilities virtually represent all public health care facilities in the assessed oblasts.

In June 2023, WHO published its [HeRAMS Ukraine Baseline Report on the operational status of the health system](#) summarizing the key findings to date. While the information keeps on being refined, verified and updated, this initial analysis has already proved useful to inform operations.

Overall, the data collected by HeRAMS shows that health care facilities in Ukraine are functioning, and services related to primary health care are widely available across the country. However, more specialized services such as chemotherapy, mammography, and the multidrug-resistant tuberculosis diagnostics and treatment are interrupted. This has been largely attributed to the lack of personnel and medical equipment.

These disruptions of specialized services has had a negative impact on public health, as early detection of noncommunicable diseases and subsequent treatments will be delayed. The lack of available of basic emergency obstetric care in certain oblasts is also a cause of concern and poses a significant threat to maternal health. Unsurprisingly, service disruptions are most visible in oblasts impacted by the conflict due to damages to buildings, lack of medical equipment, and lack of specialized personnel.

MORE SPECIFICALLY, KEY FINDINGS INCLUDE



96% of assessed health care facilities are fully functioning across all oblasts.



In Donetsk oblast: 27% of health care facilities are non-functioning. 36% are partially functional due to a lack of security and structural damage to the health care facilities.



In Khersonska oblast: 43% of health care facilities are functioning, even though 71% of these facilities sustained partial or total damage to their building and 58% of health facilities sustained partial or total damage to their equipment.



In all assessed oblasts: trauma and general services are widely available, but more specialized medical services are interrupted due to lack of personnel and medical supplies and equipment.



Skilled care during childbirth is not provided in almost two-thirds (69%) of facilities in Khersonska oblast, more than half (55%) of health care facilities in Donetsk oblast, and over a third (40%) of facilities in Sumska oblast.



Specialized diagnostics such as mammography screening have been disrupted in the majority of oblasts with the exception of Vinnytska oblast.



The primary reasons for the unavailability of services are lack of specialized medical equipment and personnel.

Continued on next page ...



WHO supports medical statistics information and analytics centers in Ukraine by providing IT equipment and training for medical staff in the six most war-affected regions. Credit: WHO

To ensure accuracy and best inform decision making, HeRAMS data needs to be verified continuously. In Ukraine, the data verification work will be undertaken by a third-party monitoring group in coordination with WHO on a randomly selected sample of 528 health care facilities – approximately 30% of all previously assessed health facilities. Approximately half of the facilities that will undergo the verification process will be multi-profile health facilities offering specialized care while the remainder will be primary health care centers from both urban and rural areas. Once available, the verification results will be leveraged to enhance the quality of the data collected across Ukraine. They will also form the foundation for data quality workshops engaging HeRAMS focal representatives.

Overall, by providing up-to-date information on the availability of essential health resources and services, HeRAMS data has been useful for Ukrainian health authorities and key

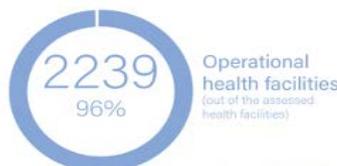
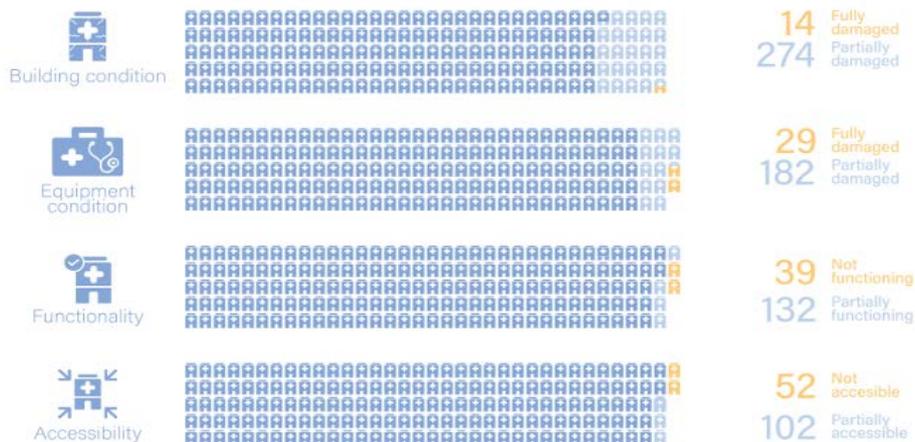
stakeholders to identify gaps in coverage, and set immediate priorities to enhance service coverage across the country in the context of the ongoing war. HeRAMS data will also be useful to support ongoing discussions on overall health system strengthening and health system reform. Among other strategic documents and assessments, HeRAMS results have been used to update the [Priorities for health system recovery in Ukraine: Joint Discussion Paper](#).

