WHO's Operational Update on Health Emergencies

In this issue

A patient being treated for mpox at Kavumu Hospital in South Kivu, Democratic Republic of the Congo, on 30 August 2024. Credit: WHO / Guerchom Ndebo

Key figures on WHO's work in emergencies (as of 15 October 2024)

WHO is currently responding to 40 graded emergencies across the world, including:

11 Grade-3 emergencies

7 protracted Grade-3 emergencies

10 Grade-2 emergencies

9 protracted Grade-2 emergencies

3 Grade-1 emergencies

Graded emergency: An acute public health event or emergency that requires WHO's moderate response (Grade-2) or maximal response (Grade-3). If a graded emergency persists for more than six months, it may transition to a protracted emergency. WHO continuously updates the graded emergencies figures based on inputs from the Organization's three-levels.

On 14 August 2024 the WHO Director-General declared the escalating mpox outbreak in Democratic Republic of the Congo and other countries a Public Health Emergency of International Concern (PHEIC). On 29 September 2024, the ongoing Marburg virus disease outbreak in Rwanda was graded as a WHO Grade-3 emergency. On 3 October 2024, the hostilities in Lebanon were graded as a WHO Grade-3 emergency.

So far in 2024, nearly US$ 48 million has been released by WHO's Contingency Fund for Emergencies (CFE) to provide humanitarian health assistance for 26 emergencies. The largest allocations have been for the Sudan conflict and refugee crisis, the Ethiopia humanitarian response, the global dengue outbreak, the crisis in the occupied Palestinian territories, and the escalation of hostilities in Lebanon.

The Global Outbreak Alert and Response Network (GOARN) has supported 45 deployments in 2024. The highest number of GOARN deployments were in response to the escalation of violence in Israel and occupied Palestinian territories (13), the Greater Horn of Africa drought and food Insecurity (six), and the Marburg virus disease outbreak in Rwanda (five).

OpenWHO.org totaled 9 million enrolments across 295 online public health courses, with learning available in 75 national and local languages. To date, there have been 760 000 enrolments in 2024.

In 2024, Standby Partners have supported WHO's response to 12 graded emergencies through the deployment of 43 new deployments of surge personnel to 19 WHO offices.

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

Global efforts to halt mpox outbreak bolstered by first WHO prequalified mpox vaccine and approval of mpox diagnostic test for emergency use

On 14 August 2024 the WHO Director-General declared the upsurge of mpox outbreak in the Democratic Republic of the Congo and other countries a Public Health Emergency of International Concern (PHEIC) under the International Health Regulations (2005) (IHR). The event has the potential for further spread across countries in Africa, as well as to regions outside the continent, and requires a coordinated international response. Mpox is an infectious disease caused by the monkeypox virus (MPXV). There are two distinct clades of MPXV: clade I (with subclades Ia and Ib) and clade II (with subclades IIa and IIb). Since May 2022 a multi-country outbreak of mpox, caused by clade IIb MPXV, has spread to more than 100 countries and continues in several countries, including parts of Africa.

From 1 January 2022 to end of September 2024, 123 WHO Member States across all six regions have reported a total of 109 699 laboratory confirmed mpox cases. As of 27 October 2024, 13 106 of laboratory-confirmed cases have been reported from 23 countries across Africa since 1 January 2022, with 10 702 (82%) of these cases reported in 2024. The 2024 increase in mpox cases across the continent is associated with the emergence of clade Ib which has been spreading through sustained human-to-human transmission since September 2023, particularly in the Democratic Republic of the Congo, Burundi and, more recently, Uganda. Other African countries where clade Ib was detected include Kenya and Rwanda and travel related cases have also been identified in Sweden, Thailand, India and Germany. More recent surveillance can be found on the online mpox surveillance report.

On 7 September 2024, WHO delivered 14 metric tonnes of medical supplies to the Democratic Republic of the Congo for the ongoing mpox outbreak response. Credit: WHO/ Junior Diatezua

The mpox global strategic preparedness and response plan outlines three strategic objectives covering the period from September 2024 to February 2025: to rapidly detect and control outbreaks; to promote research and equitable access to medical countermeasures; and to minimize transmission between humans and animals. Together, these form the basis of a harmonized response with the overall aim to halt human-to-human transmission through coordinated global, regional, and national efforts.

In the context of the PHEIC declaration, efforts to accelerate the availability of lifesaving mpox medical products - such as vaccines, tests and therapeutics - have been a priority within the objective to promote research and equitable access to medical countermeasures, as part of a comprehensive response. Within two months of the PHEIC determination, breakthroughs in expanding access to both mpox vaccines and diagnostics were achieved, through WHO's Prequalification (PQ) and Emergency Use Listing (EUL) mechanisms which evaluate the quality, safety and efficacy of medical products.

On 13 September 2024, WHO announced the MVA-BN vaccine as the first vaccine against mpox to be added to its prequalification list, followed by the age-extension for 12 to 17 years old on 8 October. MVA-BN vaccine can be administered in people over 12-years of age as a two-dose injection. Available data shows that a single-dose given before exposure has an estimated 76% effectiveness in protecting people against mpox, with the two-dose schedule achieving an estimated 82% effectiveness. Based on available evidence, the WHO Strategic Advisory Group of Experts (SAGE) on Immunization recommended the use of MVA-BN vaccine in the context of an mpox outbreak for persons at high risk of exposure, which means vaccine use is recommended in outbreak settings where the benefits of vaccination outweigh the potential risks.

The Democratic Republic of the Congo has received 265 000 doses of the MVA-BN vaccine, donated by the European Commission's Health Emergency Preparedness and Response Authority (HERA); Gavi, the Vaccine Alliance; and the United States Government. On 5 October 2024 the country launched targeted mpox vaccination in the eastern North Kivu province. Rwanda received 5420 doses of the MVA-BN vaccine on 6 October 2024, as part of the bilateral donation from HERA to the

Continued on next page …

Africa Centres for Disease Control and Prevention (Africa CDC), and targeted vaccination is ongoing. Africa CDC and WHO have established a Technical Review Committee (TRC) as an access and allocation mechanism for mpox vaccines, treatments, and diagnostics, and its first meeting was held on 9 October 2024. By the end of October, over 5.9 million doses of vaccine have been pledged by 15 countries and Gavi, the Vaccine Alliance. The mpox vaccine Access and Allocation Mechanism made its first allocation of 899 000 doses of MVA-BN vaccine to nine countries on 28 October 2024.

> "As we rally efforts to stop the mpox outbreak, the rollout of the vaccine marks an important step in limiting the spread of the virus and ensuring the safety of families and communities. Vaccines are an important additional tool in outbreak control and we're grateful to our partners who have donated the doses. We're working closely with the national authorities to effectively deliver the vaccines to those who need them most."
>
> **Dr Matshidiso Moeti**
> WHO Regional Director for Africa

On the other hand, limited testing capacity and delays in confirming mpox cases persist, contributing to the continued spread of the virus. In a major milestone, under its EUL procedure, on 3 October 2024 WHO listed the first mpox in vitro diagnostic (IVD), the Alinity m MPXV assay. Within the same month, two additional diagnostic tests were listed: on 14 October 2024 the cobas MPXV qualitative assay and on 25 October 2024 the Xpert Mpox real-time PCR test. The approval for emergency use of these three diagnostics will be pivotal in expanding diagnostic capacity in countries facing mpox outbreaks. Additional dossiers are under review to support more widespread testing and response capabilities.

