WHO country stories
Delivering for all

World Health Organization
WHO country stories

Delivering for all
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As World Health Organization (WHO) celebrates the 75th year of its founding in 1948, our constitutional mandate is more relevant than ever: to support countries to give people everywhere the chance to achieve the highest attainable standard of health, no matter who they are, where they were born, or how much money they have. This is central to WHO’s Constitution, and is articulated in WHO’s “triple billion” targets: to promote health, keep the world safe and serve the vulnerable. To realize these ambitious targets, in concert with the 2030 Sustainable Development Goals, WHO focuses on achieving measurable impact where it matters most: within communities.

This publication, “WHO country stories: delivering for all,” encapsulates the achievements and progress countries have made in global health. It demonstrates how WHO’s technical assistance, evidence-based policy recommendations, and capacity-building initiatives serve as catalysts for health advancement, and how collaboration, innovation, and evidence-based interventions can improve lives.

The COVID-19 pandemic brought global health to the public’s attention like never before. While the pandemic has receded, this collection of stories highlights the ways in which the structural investments and improvements made during the pandemic are now being leveraged to address other priority health areas. From strengthening health systems to enhancing disease surveillance, promoting health equity, and advancing universal health coverage, these stories describe how WHO’s interventions have made a difference in coverage, quality, and in the capacity to improve health outcomes in countries.

More broadly, these stories offer a window into the significant progress nations are making in their pursuit of better health outcomes. WHO supports countries by providing resources and capabilities to tackle stubborn communicable diseases; the growing burden of noncommunicable diseases; to prevent, prepare for and respond to health emergencies; and address the health inequities and social determinants of health through a comprehensive, integrated approach.

This collection serves as a powerful call to action. The global community must prioritize health as a fundamental human right and invest in resilient health systems with primary health care as a strong foundation. WHO, as the global authority
for health, works with countries to provide evidence-based solutions, foster innovation, and nurture partnerships that transcend geographical, sectoral, and disciplinary borders.

This collection of country stories not only acknowledges the achievements of countries but also recognizes the potential for further progress, including preparing for the global health threats of the future. WHO is taking concrete steps to strengthen and enhance our capacities at the country level, redirecting resources to sustain a predictable level of support across critical areas that align with specific country contexts.

This report is a powerful illustration of WHO’s commitment to supporting countries and communities around the world to progress towards our shared vision of Health for All.

Dr Tedros Adhanom Ghebreyesus
Director-General
World Health Organization
Acknowledgements

The contents of this publication have been prepared jointly by WHO Country Office teams, Regional Country Support Units and the Department of Country Strategy and Support (CSS) at headquarters. CSS coordinated the development of the stories, their consolidation and the finalization of this publication. Colleagues from multiple headquarters teams also contributed to the development of the stories. The valuable inputs and three level collaboration were greatly appreciated.
Introduction

The stories collected here are anchored in the WHO’s Thirteenth General Programme of Work (GPW 13) results framework, which measures the progress made by the WHO Secretariat, Member States, and partners. These qualitative stories from the field form an integral part of the GPW13 reporting mechanism, providing a narrative that demonstrates how WHO has been able to support Member States and public health authorities around the world across different priority health areas.

Each story within this publication describes a journey that each country has taken towards bettering health outcomes, with WHO’s strategic guidance and support. From combating infectious diseases to addressing noncommunicable illnesses, strengthening primary health care systems, and promoting universal health coverage, these stories illustrate the multifaceted impact of WHO’s interventions across diverse contexts.

Furthermore, the stories highlight the collective efforts of Member States, technical and financial partners, health care professionals, researchers, and communities who have joined forces with the WHO to overcome persistent challenges. Through showcasing successful interventions, innovative approaches, and lessons learned, this publication seeks to enrich the repository of valuable knowledge and good practices that can be adapted in different settings.

As you delve into these stories, we invite readers to reflect on the considerable progress achieved thus far and to renew their commitment to shaping a healthier, more equitable world.
Cabo Verde invests in comprehensive essential services to offer better quality of care to the elderly

Key WHO contributions

• Provision of technical expertise through use of WHO products and tools
• Guidance on contextual implementation of developed strategies
• Conducting stakeholder training to capacitate and improve the PHC approach
• Leading monitoring of intervention outcomes.