Moving forward, the WHO Country Office will continue to support the Ministry of Health to further improve the completeness, quality and timeliness of HeRAMS to sustainably support health system strengthening efforts across the country.

For detailed information on operational status of the health system in Ukraine, click [here](#).

OPERATIONAL STATUS OVERVIEW, 05.05.23

2333 health facilities assessed



Extract from the HeRAMS report on the operational status of the health system. Credit: WHO

GOARN holds its first leadership training

The [Global Outbreak Alert and Response Network \(GOARN\)](#) is a WHO network of 300+ technical institutions and networks globally that respond to acute public health events with the deployment of staff and resources to affected countries.

As of mid-October 2023, 6 GOARN deployments are ongoing in support of the responses to cholera in Haiti and Zimbabwe, diphtheria in Guinea, as well as the drought in the Greater Horn of Africa. Since the beginning of 2022, GOARN has supported 166 deployments across the world, in response to cholera, COVID-19, dengue, diphtheria, Ebola, drought and food insecurity, Marburg virus disease, mpox, Sudan virus disease, the conflict in Ukraine and yellow fever.



Participants to GOARN's first leadership training. Credit: Robert Koch Institut

From 18 to 22 September 2023, [WHO's Global Outbreak Alert and Response Network \(GOARN\)](#) held its first leadership training in Berlin, in collaboration with the Robert Koch Institute and the Geneva Center for Security Policy.

This flagship course aimed to strengthen individual and collective emergency response leadership skills and enhance participants' capacities to become influential and trusted leaders during public health emergencies.

24 public health experts from a multidisciplinary array of GOARN partner institutions across WHO's six regions - all of whom are highly experienced outbreak responders - participated in this flagship program. Throughout the five days, participants shared their personal experiences, challenges and concerns and reflected on lessons learned from responding to the COVID-19 pandemic and recent disease outbreaks. Through group work, discussions and mentoring sessions, they reflected on themes such as: how to create inclusive leadership, how to span boundaries and establish trusted relationships with key stakeholders to influence collective decision-making, or how to leverage polarizing tensions.

Key takeaways from this training include the understanding that leadership is not solely a role but a collective practice accessible to all in an outbreak response team, and that a good leader is someone who is able to connect with others and quickly build trusted relationships with diverse actors and stakeholders. Alongside technical expertise, these leadership skills are essential for optimizing emergency responses and will increase collaboration and build trust, based on the principles of diversity, equity and inclusion. Participants will be able to directly apply their enhanced leadership skills both for field

deployments under GOARN as well as leading teams within their respective home institutions.

A post-workshop webinar will be organized in November 2023, allowing participants to reconnect, revisit what they learnt and exchange on how they have been able to apply it in their everyday work.

Moving forward, GOARN will work to scale up the delivery of the outbreak response leadership training and plans to hold several more courses next year. This will in turn enhance the network's ability to respond to public health emergencies globally.

“The GOARN Leadership training assisted me to authentically reflect on my role as a leader in both outbreak response and as an infection prevention and control (IPC) professional. It identified areas where I can continue to develop leadership skills whilst reinforcing and sharing my strengths with others. I am already applying my learning practically by being far more measured in my responses with the various teams I either lead or am a part of as the IPC lead.”

Dr Peta-Anne Zimmerman

GOARN Focal Point for the Australasian College for Infection Prevention and Control (IPC) and Program Advisor of the Griffith University Graduate IPC Program

For more information, click [here](#).