The EUL process assesses the quality, safety, and performance of essential health products, such as diagnostic tests, to guide procurement agencies and WHO Member States in making informed decisions for time-limited emergency procurement. The EUL for listed mpox diagnostics will remain valid as long as the PHEIC is in effect. This will support countries which have not approved the medical products through their own approval processes to procure the critically needed tests through UN agencies and other procurement partners.

In the context of the ongoing multi-country mpox outbreak, global efforts are also underway to gather evidence on the use of novel antivirals such as tecovirimat and their benefit within the clinical course of mpox disease. On 24 September 2024, WHO relaunched the Partners Platform for reopening of expressions of interest to receive tecovirimat within the Mpox Monitored Emergency Use of Unregistered and Experimental Interventions (MEURI) framework.

While these achievements to rapidly avail medical countermeasures add vital tools to WHO's global response to this outbreak, at the national level WHO is working closely with governments, partners and communities to scale up and reinforce all the key control measures as part of its comprehensive response to save lives and end the outbreak. In August 2024, WHO released funds from its Contingency Fund for Emergencies (CFE) to scale up the response in the African Region, in line with the Mpox Continental Preparedness and Response Plan for Africa.

A Coordinated Research Roadmap outlining the immediate research next steps to contribute to control the mpox outbreak was published in September 2024. This summary on the need for research is a consensus of over 2500 participants with researchers and Ministries of Health of the affected countries in the driving seat.

For more information, click here, here and here.

KEY OPERATIONAL RESPONSE FIGURES

SINCE MPOX OUTBREAK BEGAN ON 1 JANUARY 2022

110 Number of countries reached with supplies*

US$ 2.83 MILLION Number of countries reached with supplies*

Supplies delivered:

189 467 Testing items

671 310 PPE items

598 therapeutics**

155 416 OpenWHO Mpox course enrolments*** from all six WHO regions

SINCE DECLARATION OF PHEIC ON 14 AUGUST 2024

43 Number of countries reached with supplies*

US$ 2.03 MILLION Value of supplies procured*

Supplies delivered:

32 046 Testing items

670 990 PPE items

0 therapeutics**

25 603 Total OpenWHO Mpox course enrolments*** from all six WHO regions (since publication of courses)

*as of 22 October 2024
** through Mpox Monitored Emergency Use of Unregistered and Experimental Interventions (MEURI) framework
***as of 17 October 2024, includes three courses including 'Mpox: Introductory course for African outbreak contexts' (currently available in 10 languages); 'Mpox: Epidemiology, preparedness and response for African outbreak contexts' (currently available in seven languages); and 'Mpox and the 2022-2023 global outbreak' (currently available in three languages).

Emergency polio vaccination in Gaza concludes, amid ongoing conflict and attacks

WHO teams train vaccinators engaged in the polio campaign in Gaza. Credit: WHO

In urgent response to the confirmation of circulating variant poliovirus type 2 (cVDPV2) in Gaza - which was found in the environment in July 2024 and in a 11-month-old child in August 2024 - an emergency polio vaccination campaign took place in Gaza. This campaign was led by the Palestinian Ministry of Health in collaboration with WHO, the United Nations Children's Fund (UNICEF), the United Nations Relief and Works Agency for Palestine Refugees (UNRWA) and partners.

Novel oral polio vaccine type 2 (nOPV2) is the vaccine globally recommended for variant type 2 poliovirus outbreaks, the type that was found in Gaza. A minimum of two doses of nOPV2 are needed to interrupt poliovirus transmission, which will only be achieved if at least 90% of all children are vaccinated in all communities and neighbourhoods in Gaza.

The first round of the polio vaccination campaign was successfully implemented from 1 to 12 September 2024 and vaccinated 559 161 children with a first dose of nOPV2. This represents an estimated 95% of eligible children at governorate level, according to independently conducted post-campaign monitoring.

> "Health and community workers have shown incredible resilience, carrying out this campaign at unprecedented scale and speed under the toughest conditions in Gaza. Swift action by the GPEI - from the moment the virus was detected to the launch of the vaccination campaign - speaks to the effectiveness of the polio programme. In areas where humanitarian pauses took place, the campaign brought not just vaccines, but moments of calm. This campaign has clearly shown the world what's possible when peace is given a chance."
>
> **Dr Richard Peeperkorn**
> WHO Representative for the occupied Palestinian territory

The second round of the campaign, which aimed to vaccinate an estimated 591 700 children under ten years of age with a second dose of nOPV2, began on 14 October 2024. In this round, vitamin A was co-administered alongside polio vaccine, to help boost overall immunity among children between the ages of two and ten years.

More than 800 social mobilizers reached out to families to raise awareness on the importance of taking the second dose as well as on the dates and locations. As with the first round, meticulous planning, coordination and implementation saw an extensive network of teams vaccinating at selected health facilities and outreach posts. Mobile teams actively reached out to families living in shelters, tents and camps for the internally displaced.

In the second round a total of 556 774 children under the age of 10 were vaccinated with a second dose of polio vaccine, and 448 425 children between 2- to 10-years-old received vitamin A. This round took place in three phases across central, south and northern Gaza under area-specific humanitarian pauses. While the first two phases proceeded as planned, the third phase in northern Gaza had to be temporarily postponed on 23 October because of intense bombardments, mass displacements, lack of assured humanitarian pauses and access. The end of this second round concludes the polio vaccination campaign that was launched in September 2024.

Despite overwhelming logistical challenges - including operating amid devastated infrastructure and constant population movements - an extraordinarily resilient and dedicated health workforce and strong community demand for polio vaccination helped to ensure that children could be vaccinated against this debilitating disease.

To fully implement surveillance and routine immunization services, not just for polio but for all vaccine-preventable diseases, WHO continues to call for a ceasefire.

For more information, click here, here, and here.

Sudan surpasses 100 attacks on healthcare since 2023 armed conflict began

A health worker stands in a destroyed room at Aalia Specialist Hospital in Omdurman, Sudan on 21 April 2024. Credit: Ivor Prickett/The New York Times

The number of attacks on healthcare facilities in Sudan since the onset of the armed conflict in April 2023 has exceeded 100, with 108 incidents verified by WHO until mid-September 2024. WHO believes that the number of attacks is likely much higher than what is currently verifiable. The ongoing - and, in some areas, worsening - violence hinders our ability to independently verify both attacks and casualties.

> "For each attack, there is a human cost that is borne by the entire community. In times of extreme violence, as we are unfortunately witnessing in Sudan today, it becomes even more crucial to have a functional health system. But instead, we not only see facilities but also health workers – the caregivers to the most vulnerable in society – targeted, despite their inspirational commitment to serve."
>
> **Dr Hanan Balkhy**
> WHO Regional Director for the Eastern Mediterranean

Of the more than 100 verified attacks, over 75 have involved health facilities, and 45 have impacted health personnel. In addition to these, attacks have been reported on transport including ambulances, medical supplies, and warehouses. In 29 of these incidents, patients were directly impacted. The worst affected have been the states of Khartoum, Darfur, and South Kordofan.

> "After the attack on our facility, we lost access to crucial medical supplies and equipment, including medicines for children, nutrition supplies, and HIV and tuberculosis treatment. While the safety of our staff is our primary concern, we are determined to find ways to resume operations and serve those in need."
>
> **A nurse working at a primary healthcare center in Darfur**

The attacks on health facilities in Sudan have had a devastating impact on a country engulfed by violence. Civilians are experiencing the largest human displacement in the world with over 13 million people forcibly displaced both within the country and outside its borders. Countless people suffer from war injuries, extreme hunger, debilitating mental health stress, rising disease outbreaks and inadequate treatment or medical supplies for non-communicable diseases such as cancer, diabetes, and heart and kidney disease.