Cabo Verde’s health and social assistance systems need to adapt to an ageing population in order to provide relevant prevention and health promotion programmes and curative services. A more agile and responsive health and social assistance system will address the growing and varying needs of the elderly. The Ministry of Public Health (MoPH) requested WHO Cabo Verde’s technical cooperation to help implement strategies aimed at this demographic. The Integrated Care for Older People (ICOPE) guidance was considered an agile and appropriate strategy, presenting six comprehensive and integrated domains of intervention. With its implementation, health service providers have become aware of the needs of the elderly – creating dedicated care spaces, establishing elderly service days and visiting communities across the pilot health centres. These initial steps will improve the quality of elderly care for this population, in view of early signs of increased morbidity among the elderly.

Thirty community caregivers trained to provide better care in approaching the elderly population. Photo credit: WHO Cabo Verde.
How did Cabo Verde, with the support of the WHO Secretariat, achieve this?

People globally are living longer. Most people born today can expect to live into their sixties and beyond. Ageing is a biological event, the result of an accumulation of molecular and cellular damage over time leading to a gradual decrease in physical and mental capacity, along with a growing risk of disease.

In Cabo Verde, life expectancy in 2020 was 75 years of age, just above the global average. This has been consistently increasing over the past few decades, bringing with it health system challenges. The population above 60 years of age has been growing: from 7.6% in 2010 to 10.0% in 2021. This population represents an increasing proportion of the burden of noncommunicable diseases (NCD), which cause roughly 60% of all deaths in the country. The MoPH created the national programme for the health of the elderly in 2015 and developed its first strategic plan in 2017. The programme and strategy were later aligned to the WHO Decade on Healthy Ageing 2021–2030.

In August 2019, WHO Cabo Verde was invited by the MoPH to support this plan and presented the ICOPE guidelines to the national authorities as an agile and efficient approach. The ICOPE proposes evidence-based recommendations for health care professionals to prevent, slow or reverse declines in the physical and mental capacities of older people. These include six interventional domains related to limited mobility, depressive symptoms, cognitive decline, malnutrition, visual impairment and hearing loss. COVID-19 disrupted implementation of ICOPE, but from September 2021 WHO Cabo Verde organized training sessions to orient stakeholders on the steps to take for healthy ageing. WHO Cabo Verde also convened politicians, health professionals, social workers, researchers, community representatives and the elderly to understand and implement this approach. This was an important step towards mutual ownership and sustainability of the actions and their results.

A total of 320 professionals from different fields were trained, including from universities and nongovernmental organizations (NGOs). Among them were 50 professional caregivers from the Ministry of Family Social Inclusion and Development, working as part of the COVID-19 response to provide social assistance to vulnerable populations, including the elderly. The training sessions applied all six domains to pilot health offices with adequate spaces to address integrated care for the elderly. Photo credit: WHO Cabo Verde.
identify the state of health and well-being of the elderly and then to make appropriate referrals to health services.

To monitor implementation and outcomes, WHO Cabo Verde is following three pilot health centres: Órgãos, São Domingos and Ribeira Grande de Santiago. All have been renovated to provide adequate health care space and have started to register this population using disaggregated data for monitoring ICOPE. São Domingos Health Centre was the first to apply ICOPE within its municipality, which has 14,102 inhabitants. In this pilot survey, 1257 people aged 60 and above were registered for the first assessment. Many of them were found to have chronic conditions such as hypertension and type 2 diabetes with complications, 28% with cognitive deficit and 17% with reduced mobility, risk of malnutrition and risk of deafness. This information was used to form the baseline which would be used to demonstrate the results of interventions carried out in this population. A further 40 health professionals from the São Domingos Health Centre were trained in ICOPE and interventions piloted in 81 elderly individuals from the first assessment based on their identified individual needs. Initial reports show improved access and quality of service along with bespoke patient-centred care in this population.

“The implementation of the ICPOE strategy allowed us to improve the elderly clinical evaluation and functional assessments.”

- Maria Natalina Silva, National Programme for the Elderly Coordinator

During the 3rd Congress of Good Practices in Health in 2022, Cabo Verde presented preliminary data on ICOPE implementation and was awarded third place in recognition of the initiative and progress made in the West African region.