Enhancing early outbreak analytics to support better decision-making: the WHO Hub for Pandemic and Epidemic Intelligence holds a ground-breaking hackathon



Group photo of participants and facilitators of The Early-Stage Outbreak Analytics Hackathon. Credit: Alfonso Moral

To manage outbreaks effectively, every second counts. To consolidate and analyse data to inform decision-making – such as data on the severity or transmission rate of a disease –, the availability of ready-to-use analytical tools can save critical scale-up time and strengthen early outbreak response efforts.

It is against this backdrop that the [WHO Hub for Pandemic and Epidemic Intelligence](#), in collaboration with the [London School of Hygiene and Tropical Medicine's](#) Epiverse-TRACE team, organized an “**Early-Stage Outbreak Analytics Hackathon**” from 19 to 21 September 2023.

This event aimed to develop standardized and reusable algorithms – often referred to as ‘analytical pipelines’ – to enable the systematic collection, processing and analysis of large volumes of data in the early stages of an outbreak. Using the open-sourced R-programming language, the analytical pipelines aim to address critical questions and tasks to speed up informed decision-making.

This work is key as making these analytical tools readily available to Member States, health organizations and research institutions across the world will fast track and inform better decision-making in the early stages of an outbreak.

The September 2023 dynamic and collaborative hackathon brought together in Berlin 22 experts, including mathematical modellers, data scientists, software engineers and field epidemiologists from WHO and partner organizations. The latter notably included [Epiverse-TRACE](#), [Epicentre](#), [Imperial College London](#), and [WHO's Global Outbreak Alert and Response Network \(GOARN\)](#).

Identifying challenges and working together to find solutions

During the hackathon, participants identified core tasks, data structures as well as common challenges to extract and analyse data which then informed discussions and working sessions.

Experts flagged issues surrounding data standardization, automated data extraction from PDFs and images, analytical tools fragmentation and R capacity building.

For instance, one common challenge which was addressed during the hackathon, concerned the extraction of data from PDF documents. While most Member States and health institutions produce situation reports during disease outbreaks, these documents tend to be disseminated in PDF format and their structure, content and format vary greatly. In the absence of an automated tool, extracting and comparatively analysing data from individual situation reports requires manual extraction – a process which is not only time consuming but also prone to errors.

As part of the hackathon, participants worked together to develop the basis for analytical pipelines which can support the scraping and compilation of data from PDF documents, which would then save country data analysts significant time and support data quality assurance.

“The interaction and results of the hackathon highlight the vital role of initiatives (...) which can convene people in-person or through digital environments to work together on similar problems and build communities of practice around common areas of pandemic and epidemic intelligence. With health emergencies, time is of the essence and innovative solutions fostered by collaborative platforms are crucial to strengthen our collective capacity to respond quickly and effectively to outbreaks.”

Julia Fitzner

Unit Head Insights and Analytics, WHO Berlin Hub for Pandemic and Epidemic Intelligence

Continued on next page ...



Participants co-creating analytical pipelines. Credit: Alfonso Moral

Ensuring availability of resulting pipelines to Member States for early outbreak data management

Throughout the hackathon, participants worked together to co-develop R pipelines for prioritized tasks. Roadmaps were also developed to ensure future collaborations with hackathon participants beyond this event, to keep elaborating on their outlined solutions

In line with the collaborative spirit of the hackathon, a [publicly accessible GitHub repository](#) was established containing all the developed pipelines. Through this platform where anyone can provide trackable changes and improvements, a community of practice will continue to refine and expand the algorithms created during the hackathon to make them more efficient, while nurturing a culture of ongoing collaboration.

Continuing hackathon approach to build future analytical pipelines to support Member States

Overall, by pooling expertise, leveraging innovative tools, and consolidating efforts, this hackathon represents a significant stride towards enhancing outbreak analytics and laid the groundwork for innovative future initiatives.

By the end of the hackathon, participants highlighted the immense value of physically convening to catalyse co-creation and facilitate networking. Participating partners recognized the importance of the WHO Hub for Pandemic and Epidemic

Intelligence as a central hub for collaboration among individuals and institutions.

In doing so, it contributes to the development of crucial insights for informed policy and decision-making, and will help Member States, health organizations and research institutions take informed decisions quicker, which aligns to the WHO Berlin Hub's commitment to preventing epidemics and pandemics.