Prior to the current crisis, Sudan had an estimated 6 500 primary healthcare facilities and 300 public hospitals across the country. WHO estimates that 70 – 80% of health facilities in areas worst affected by conflict, such as Al Jazirah, Kordofan, Darfur and Khartoum, and about 45% in other parts of the country, are now barely operational or closed. This impacts millions of people living through one of the worst humanitarian disasters in recent memory.

> "We live in constant fear, not knowing when the next attack might happen. We are doing our best to continue serving the community, but the challenges are immense."
>
> **A paediatrician working at a hospital in Khartoum**

Under international humanitarian law, medical facilities and health workers are granted special protection in times of conflict, to ensure the delivery of life-saving care to civilians and to safeguard the health infrastructure vital to community survival.

As always, WHO calls for all parties to the conflict in Sudan to respect and protect health care. Attacks on health hurt the most vulnerable, are self-defeating, and represent one of the most disturbing violations of international humanitarian law.

For more information, click here and to view WHO's Surveillance System for Attacks on Health Care (SSA), click here.

Senegal becomes first African country to establish Emergency Medical Team following WHO standards

Senegal becomes first African country to establish Emergency Medical Team following WHO standards. Credit: WHO

Senegal has become the first country in Africa to receive WHO classification for developing the capacity of its Emergency Medical Team (EMT) to be able to deploy and respond to health crises around the world, marking a historic milestone for the country and significantly boosting the African Region's emergency response capacity.

The classification of Senegal's Type 2 EMT follows the international EMT standards. The country's EMT, which is now deployable across the globe within 72 hours to autonomously provide medical and surgical care to up to 2500 patients impacted by health emergencies for a four-week period, follows a rigorous six-year process. EMT2 Senegal is the 49th classified team globally, with 130 others in process around the world.

> "This certification is a real turning point that reflects the dedication of Senegal's health authorities to ensuring a coordinated and rapid response to emergencies, both nationally and internationally, consolidating our position as a leader in health crisis management in Africa and beyond."
>
> **Dr Ibrahima Sy**
> Senegal's Minister of Health and Social Action

Since 2017, WHO in the African Region has provided intensive technical and financial support to the country, working closely with the Ministry of Health and Social Action, the Health Emergency Operations Centre, and Senegal's Armed Forces Health Service. During this time, Senegal has already deployed teams to respond to health crises in the Democratic Republic of Congo, Sierra Leone and, most recently, Guinea.

EMTs can provide routine outpatient care, manage emergency and trauma cases, mass casualty incidents and outbreaks due to infectious diseases, and safely stabilize and refer patients for higher level care. In addition to clinical expertise, EMT team members are trained to work in the most challenging conditions, establishing field hospitals that are fully self-contained, thereby limiting demands on local resources that may already be stretched in an emergency context.

The main aim of the EMT classification, which is overseen by WHO's EMT Secretariat, is to improve the quality of care and professionalism of medical teams responding to disasters, conflicts, outbreaks and other emergencies. Populations benefit from the rapid arrival of well-trained EMTs, who support existing medical staff.

> "Congratulations to Senegal for this milestone achievement that contributes significantly to the region's growing expertise in addressing public health emergencies. Emergency Medical Teams are a crucial set of health workforce that greatly enhances the capacity of national health systems through rapid action to save lives in times of crises."
>
> **Dr Matshidiso Moeti**
> WHO Regional Director for Africa

The classification is part of the wider vision encompassed in WHO's Emergency Medical Teams 2030 strategy. This envisions a world in which every country can respond rapidly and effectively to national emergencies, leveraging regional and sub-regional capacities to support vulnerable communities and others in need.

WHO thanks its donors and partners, including Canada, for the continued support provided toward the realization of this landmark achievement.

For more information, click here.

WHO installs a new modular clinic in the Kharkiv region of Ukraine, as population faces third winter amid war

A new modular primary health-care clinic in the Kharkiv region, Ukraine. Credit: WHO

As Ukraine approaches its third winter amid full-scale war, WHO's latest health needs assessment in Ukraine shows that 8% of households do not currently have access to a primary health-care facility. According to WHO data, 40% of attacks on health care in Ukraine have affected primary care facilities.

Ahead of winter, primary health care is being prioritized to bring care to where people are living, including communities near the frontline. In September 2024, WHO opened a new modular primary healthcare clinic in the village of Tsyrkuny in the Kharkiv region of Ukraine, replacing a clinic that was destroyed in an attack earlier this year in nearby Lyptsi.

The clinic is a large, modular primary healthcare facility with four patient or examination rooms. It will serve internally displaced people who have been evacuated or have fled areas in the region due to intense hostilities. Five health-care workers will staff the clinic, which is fully equipped to operate during power outages. This is the second modular clinic installed in Tsyrkuny; together, the two facilities will serve around 12 000 patients per year in total.

> "When the previous modular clinic in Lyptsi was damaged, we responded quickly. Thankfully, everyone was evacuated and no one was harmed in the attack. Our team worked hard to ensure the new facility was ready within two months."
>
> **Dr Emanuele Bruni**
> Acting WHO Health Emergency Programme Lead

Over the past year, WHO has invested in modular primary care clinics to ensure the accessibility of healthcare services. This clinic is one of 18 WHO-installed modular units being run in regions affected by the war in Ukraine. It is part of a larger initiative by WHO which aims to bring primary healthcare to frontline communities in Ukraine, where the war has severely impacted the health system over the past 2.5 years.

> "WHO has been investing in modular primary health-care units over the past year to ensure local communities have access to primary health-care services – a fundamental human right."
>
> **Dr Jarno Habicht**
> WHO Representative and Head of the Country Office in Ukraine

With these rapidly deployable prefabricated facilities, WHO ensures that frontline communities have uninterrupted access to patient-centred medical services, even if their original premises have been damaged or require major repairs. Each clinic can be set up in 10 to 14 days and is intended to be a long-term solution, with a lifespan of more than 10 years. This project bridges emergency response and early recovery, with the modular units fully integrated into Ukraine's health system, contracted by the National Health Service of Ukraine to ensure a sustainable solution.

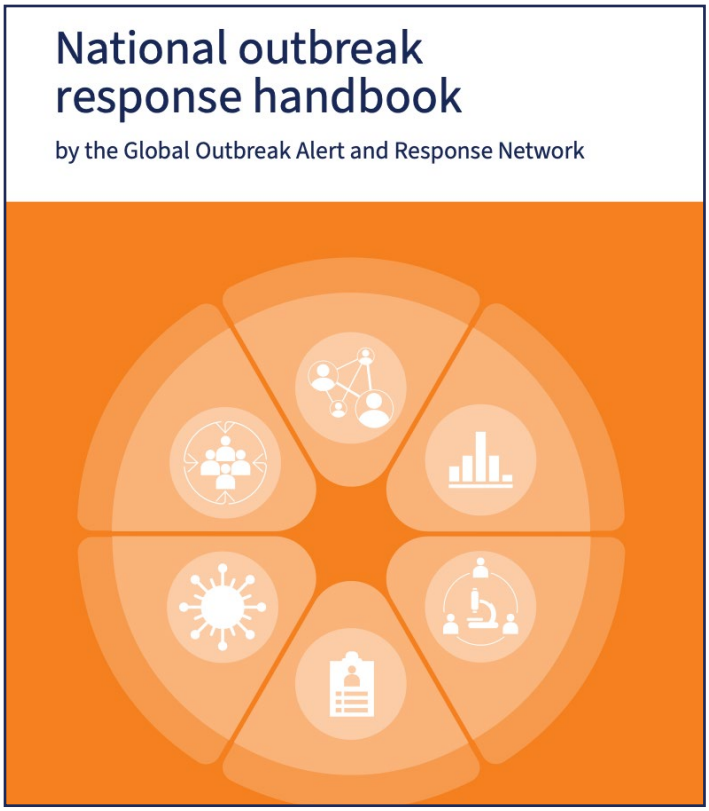
The unit's installation was made possible with the support of the Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG-ECHO).