WHO Cabo Verde’s leadership has been critical in implementing the ICOPE, through technical support for implementing ICOPE guidelines and developing and updating policies and plans aimed at healthy ageing. Results of these actions will be disseminated to inform further government action.

Outcome 1.1  Improved access to quality essential health services

During the COVID-19 pandemic, due to the international border closures from 2020 to 2022, over 100,000 people entered Chile’s northern triborder region. With limited documentation, they had limited rights and access to basic services. They were also vulnerable to mental health issues, violence, COVID-19 and human trafficking. To address this humanitarian crisis, Chile’s Ministry of Health (MoH) requested support from the Pan American Health Organization (PAHO/WHO), which established local health support teams, or “duplas”. By 2021, 11 duplas had conducted 10,000 interventions, representing 50% of all the interventions provided by the Inter-Agency Coordination Platform for Refugees and Migrants from Venezuela (R4V) in the country. The programme’s success led to its expansion with 28 duplas consisting of 56 professionals working in six regions of Chile by mid-2022.

Key PAHO/WHO contributions

- Forming a working group to deliver planning support
- Funding, training, and equipping 56 health professionals to work in 28 dupla teams that help migrants to access health and social services
- Monitoring dupla activities to identify needs and gaps and update the action plan
- Coordinating with diverse regional, national and international actors to align activities and mobilize resources.
How did Chile, with the support of the PAHO/WHO Secretariat, achieve this?

In February 2021, the MoH received planning support from PAHO/WHO Chile. The office proposed a working group led by the MoH and including various United Nations (UN) agencies. The group examined migration routes, identified three areas of critical need in Chile’s northern region and conducted field visits to assess the situation using an adapted rapid needs assessment methodology.

PAHO/WHO Chile funded 11 clinical and psychosocial health professionals to meet migrants’ identified health needs. PAHO/WHO Chile provided the professionals with training, personal protective equipment (PPE), first-aid kits, transportation and other necessary supplies to establish each dupla team. The training covered various topics including dupla responsibilities, national health legislation and policies, organization of health services and social support networks, human rights, security in the field (“Bsafe”), prevention of sexual exploitation and abuse, psychological first aid, gender, maternal and child health, and intercultural competencies. PAHO/WHO’s global, regional and national resources were used for training, adapted to the local context by PAHO/WHO Chile.

Upon arrival, migrants relied on duplas as their initial point of contact for health care needs. The duplas provided health assessments and guidance on accessing health services, while also liaising on behalf of migrants with relevant government institutions, civil society organizations (CSOs) and international organizations. They educated migrants on their rights and administrative procedures, empowering them to access social and health services that complied with national legislation and standards. If necessary,
they accompanied people to health care establishments to overcome cultural barriers. In more complex cases such as children, older adults and pregnant women, tailored responses were available since migrants were covered by Chile’s wider social protection system.

Duplas keep PAHO/WHO Chile informed by presenting a monthly activity report which offers a comprehensive overview of individual, familial and community interventions, as well as health and demographic information. These data are shared with the MoH and collated in the Regional Refugee and Migrant Response Platform (R4V), a coordination platform that includes over 200 organizations working together under the Venezuela Refugee and Migrant Response Plan (RMRP) across 17 countries in Latin America and the Caribbean. PAHO/WHO is currently piloting a web-based reporting system and mobile application to streamline this process.

To further enhance coordinated action, PAHO/WHO Chile enlisted a consultant to help the MoH with coordination and supervision. The Dupla Project Coordination Team, comprising the MoH’s Department of Public Health Policies and Department of Primary Health Care as well as PAHO/WHO Chile, meets regularly to identify needs and gaps. In August 2021, a joint technical visit was conducted to assess the project’s progress and update the action plan, which resulted in the expansion of the project to 56 personnel deployed in 28 dupla teams.