“I think initiatives like the (WHO Hub for Pandemic and Epidemic Intelligence's) Collaboratory where experts are brought together with different perspectives and common challenges is very beneficial. In-person meetings like this hackathon are essential to establish personal relationships, which will make it easier to collaborate in the virtual environment. It also allows me to focus on issues that I don't often have time for in my day to day work. I think it's brilliant.”

Henry Laurenson-Schafer
Data Analyst at WHO

Enhancing preparedness through Barbados Defence Forces' Mobile Field Hospital



Dr Amalia Del Riego, PAHO/WHO Representative for Barbados and the Eastern Caribbean Countries touring the mobile field hospital. Credit: PAHO/WHO

In the last week of August 2023, the Barbados Defence Forces' Field Medical Team conducted a technical training and full scale simulation exercise at the National Stadium in Bridgetown whereby their emergency medical team (EMT) and their [field medical hospital](#) were deployed to respond in the aftermath of an 8.9 earthquake. As part of the scenario, critical wings of Barbados' national hospital had become compromised and the Barbados Defence Forces' EMT had to provide medical surge capacity to ensure the continuity of health services. Throughout this deployment, the EMT was supported by members of Barbados' Cadet Corps, who helped to assess the patient-flow capabilities.

Following the completion of this simulation exercise, Barbados' Defence Forces kept the field mobile hospital at the National Stadium and opened it for public visits for the first two weeks during of September 2023.

This mobile field hospital is designed to be rapidly deployable in case of health emergencies (whether disasters or disease outbreaks) both across the country and the Caribbean region to ensure the continuity of health services. It is fully furnished with medical equipment and notably contains dedicated spaces for registration and triage, an operating theatre, an x-ray room, an antenatal clinic, a delivery room and space for obstetrics, as well as separate wards for male, female and children. A pharmacy is also included.

Barbados' Defence Forces developed this field hospital following lessons learned from a response operation to a disaster situation in another Caribbean Island during which a hospital was destroyed. With this mobile field hospital, continuity of care could be provided in a similar situation, by ensuring the affected population has access to a health facility.

Barbados' field medical hospital is currently classified as emergency medical equipment Type 1 according to the [classification and minimum standards for emergency medical teams](#).

This means this mobile hospital can provide daylight hours care for stabilization of acute trauma and non-trauma presentations,

referrals for further investigation or in-patient care and community-based primary care in multiple locations. It is currently the only facility in the Caribbean with this certification.

To further enhance its potential, Barbados' Defence Forces are preparing the hospital for a Type 2 classification, with support from the Pan American Health Organization (PAHO/WHO). Once obtained, the field hospital would be able to provide additional general and obstetric surgery for trauma and other major emergency conditions as well as inpatient acute care.

Over two weeks, the field hospital was visited by the public who was invited to participate in activities such as health checks, as well as by government officials and international and national donor agencies.

Importantly, PAHO/WHO visited the mobile health facility, highlighting the continued commitment to working with Barbados' Defence Forces. Throughout the Caribbean region, this type of civil-military collaboration model that has indeed being instrumental to enable rapid deployments between neighboring islands, especially during hurricane season.

Moving forward, PAHO/WHO will continue supporting Barbados and Caribbean countries in their preparedness efforts to ensure continuity of care in health emergencies.

“PAHO/WHO is very pleased to have partnered with the Barbados Defence Forces in support of establishing this impressive facility. (...) Our organizations have had a long history of collaboration, and we look forward to continuing this partnership.”

Dr Amalia Del Riego

PAHO/WHO Representative for Barbados and the Eastern Caribbean Countries

For more information, click [here](#). for a 360 Virtual visit of Barbados' EMT Type 1 facility, click [here](#).

Malawi launches its first training for frontline responders for health emergencies and disasters



AVoHC-SURGE training in Mponela, Malawi. Credit : WHO Malawi/Audrey Mutasa

On 9 October 2023, the Ministry of Health in Malawi with support from WHO and the Africa Center for Disease Control and Prevention (CDC) launched the first training for frontline responders, which is aimed at enhancing response capacities for health emergencies and disasters in Malawi and beyond.