The Global Outbreak Alert and Response Network (GOARN) has launched a handbook on national outbreak response

Members of the GOARN Operational Support Team (OST) during the launch of the outbreak manual. Credit: WHO

Protection against future epidemics and pandemics requires coordinated national capacities to detect and rapidly contain outbreaks, guided by documented best practices and innovations. Drawing from its 24 years of experience in outbreak preparedness and response, the Global Outbreak Alert and Response Network (GOARN) represents a longstanding model of leveraging strengths across multidisciplinary partners. In June 2024, GOARN published a National outbreak response handbook, complemented with the launch of an interactive web version of the handbook in August 2024.

GOARN developed this handbook to document best practices and resources developed by partner organizations. It is intended for national public health agencies, ministries of health, and other partners as they develop national outbreak response plans and respond to outbreaks in their respective countries. The handbook's development followed recent requests from GOARN partners, including during the GOARN 2022–2026 strategy development process and subsequent strategy implementation workshop in May 2023. It is a resource that will further strengthen national capacity for resilient health systems during public health events and may serve as a guide for countries when developing or revising their national outbreak response plans. In 2024, GOARN partner institutions supported 13 operations.



Dr Wasiq Khan, from the Health Emergencies Programme at WHO's Regional Office for the Eastern Mediterranean, underlines that this handbook is a very useful tool to promote capacity building as well as standardizing outbreak preparedness and response by the field teams.

> "In our region where human resources are scarce and turnover is higher among outbreak teams in the field, this tool is worth using. We have already translated this into Arabic and intend to promote more of its localization in the near future".
>
> **Dr Wasiq Khan, Team Lead**
> WHO Health Emergencies Programme, Regional Office for the Eastern Mediterranean

The handbook aims to document effective organizational structures and governance models that can be implemented during national outbreak responses, highlight best practices during outbreak responses based on GOARN partners' collective experiences, and reference key technical and operational resources developed by GOARN and its partners.

This handbook is a milestone in summarizing essential components of national outbreak response and referencing key resources developed by GOARN's partners over the years. It can serve as a basis for further derivative products, including regional and national adaptations or specific toolkits across key technical areas.

Moving forward, the National outbreak response handbook will be translated into French, Arabic and Spanish with other languages to follow at a later stage. GOARN Operational Support Team is working with regional focal points to outline plans for its future rollout.

Addressing the low risk perception of avian flu in Cambodia, ahead of festival season

An social media assets of the avian influenza pilot campaign in Cambodia with simplified and culturally relevant messages and visuals to match the festive Khmer New Year atmosphere. Credit: WHO Cambodia

Since early 2023, Cambodia has reported 15 human cases of avian influenza, five of which have been fatal. To combat this worrying trend, WHO and the Ministry of Health have designed proactive short- and medium-term communication strategies. Utilizing the Communication for Health (C4H) approach, these strategies aim to raise awareness of avian influenza risks among citizens and empower them to adopt preventive behaviours.

Avian influenza A(H5N1), or bird flu, is a viral disease that mainly affects birds but can sometimes infect mammals, including humans, through close contact with infected poultry or contaminated environments. Human infections can range from mild to severe and may be fatal. In Cambodia, poultry is an integral part of daily life. Families often raise poultry in their backyards, relying on them for meat, eggs and additional income. Despite this prevalence, people's perception of avian influenza risks remains low, with limited knowledge about appropriate protective measures.

The outbreak investigations identified that all human cases of avian influenza in Cambodia involved exposure to sick or dead backyard poultry, with increased infections occurring around festival periods when poultry slaughtering is more common. A study conducted in 2023 in Prey Veng, a province with high poultry density, had previously found that 97.1% of surveyed adults reported burying dead poultry, while 22.6% admitted to cooking sick or dead poultry for their families.

To better understand these barriers, WHO conducted message testing which revealed an urgent need to address gaps in knowledge about protective measures during food preparation: only 50% of participants had heard the advice not to touch or eat sick or dying birds when preparing food, while just 36.9% said they would follow it.

Working with Cambodia's Ministry of Health, in April 2024 WHO engaged long-standing partners - including the US Centers for Disease Control and Prevention (US CDC) and the Food and Agriculture Organization (FAO) - to launch a pilot a campaign during the Khmer New Year festival season. The campaign primarily utilized Facebook, Cambodia's most popular open social media platform, with simple messages framed to be culturally relevant and featuring a call to action encouraging the audience to share messages with family and friends. Visuals were designed to reflect the festive and vibrant atmosphere of the Khmer New Year celebration. Ahead of Khmer New Year, the Ministry of Health also distributed printed campaign posters, leaflets and stickers to pagodas, schools, households and health centers in five high-risk provinces, ensuring broad and effective outreach around the festival season.

The online campaign reached 8.8 million people (just over half the population of Cambodia) and garnered 1.2 million engagements. However, despite its extensive reach and engagements, such a rapid, short-term campaign has its limits, specifically in shifting behaviours. Subsequently, WHO supported scoping visits to two villages which provided deeper insights into local attitudes including the belief that freezing sick poultry after slaughtering will kill any viruses. These insights highlight the need to better target audiences with tailored behavioural messages based on their barriers and motivators to change.

Applying these lessons, WHO, the Ministry of Health and partners have refined the communication strategy and tested creative concepts to address behavioural barriers and promote the adoption of preventive actions among target populations in the context of Cambodia's November 2024 festival season.

Print posters were produced in addition to social media materials and distributed in high-risk provinces, specifically pagodas, health centers and communal areas in rural communities. Credit: WHO Cambodia

WHO launches a global framework to define and guide studies into the origins of emerging and re-emerging pathogens with epidemic and pandemic potential

The Scientific Advisory Group for the Origins of Novel Pathogens (SAGO), established in November 2021, comprises 27 scientific experts - acting in an individual capacity - who advise WHO on technical and scientific considerations regarding origins of emerging and re-emerging pathogens. One of the group's specific mandates was to develop a standardized framework approach for investigating the origins of novel or existing pathogens when and where they emerge or re-emerge. After three years of collaboration and consultation, the SAGO has now finalised and launched the WHO global framework to define and guide studies into the origins of emerging and re-emerging pathogens with epidemic and pandemic potential

This framework proposes a multi-disciplinary, multi-stakeholder *One Health* approach to ensure coordination and collaboration for determining the origins of a pathogen's initial emergence (or re-emergence) through a set of investigations and research studies which focus on the pathogen transmission to humans (see arrows A, B, C in figure 1). It is aimed principally at Governments and academic institutions of WHO Member States - particularly line ministries of health, agriculture and animal health, wildlife, and environment - but is also pertinent for international technical agencies, researchers and donors at national, regional and global levels.