The training forms part of a program which involves Africa CDC's [African Volunteer Health Corps initiative \(AVoHC\)](#) and one of the WHO Regional Office for Africa's flagship initiative on "Strengthening and Utilizing Response Groups for Emergencies (SURGE)". Building on lessons learned from the COVID-19 pandemic, this program aims to provide African-driven solutions to ensure that African countries are prepared to respond to health emergencies and humanitarian crises within 24 to 48 hours. In total, the AVoHC-SURGE program involves 16 countries across the region, including Malawi.

63 participants took part in this first cohort of the AVoHC-SURGE training, out of a total of 200 professionals who will be trained in Malawi. They followed four modules covering some of the most important areas in emergency response, namely:

1. Public health emergency operating center (PHEOC),
2. Humanitarian and Health Cluster coordination,
3. Gender-based violence and the prevention and response to sexual exploitation, abuse and harassment in emergencies, and
4. Rapid response teams (RRT).

The training of the first cohort will be finalized by 23 November 2023. In the coming months, WHO and Africa CDC will jointly support the Ministry of Health of Malawi to conduct additional training sessions.

"I would like to assure you of WHO's commitment to mobilizing resources to support the country in implementing WHO's Emergency Preparedness and Response flagship initiatives, including full implementation of the AVoHC SURGE training. This initiative will translate lessons learnt from the pandemic into African driven solutions that reflect regional, national, and local needs."

Dr Neema Kimambo

WHO Representative to Malawi

In the recent past, Malawi, has responded to several emergencies including COVID-19, polio, tropical storms, tropical cyclones, and its worst cholera outbreak. Two after-action reviews which were conducted following the responses to Cyclone Freddy and the recent cholera outbreak identified as one of the key priority actions the need to strengthen response capacities. This AVoHC-SURGE training therefore comes at an opportune time and will help strengthen Malawi's existing structures to respond more efficiently and effectively to crises, limit the interruption of essential health services, minimize socio-economic disruptions, and contribute to enhancing global health security.

"The training will produce AVoHC SURGE Rapid Responders, to form a critical component of our preparedness and response program capacities. Their ability to deploy within 48 hours of an emergency is a testament to the agility and preparedness we aspire to achieve."

Mr Ben Mbwana

Director of Administration, speaking on behalf of the Malawi Secretary for Health

For more information, click [here](#).

WHO offers a Basic Emergency Care course in the Republic of Moldova to boost clinical care capacities for emergency preparedness and response



Health workers participate to the skill station in the hospital simulation laboratory during the BEC course. Credit: WHO/Europe.

Since the start of the war in Ukraine in February 2022, hundreds of thousands of refugees fled over the border into the Republic of Moldova, leaving the country to face a prolonged health emergency. As of October 2023, around 100 000 refugees are remaining in the country, many of whom are requiring health care.

To face this situation, the Moldovan Ministry of Health deployed a multifaceted emergency response mechanism which includes coordinating the scale-up of health services and ensuring that health professionals have the necessary skills to provide quality, timely and safe care during an emergency. In support of this response, WHO has been working alongside national professional societies and academia to implement a holistic capacity building package to reinforce the provision of acute care for patients in emergencies.

It is against this backdrop that WHO supported the [Basic Emergency Care \(BEC\) course](#) that took place at the University Medical Simulation Training Center in Chisinau from 4 to 7 July 2023. Developed in collaboration with the [International Committee of the Red Cross](#) and the [International Federation for Emergency Medicine](#), WHO's BEC course is a clinical training designed for frontline health care providers who provide emergency care but have received fragmented formal training in the field. The course provides a systematic approach to assessment and resuscitation of patients in emergency conditions when time and resources are limited.

The July 2023 course was attended by 42 emergency physicians, anesthesiologists, surgeons, intensive care providers, cardiologists, trauma specialists, family doctors and nurses from Kazakhstan and the Republic of Moldova. As part of it, participants learned how to manage trauma, shock and altered

mental status and focused on the ABCDE (airway, breathing, circulation, disability and exposure) approach.

As of September 2023, a total of 350+ doctors, nurses and hospital managers have been trained on BEC in the Republic of Moldova, and 21 national trainers have fully completed their international certification meaning they are able to trickle down the training. In addition, a range of clinical guidance have been revised nationally, to provide health care workers with the most up-to-date knowledge. Over 15 hospitals have been supported with essential medical equipment and supplies enabling the implementation of the clinical knowledge taught during the BEC course.