The global framework outlines six key elements: early investigations; human studies (epidemiology); human/animal interface studies; environmental/ecological studies; genomics/phylogenetics; and biosafety/biosecurity. For each of these elements, the framework provides guidance on capacities needed and recommended studies. These are intended to be complementary and can be conducted concurrently across multiple technical elements.

SAGO collaborated closely with the Technical Advisory Group on Biosafety (TAG-B) in drafting the sixth technical element on laboratory biosafety and biosecurity investigations. The priority pathogen list developed by the WHO R&D Blueprint is referenced as relevant priorities for SAGO also.

While not primarily supporting capacity building at country level, the framework notes the capacities required at country level to effectively implement all six elements. The framework does not cover deliberate release of pathogen(s) or bioterrorism. The forthcoming independent assessment of the origins of SARS-CoV-2 formulates its analysis around the technical elements of the framework.

Having completed a first term of three years, a call for experts will be launched for the second SAGO term by end of 2024. Once established, the group will continue to act as an advisory body to WHO, advocate for the use of the framework and refine/update it in collaboration with partners and Member States, and be available to deploy experts to regional or country in the event of a novel pathogen should Member States make a request.

> "In the face of the eminent threat of the emergence (or re-emergence) of disease X, we hope this framework will assist with novel pathogen investigations through a collaborative One Health transparent approach."
>
> **Professor Marietjie Venter**
> SAGO chair

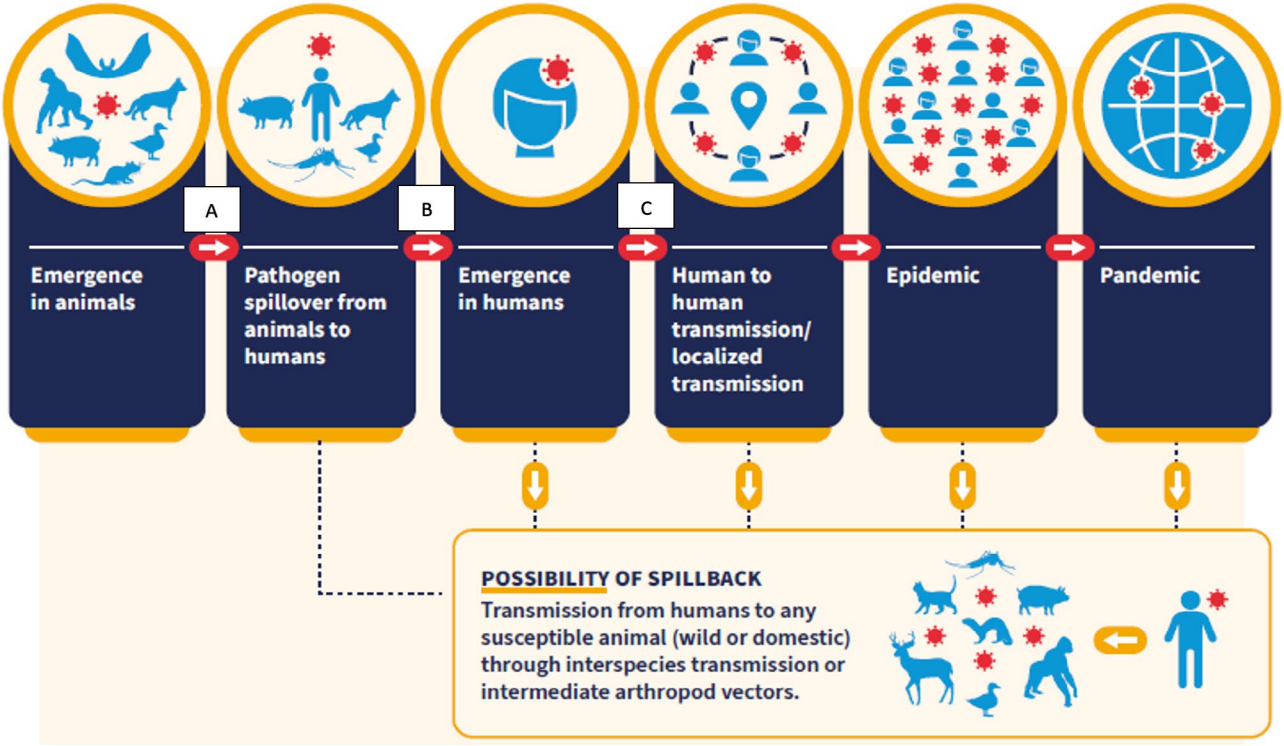


Figure 1: Stages of emergence, spillover and potential spillback through zoonotic spillover (A,B,C are the focus for this global framework).

GOARN leadership training elevates women leaders in emergency outbreak response

Group photograph of participants at the first GOARN leadership training for women, held in Australia (September 2024). Credit: NCCTRC/C Yeung.

When public health emergencies strike anywhere in the world, experts who are part of the Global Outbreak Alert and Response Network (GOARN), established by WHO, are rapidly deployed to support outbreak response. Although women comprise a significant proportion of the global health and social workforce, they hold just a small fraction of leadership roles.

To help bridge this gap, the first GOARN leadership training for women took place in Australia in September 2024. The training was designed to strengthen individual and collective emergency response leadership skills of women working in outbreak response. This initiative underscores WHO and GOARN's commitment to fostering gender equity and enhancing opportunities for women to lead in responding to outbreaks and other public health emergencies.

> "We noticed a gap in leadership training in public health and outbreak response for women. Training women leaders in responding to public health emergencies strengthens decision-making, promotes gender equity, enhances community trust and builds resilient health systems through diverse and inclusive leadership."
>
> **Dr Sharon Salmon**
> Technical Officer, GOARN, WHO Western Pacific Region

The training took place from 23 to 27 September 2024 and was hosted by a GOARN partner in Australia, the National Critical Care Trauma and Response Centre (NCCTRC), through their Public Health Operations in Emergencies for National Strengthening in the Indo-Pacific (PHOENIX) programme. The training brought together 24 women leaders from 12 countries across Asia and the Pacific.

Participants engaged in interactive discussions using case studies and networking sessions designed to strengthen their strategic, operational and decision-making skills in complex emergency settings.

> "Women are disproportionately affected during outbreaks and emergencies. It is therefore crucial to make space for women's voices at the table to ensure that the response solutions we co-create with governments and communities address everyone's needs – in particular, women's needs."
>
> **Ms Amanda McClelland**
> Senior Vice President and programme mentor, Prevent Epidemics, Resolve to Save Lives

The programme featured global leaders with extensive experience in public health and outbreak response, offering participants insights into effective leadership styles, crisis management and strategies for overcoming barriers to leadership in the global health sector. Tailored mentoring sessions further supported participants in navigating the unique challenges faced by women in leadership roles. In addition to building individual leadership skills, the training created a connected community of women leaders who can collaborate and share best practices across borders.

> "When I first came into this line of work, there weren't many women in the emergency workforce. I'm learning how to be a role model for younger women, to demonstrate that women can also be at the forefront of any emergency response."
>
> **Dr Annette Aguon**
> Administrator, Bureau of Communicable Disease Control, Department of Public Health and Social Services, Guam

The initiative aligns with WHO's Global Health Emergency Corps vision to standardize and strengthen emergency response capacities across countries through well-established health emergency networks.

For more information, click here.