Overall, this joint effort between WHO and the Republic of Moldova contributes to providing better care to both refugees and Moldovans, thereby strengthening not only the emergency response but also the national health system in the long term.

“The BEC training is part of the wider support for the health emergency response and preparedness in the context of the refugee crisis caused by the war in Ukraine. It is essential for health system to have adequate training, planning systems and coordination mechanisms at a national level.”

Dr Miljana Grbic

WHO Representative to the Republic of Moldova

The BEC course in the Republic of Moldova has been supported financially by the U.S. Department of State, Switzerland and the European Union.

WHO Global Logistics Centers' Monthly Update

WHO's Global Logistics Center is based within the International Humanitarian City in Dubai, United Arab Emirates (UAE) continues to respond to an unprecedented number of acute health emergencies. With an average of two charter flights per month, the Center's operations are currently on-track to complete more emergency charter flights in 2023 than any previous year and as of October 2023, **over 500 orders have been passed for this year**. Responding to emergencies currently in AFRO and EMRO represents 80% of the volume of goods distributed.

Responding to the most pressing challenges across the world

In September and October 2023, the Dubai Global Logistics Center continued to ship lifesaving medical supplies and equipment across the world, to the most pressing health emergencies. Over this period, charter flights were notably completed to Afghanistan, Chad, Lebanon, Libya, Morocco, the occupied Palestinian territory, Sudan and Yemen, among others.

In response to the escalating crisis in Israel and the occupied Palestinian territory, the Dubai Global Logistics Center sent 78 cubic meters of health supplies to Al-Arish airport in Egypt on 14 October 2023 – about 20 minutes away from the Rafah checkpoint. The supplies include enough trauma medicines and health supplies to treat 1200 wounded patients and 1500 patients suffering from heart disease, hypertension, diabetes and respiratory problems, and basic essential health supplies to serve the needs of 300,000 people, including pregnant women. They also include trauma pouches with enough medicines and supplies to treat 235 wounded people. With support from the government of the United Arab Emirates, the Dubai Global Logistics Center also shipped another 40 metric tons of emergency medical supplies to Al-Arish airport through four flights between 20 and 25 October 2023.

OPERATIONS IN 2023 (AS OF MID-OCTOBER 2023)



US\$ 31 MILLION
Value of goods received
This represents nearly 1200 metric tons of health supplies.



26 CHARTER FLIGHTS COMPLETED

This includes flights to Afghanistan, Chad, Lebanon, Libya, Morocco, the occupied Palestinian territory, Sudan and Yemen



510+ REQUESTS RECEIVED

83% OF REQUESTS ARE FROM AFRO AND EMRO

AFRO- 22% | EMRO- 61%



US\$ 27 MILLION
Value of goods delivered
US\$ 5.1 million worth of goods are currently pending dispatch



US\$ 3.3+ MILLION
in transportation awarded through Global Shipping

This represents US\$ 450,000 per month on average



106 EMERGENCY ORDERS
currently under process



OVER 141 COUNTRIES ACROSS ALL 6 WHO GEOGRAPHIC REGIONS ARE SUPPORTED



WHO has released an innovative, interactive [report](#) that provides insights into the vast operations and global impact of WHO's Global Logistics Center. For more information on the WHO Global Logistics Center's work in 2022, click [here](#).



A plane carrying WHO medical supplies has landed at Al Arish airport, Egypt, 21 October 2023. Credit: WHO

OpenWHO: providing quality and up-to-date learning on clinical management during and beyond the COVID-19 pandemic

Since the declaration of the first cases of COVID-19, the demand for knowledge about how to clinically manage the disease has persisted. In this respect, [OpenWHO's free online COVID-19 clinical management course series](#) offered a vital resource for pandemic learning, empowering individuals – in particular young people, students and healthcare professionals – to enhance their understanding of how to manage the disease.