Strengthening public health intelligence in countries and partner organizations: the 2024 EIOS Training of Trainers (ToT) workshop held at the WHO Pandemic Hub in Berlin

Experience sharing session during the 2024 EIOS Training of Trainers (ToT) workshop held in the WHO Hub for Pandemic and Epidemic Intelligence from 16 to 20 September 2024. Credit: WHO/Geraldine Hutt

Epidemic Intelligence from Open Sources (EIOS) is the world's leading initiative for harnessing open-source intelligence to support public health decision-making. Used daily by governments and organizations around the world, the EIOS system uses cutting-edge technology to harness the power of open-source data for the detection and assessment of public health threats, in near real time.

At the heart of the initiative is the EIOS community, comprised of sub-national level to international governmental and non-governmental organizations working to prepare for and respond to health threats. With an all-hazards approach incorporating One Health principles, the EIOS community of practice collaborates across sectors and disciplines to build and strengthen global health security.

The overarching mission of the EIOS initiative is to help public health leaders around the world to protect their populations from disease outbreaks and health emergencies before they escalate into bigger crises. As of October 2024, EIOS has been implemented in 98 Member States and close to 30 regional and international organizations and networks.

The EIOS Training of Trainers (ToT) workshop was designed to empower EIOS Champions with the skills to deliver training on the EIOS system and Public Health Intelligence (PHI). The goal of the workshop is to provide trainers with different methodologies to ensure consistent EIOS training, PHI capacity and adequate support to Member States. During the 2024 EIOS ToT workshop, participants joined sessions focused on interactive group activities and the application of adult learning techniques, the history of public health intelligence and key concepts such as surveillance and early warning alert and response (EWAR). This workshop plays a vital role in building and strengthening the capacity of national and global organizations engaged in public health intelligence.

The 2024 EIOS Training of Trainers (ToT) was the fourth edition of this workshop and was hosted from 16 to 20 September 2024 at the WHO Hub for Pandemic and Epidemic Intelligence in Berlin, Germany.

The 2024 EIOS ToT welcomed 31 participants from 26 organizations representing all six WHO regions. Attendees came from WHO Headquarters, WHO Regional Offices, WHO Country Offices, Member States (Ministry of Health and Public Health National Institute representatives), and partner organizations such as the Food and Agriculture Organization for the United Nations (FAO), Africa Centres for Disease Control and Prevention (Africa CDC), United States Centers for Disease Prevention and Control (US-CDC), European Centre for Disease Prevention and Control (ECDC) and the Robert Koch Institute (RKI) among others.

> "The most valuable thing I learned from this workshop is about the enhancement of skills in using EIOS in epidemic surveillance, international collaboration and the network of professionals who can share knowledge and strategies for addressing public health intelligence."
>
> **Deepesh Sthapit**
> WHO Nepal Country Office

The 2024 EIOS ToT marked a significant step forward in enhancing global PHI capabilities. By providing the teaching skills to trainers from a diverse range of organizations with the expertise and knowledge to deliver consistent EIOS and PHI trainings, the workshop strengthened the capacity of institutions worldwide to detect and respond to health threats with greater efficiency. The event fostered collaboration across WHO regions and partner organizations, emphasizing the importance of a unified approach to collaborative surveillance and early warning systems.

Enhancing resilience to climate hazards in primary healthcare facilities: a collaborative approach in Southeast Asia

The Technical Science for Health Network (WHO-Téchne) is a WHO network of architects, engineers, designers and public health practitioners from several institutions globally, that aims to make health settings and structures safer and reduce the risk of hospital-acquired infections. Since it was established in 2020, Téchne has become a key logistical response network helping with preparedness and response to global health emergencies.

Chiang Mai University, Summer school 2024. Credit: Chiang Mai University

The increasing frequency and severity of extreme weather events due to climate change significantly threaten human health, ecosystems and infrastructure. The 2023 United Nations Climate Change Conference (COP 28) emphasized the escalating risks to public health and healthcare systems as the climate crisis intensifies. Healthcare facilities and the staff who work in them are positioned as critical actors, providing essential services amid extreme weather events and outbreaks while mitigating their own greenhouse gas emissions.

Primary healthcare (PHC) facilities are essential components of functional healthcare systems however they often face challenges including inadequate infrastructure, insufficient funding and a lack of trained personnel, particularly in rural settings. Climate change exacerbates these issues, straining resources and disrupting healthcare delivery. To overcome these challenges, PHC facilities must be designed with a focus on environmental sustainability, climate resilience, infection prevention and control (IPC), mental health support and accessibility to ensure they can effectively respond to the needs of their communities in the years to come.

In response to these challenges, a consortium was formed involving WHO Téchne, the WHO Country Office for Thailand, KU Leuven (Belgium), hosting universities of Thammasat University and Chiang Mai University (Thailand), and several other academic institutions across Southeast Asia. Initiated in 2022, this collaboration aims to enhance the design of PHC facilities in the region, making them climate-resilient and environmentally sustainable, while also preparing them for infectious disease outbreaks and natural hazards.

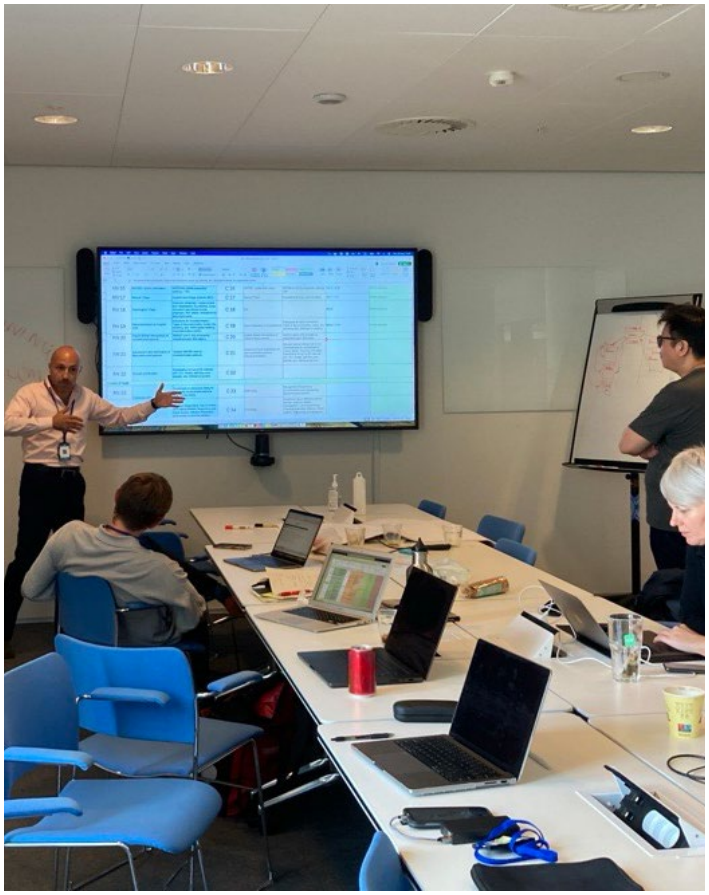
The consortium so far has brought together 68 students and 13 instructors from 12 countries, combining diverse expertise to develop a comprehensive framework that addresses the unique challenges faced by health centres in Southeast Asia. The initiative has two primary objectives: to inform WHO and Ministry of Health (MOH) guidelines on designing sustainable healthcare facilities resilient to infectious diseases and natural hazards; and to strengthen international capacity through knowledge generation and exchange.

As this three-year initiative nears completion, several outputs emerge. First, a design brief for PHC facilities was drafted, detailing the essential spaces required and their specific functions to support efficient workflows, reduce cross-contamination risks, and enhance the experiences of patients and staff. This design brief aims to support PHC facilities in handling routine situations as well as emergencies, with flexible spaces for varying uses, adequate storage for emergency supplies, and robust communication systems.

Secondly, a draft tool has been developed to evaluate PHC facilities, known as the 'Comprehensive Resilience Assessment System (CRAS) Tool'. This tool is tailored for rural and peri-urban healthcare facilities in Southeast Asia, to evaluate climate resilience, environmental sustainability, IPC, and overall safety, particularly during emergencies.

Both the design brief and the CRAS tool drafted by the consortium will be refined by WHO for inclusion in relevant guidance and to be shared with MOHs in the region.

WHO experts' workshop to develop Chemical, Biological, Radiological and Nuclear (CBRN) clinical training standards



The CBRN Action workshop gathered WHO CBRN experts from three levels of the Organization to develop CBRN clinical training standards. Credit: WHO

Initiated in collaboration between WHO and the European Commission's DG SANTE, and formally launched on June 14 2024, the WHO-EC project "CBRN in the European Union: Enhancing Public Health and Crisis Response Activities in Ukraine, Neighbouring Countries, and Beyond" is a three-year initiative targeting ten countries to strengthen public health and crisis response activities in the region.

Under this project, the WHO Regional Office for Europe is supporting regional objectives across six technical areas including workforce and coordination, collaborative surveillance, community protection, clinical interventions, countermeasures, and specialized networks. WHO Country Offices in Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, Poland, Republic of Moldova, Romania, Slovakia, and Ukraine are planning activities with their respective Ministries of Health for the first year of the project.

Activities for 2024 include the development of CBRN-specific emergency plans, standardized curricula for CBRN clinical management, Training of Trainers (ToT) workshops, trainings on Health Security Intelligence (HSI), and the creation of risk communication products and strategies, among others.

As part of this initiative, unified standards for training healthcare workers on radiological, nuclear, and chemical hazards are being developed to strengthen pre-hospital and hospital response capacities. These trainings will cover clinical care for victims of chemical and radiological/nuclear events, basic protection principles, health effects of radiation and toxic chemicals, organization of hospital care during CBRN events (including mass casualty scenarios), principles of patient decontamination, and general principles of patient care.

From 26 to 29 August 2024, a workshop for CBRN Action brought together 14 WHO CBRN experts from all three levels of the Organization to review relevant training materials already in use and to brainstorm lessons learned from recent relevant training initiatives in Ukraine and neighbouring countries. The workshop also sought to identify core training needs and target audiences for clinical CBRN training, define content development requirements, and plan the next steps for curriculum development.

During the four-day workshop, a preliminary curriculum was drafted, organized according to the broad thematic branches of chemical and radiological/nuclear public health preparedness and response for healthcare workers.

Moving forward, efforts will continue to map CBRN training and conduct gap analyses across the WHO European Region, ensuring the project reaches its target audiences. There will also be ongoing identification of relevant experts and organizations in the region to contribute to resource reviews and provide recommendations for curriculum design.

WHO Global Logistics Hub's Monthly Update

WHO's Global Logistics Hub (the Hub) - based within the International Humanitarian City in Dubai, United Arab Emirates - has the largest repository of pre-positioned health supplies and equipment within WHO's global supply chain and rapidly delivers essential medicines and equipment in response to acute and protracted health emergencies around the world. Effective partnerships are essential to these efforts. This includes emergency charter flights and operational support provided by the Dubai Humanitarian, the Government of Dubai, and the Government of the United Arab Emirates, as well as dedicated transportation support provided by the European Civil Protection and Humanitarian Aid Operations (ECHO) to help WHO reach affected populations in the most complex emergencies with access challenges.

OPERATIONS IN 2024 (AS OF 15 OCTOBER 2024)

- US$ 37 MILLION (2,055 METRIC TONNES) Value of Goods Received
- US$ 9.5 MILLION* In-Kind Received
- US$ 28 MILLION Value of Goods Delivered
- 37 CHARTER FLIGHTS COMPLETED
- 450 REQUESTS FOR ASSISTANCE DELIVERED
- 80 REQUESTS UNDER PROCESS
- 70 COUNTRIES REACHED ACROSS ALL 6 WHO REGIONS

*from United Arab Emirates through the Dubai Humanitarian, Government of the UAE, and ECHO, to support transportation for ongoing emergency operations

From 4 to 5 October 2024, rapidly responding to the escalating humanitarian crisis in Lebanon, the Hub delivered 86 metric tonnes of trauma and emergency surgery supplies containing life-saving medicines and surgical instruments. Delivering these supplies through four charter flights within a 24-hour operational period, in close coordination with the Government of the UAE and Dubai Humanitarian, represents one of the Hub's swiftest health emergency responses to date.

WHO team sort trauma and medical supplies delivered to Ministry of Public Health warehouse in Lebanon to support the health system in the country. Credit: WHO Lebanon/Roni Ziade

The Hub is expected to complete over 40 charter flights this year - primarily in response to humanitarian crises in Gaza, Sudan, and Lebanon - as the scale, pace, and complexity of humanitarian health supply requirements continue to increase. Based on current projections, 2024 will see the highest number of requests for assistance processed by the Hub on record (see figure 2).

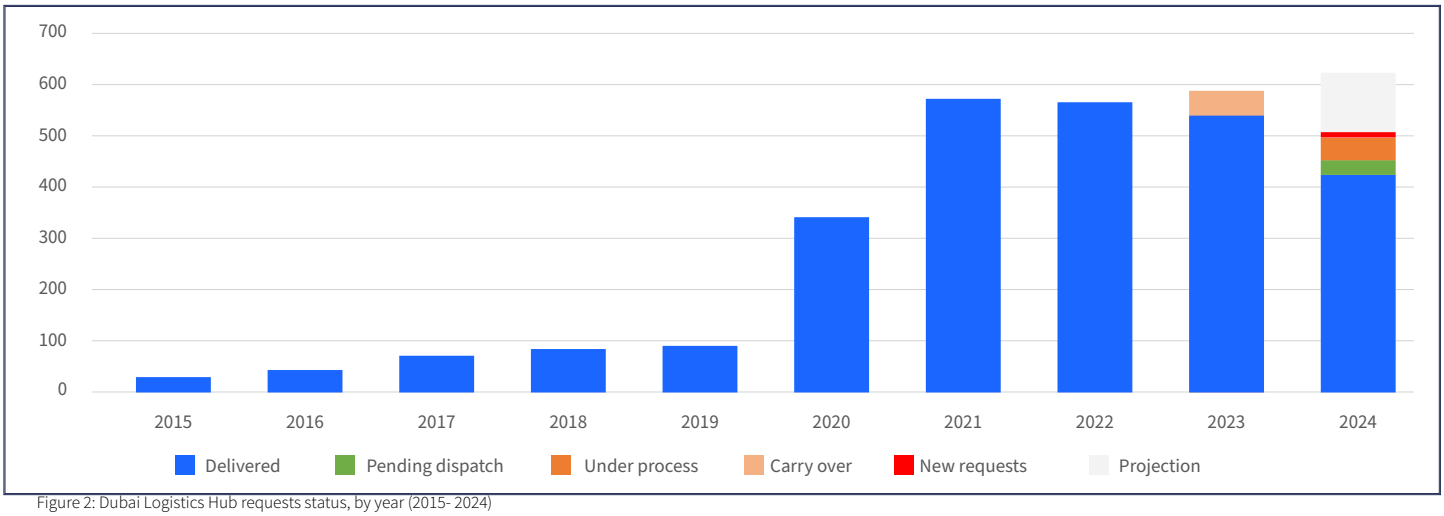


Figure 2: Dubai Logistics Hub requests status, by year (2015- 2024)

WHO learning channel provides capacity-building solution for Afghanistan

Afghanistan channel banner on the OpenWHO.org learning platform. Credit: WHO

Facing challenges with traditional in-person training, the WHO Country Office in Afghanistan launched an online learning channel in March 2024 to provide access to critical courses, in languages spoken in Afghanistan. The channel, hosted on WHO's OpenWHO.org learning platform, hosts five online courses in Dari and Pashto, most recently adding an introductory mpox course in September 2024.