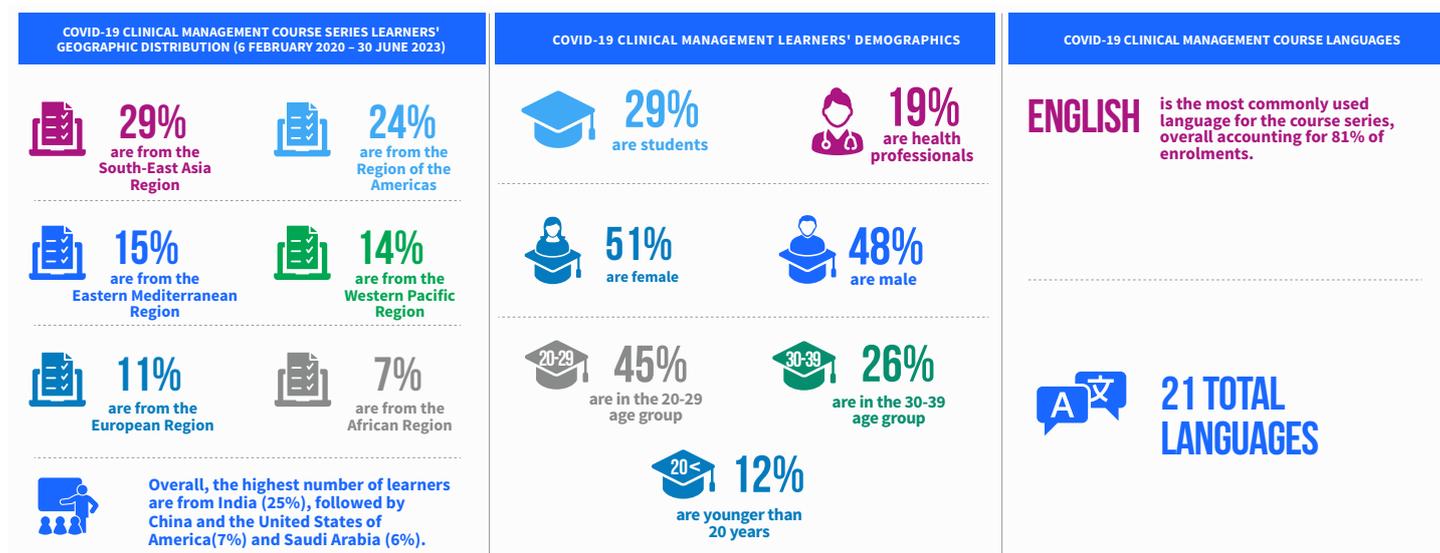
From February 2020 to June 2023, the five-course series totaled 317 000 enrolments across 21 languages. The most preferred language was English, chosen by 81% of learners.

The [WHO Clinical Care Training for Severe Acute Respiratory Infection](#) course, which was the first to be launched in February 2020 has so far been the most popular, highlighting the importance of providing evidence-based health knowledge in health emergencies in a speedy manner. Offered in 12 languages, it totaled an impressive 182 203 enrolments (58% of all enrolments). This course is intended for clinicians working in intensive care units in low- and middle-income countries and managing adult and pediatric patients with severe forms of acute respiratory infection.

The second most popular course focuses on [rehabilitating COVID-19 patients](#), and garnered 43 000 enrolments (approximately 14% of all enrolments). Offered in nine languages, it addresses the multifaceted rehabilitation needs of patients in recovery, including patients with cognitive, respiratory, swallow or communication impairments, physical deconditioning and weakness and challenges in completing daily life activities.

The series' three remaining courses – available in seven languages – garnered similar levels of interest and collectively totaled 91 500+ enrolments. These courses focused on the [initial approach to acutely ill patients](#), [investigations and care for mild, moderate and severe COVID-19 cases](#) as well as [general considerations for managing COVID-19 patients](#). The latter offered insights into the pandemic context while discussing facility operations, preparation, referral systems, infection prevention and control, and the role of palliative care for patients.

Moving forward, OpenWHO will continue to provide evidence-based and updated health knowledge about COVID-19 and other diseases with epidemic potential.



Cumulative number of enrolments in COVID-19 clinical management courses (February 2020 - June 2023)



WHO's work in emergencies

For updated information on where WHO works and what it does, visit the [WHO Health emergencies page](#), the [WHO Health Emergency Dashboard](#), the [Disease Outbreak News \(DONs\)](#), and the [Weekly Epidemiological Record](#).