A key motivation for developing the channel was to find a sustainable and cost-effective solution to help overcome high staff turnover and the considerable costs of traditional in-person classroom training. The channel allows WHO Afghanistan to deliver essential public health knowledge at a significantly reduced cost and reach a broader audience without the limitations of physical training facilities. Learners include students, health care professionals, volunteers and health ministry staff (see figure 3), with strong use among younger demographics - particularly those in the 20-29 age group - and men.

The Afghanistan office was also motivated by the round-the-clock accessibility offered by online courses in comparison to conventional classroom settings. This flexibility empowers health workers to access training at their convenience, facilitating continuous learning even in remote or conflict-affected regions.

Affiliation	%
Student	30
Health care professional	21
Other	11
Volunteer	9
Health ministry	7
NGO	6
WHO staff	5
Health expert	5
International organization	2
Health institute	2
Other Ministry	1
UN Country Team	1

Figure 3: Affiliations of learners in the Dari and Pashto courses on the OpenWHO Afghanistan channel

In addition, providing translated online courses on Afghanistan's pressing public health challenges addresses the need for scalable and repeated training. Afghanistan is currently grappling with multiple outbreaks, including Acute Watery Diarrhoea with dehydration, which poses a substantial risk of morbidity and mortality. The country is also witnessing an unprecedented surge in dengue fever cases, placing additional strain on the health care system. The Afghanistan channel hosts courses on cholera and dengue to enable professionals to conveniently refresh their knowledge to effectively mitigate the impact of these outbreaks.

Through these accessible and repeatable online courses, WHO's Afghanistan office is establishing a more sustainable capacity-building model that enhances the country's health system preparedness and response capabilities for potential outbreaks or epidemics in the long term, especially in resource-constrained areas.

> "Offering courses in native languages guarantees that critical information regarding the prevention, detection and management of these diseases is accessible to all individuals, particularly in a region where English proficiency is limited. By providing these courses in native languages, health care professionals gain the ability to comprehend and implement essential public health practices more effectively, thereby enhancing the response to prevalent communicable diseases."
>
> **Abdul Rahman Laiq**
> WHO Country Office in Afghanistan

While one-third of the channel's learners are from Afghanistan, the courses have also been utilized in a variety of other countries including in China, the Islamic Republic of Iran, Pakistan and the United States of America. The Afghanistan channel is one of 17 country-specific channels available in the OpenWHO Serving Countries portal in collaboration with WHO country offices.

WHO's Health Emergency Appeal 2024
In 2024, 300 million people are facing humanitarian crisis with severe health impacts. In 2024, WHO is appealing for US$1.5 billion to fund cost-effective, high impact solutions that protect health, lives and livelihoods during a time of significant intersecting humanitarian emergencies. For more information, click here.

GOARN
For updated GOARN network activities, click here.

Emergency Medical Teams (EMT)
For updated EMT Network activities, click here.

OpenWHO
For all OpenWHO courses, click here.

Health Cluster
For information on health cluster activities, click here.

EPI-WIN
For updates on EPI-WIN: WHO Information Network for Epidemics, click here.

WHO Publications and Technical Guidance
For updated WHO publications and technical guidance, click here.

Health Security Learning platform
To learn about or get involved in strengthening health security, 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 and Highlights

- WHO Director-General declares mpox outbreak a public health emergency of international concern
- Statement by Principals of the Inter-Agency Standing Committee on the situation in the Occupied Palestinian Territory – these atrocities must end
- Multi-country outbreak of mpox, External situation report #40 (13 October 2024)
- Multi-country outbreak of cholera, External situation report #19 (18 October 2024)
- Disease Outbreak News: Marburg virus disease – Rwanda (25 October 2024)
- Disease Outbreak News: West Nile virus – Barbados (3 October 2024)
- Disease Outbreak News: Middle East respiratory syndrome coronavirus - Kingdom of Saudi Arabia (2 October 2024)
- WHO advises against any travel and trade restrictions with Rwanda in the context of the ongoing Marburg virus disease (MVD) outbreak
- WHO launches global strategic plan to fight rising dengue and other Aedes-borne arboviral diseases
- Better use of vaccines could reduce antibiotic use by 2.5 billion doses annually, says WHO
- WHO analysis highlights vast unmet rehabilitation needs in Gaza
- High-level mission to Sudan reaffirms WHO commitment, calls for urgent action to address and end the extreme health and humanitarian crisis
- Dr Faustine Engelbert Ndugulile of Tanzania nominated as next director for WHO African Region
- Parliamentarians unite in Berlin to sign global statement supporting the WHO Pandemic Agreement
- WHO in Lebanon working to stop cholera spread amid conflict
- Attacks on hospitals and health workers jeopardize provision of health in Lebanon
- WHO and United Arab Emirates evacuate 85 patients from Gaza
- Patients transferred, critical supplies denied as high-risk, on WHO-led joint mission in northern Gaza amid intense hostilities
- Senegal becomes first African country to establish emergency medical team following WHO standards
- The Democratic Republic of the Congo kicks off mpox vaccination
- Rwanda reports first-ever Marburg virus disease outbreak, with 26 cases confirmed
- Experts commit to step up immunization programme in Central Africa
- Experts agree on African regional plan for health and climate change
- Sahel, Lake Chad Basin countries coordinate joint polio eradication plan
- WHO calls on Pacific leaders to make health and climate a high priority at regional leaders' meeting
- Pacific experts agree to further strengthen collaboration to protect communities from future outbreaks and pandemics
- In record year of dengue cases, PAHO urges countries to strengthen response as seasonal transmission set to begin in South America
- PAHO Member States adopt policy to strengthen health sector in the face of climate change, focusing on vulnerable populations and equity
- WHO and European Observatory support financing of rehabilitation care in Ukraine
- Interfaith engagement strengthens mental resilience in Israel
- Compassion in a time of crisis: how Czechia is supporting Ukrainian refugees
- Flooded but not defeated: the residents of Budapest navigate catastrophic flooding

Science in 5 is WHO's longest running video and audio series. Originally created in late 2020 to explain the science related to COVID-19, it has since expanded to cover a much broader range of topics related to health.

Mpox: what you need to know (2 September 2024)

WHO has declared the current mpox outbreak a Public Health Emergency of International Concern. How is this outbreak different from previous ones and why did it trigger a Public Health Emergency? What does that mean for countries and for you? Who is at risk? And what about vaccines? Our expert today is Dr Abdou Salam Gueye, from WHO Brazzaville in the Republic of Congo.

Rabies: Protect yourself and your pets (27 September 2024)

What is rabies? How serious is it? How can you prevent rabies? Dr Bernadette Abela explains this and what you can do immediately after a bite in Science in 5 today.