 **Outbreak and Crisis Response Appeal 2023**
In 2023, 339 million people are facing humanitarian crisis with severe health impacts. In 2023, WHO needs US\$ 2.54bn to continue to fund cost-effective, high impact solutions that protect health, lives and livelihoods during a time of significant intersecting humanitarian emergencies. To read WHO's 2023 Outbreak and Crisis Response Appeal, click [here](#).

 **GOARN**
For updated GOARN network activities, click [here](#).



EPI-WIN
For EPI-WIN: WHO Information Network for Epidemics, click [here](#).

 **Emergency Medical Teams (EMT)**
For updated EMT Network activities, click [here](#).



WHO Publications and Technical Guidance
For updated WHO Publications and Technical Guidance, click [here](#).

 **OpenWHO**
For all OpenWHO courses, click [here](#).

For more information WHO's regional response:

[African Regional Office](#)

[Eastern Mediterranean Regional Office](#)

[European Regional Office](#)

[Regional Office of the Americas](#)

[South-East Asia Regional Office](#)

[Western Pacific Regional Office](#)

News

- [UNHCR, WHO warn of deteriorating health conditions as 1,200 children die of suspected measles, malnutrition in Sudan](#)
- [New analysis confirms world seeing an upsurge of cholera](#)
- [New guidance on environmental surveillance for SARS-CoV-2](#)
- [Recommendations announced for influenza vaccine composition for the 2024 southern hemisphere influenza season](#)
- [WHO recommends R21/Matrix-M vaccine for malaria prevention in updated advice on immunization](#)
- [101 health workers killed in Libya in the aftermath of Storm Daniel](#)
- [WHO-OHCHR launch new guidance to improve laws addressing human rights abuses in mental health care](#)
- [Egypt becomes the first country to achieve WHO validation on the path to elimination of hepatitis C](#)
- [WHO issues global plan to tackle leading cause of death in childbirth](#)
- [Five key themes for improved mental health care for refugees and migrants](#)
- [New funding to ensure 370 million children receive polio vaccinations and to boost health innovation in low-income countries](#)
- [Hospitals in the Gaza Strip at a breaking point, warns WHO](#)
- [WHO pleads for immediate reversal of Gaza evacuation order to protect health and reduce suffering](#)

Highlights

- [Multi-country outbreak of mpox, External situation report#28](#)
- [Disease Outbreak News \(DON\) - Botulism - France \(20 September 2023\)](#)
- [WHO publishes Environmental surveillance for SARS-CoV-2 to complement other public health surveillance](#)
- [Disease Outbreak News - Nipah Virus Infection - India](#)
- [WHO Director-General's remarks at the opening ceremony of the World Health Summit, Berlin, Germany](#)
- [Disease Outbreak News \(DON\) - Dengue - Chad \(16 October 2023\)](#)
- [UNICEF and WHO warn that further attacks and disruptions of health and nutrition services in Sudan could cost over 10 000 young lives by the end of 2023](#)
- [WHO outlines considerations for regulation of artificial intelligence for health](#)
- [Armenia refugee response: situation report No. 2, 12 October 2023](#)
- [Public Health Situation Analysis: El Niño \(October-December 2023\)](#)
- [Multi-country outbreak of mpox, External situation report #29](#)
- [World leaders commit to new targets to end TB](#)



Science in 5 is WHO's conversation in science. In this video and audio series WHO experts explain the science related to COVID-19. Transcripts are available in Arabic, Chinese, English, French, Farsi, Hindi, Maithili, Nepali, Portuguese, Russian and Spanish.

Growing up informed: Sexuality Education (17 October 2023)

Are you a parent, teacher or just someone who cares about sexuality education? Dr Chandra-Mauli Venkataraman answers the important questions on sexuality education in the latest episode of Science in 5.

Smoke-free indoor spaces (29 September 2023)

Indoor smoke-free spaces are becoming more commonplace, and for good reason. Did you know that over a million people die every year due to second-hand smoke? One in three countries now have policies in place to create 100% smoke-free spaces, according to a recent WHO report. How do indoor smoke-free spaces help our health and our economies? Dr Kerstin Schotte explains in Science in 5.