The impact of our work has been to create the first entrance to a support network for people who do not know our health system and lack support networks.”
- Helena Opazo, social worker, Arica

To strengthen the national response, PAHO/WHO Chile partnered with other UN agencies to provide training to health care professionals on human rights approaches and national policies related to migration. PAHO/WHO Chile also appealed to the MoH and the National Insurance Fund (FONASA) to streamline the registration process for migrants in the social security system. PAHO/WHO Chile is also a member of the United Nations’ Working Group on Migration, which meets every two months and works with national institutions and partners to find solutions. Furthermore, PAHO/WHO Chile attends Chile’s First Response Committee for Migration meetings at the request of the Chilean MoH, leads health sector coordination in the Inter-Agency Coordination Platform for Refugees and Migrants from Venezuela, and participates in the regional coordination mechanism for the northern region with the MoH.

“
The teams have worked intensely to safeguard the rights of humans to migrate with dignity, a right that is fundamental and cannot be stripped away from anyone. We, as individuals and institutions, must ensure that these rights are respected and upheld.”
- David del Valle, Tarapacá Region Ministerial Secretary of Health (Seremi)

The dupla approach has been highly successful but securing resources to sustain the project remains a challenge due to Chile’s high-income status. PAHO/WHO Chile continues to work to modify perceptions of migration that impede the response to the situation and advocate for the mobilization of resources and change at the highest political levels.

CONGO

District health system strengthening to improve access to quality primary health care services in the Congo

Key WHO contributions
- Procurement of field technical services for training and supportive supervision
- Guidance of technical training sessions on clinical and health care facility management
- Initiation of finance mechanisms to maintain operations in health care facilities
- Establishment of new partnerships for wider community engagement
- Development of indicators for performance monitoring and evaluation.

The Congo has been struggling with stagnant health outcomes in recent years, largely due to insufficient investment in primary health care that has led to the underutilization of health services by the population. In an effort to address this issue, the World Health Organization (WHO) Congo collaborated with the Ministry of Health (MoH) to develop a decentralized strategy to provide technical assistance, mobilize resources and support implementation of activities at the peripheral level of the health system. After two years of implementation (January 2020–December 2021), the programme has achieved remarkable results. Health care service utilization increased from 8.1 to 15.7 percent, while the rate of the first antenatal care (ANC) visits for pregnant mothers rose from 16 to 35 percent. Moreover, the rate of pregnant mothers who completed four visits increased from 8 percent in 2020 to 18 percent in 2021\(^1\). Furthermore, with infrastructure, essential medicines and infection prevention and control (IPC) materials available to patients, districts were empowered to respond more strongly to the COVID-19 pandemic.

How did Congo, with the support of the WHO Secretariat, achieve this?

The WHO country office in Congo provided technical expertise to the MoH to introduce the Enhanced District Approach (EDA) into Congo’s 2018 national health policy, the National Health Development Plan 2018–2022, and established a joint operational strategy. The EDA focuses on strengthening the capacity of district health systems to deliver quality health services, while also addressing the underlying social and economic determinants of health. The strategy

Health facility utilization increased due to health system strengthening efforts. Photo credit: WHO Congo.
aimed to first revitalize 12 of the 52 health districts in the country before progressively expanding to the remaining 40 districts.

“Thanks to the support of the World Health Organization (WHO) and the Ministry of Health and Population, our people can receive the medical care they need without having to travel to Brazzaville or Kinshasa for treatment, eliminating the need for long-distance journeys.”

- Mr Joel Ngatsongo, Chief Administrative Officer of Mbamou Island

To strengthen local governance so that operational health zones and their subdistrict level health centres could deliver the minimum health care package to the local population, WHO Congo assigned two national consultants and a driver to each health directorate. These personnel provided day-to-day support to the regional director, district health management team and also trained health care personnel. Training sessions included Integrated Management of Childhood Illnesses (IMCI), family planning, using a partograph when assisting birth at health facilities and the management of health institutions. Joint WHO Congo and MoH teams then conducted enhanced supportive supervision missions to improve governance, using a set of WHO tools to assess existing gaps and challenges, and provided technical assistance and advice to improve the functionality of the health committees in each district. WHO Congo also provided technical assistance and guidance to mobilize, establish and manage local cost-sharing funds, which were used to finance operational gaps such as payment of health volunteers, purchase medicines, equipment, and fuel for outreach and vaccinations.
To raise community awareness of the importance of having access to health care, WHO Congo partnered with three nongovernmental organizations (NGOs): Médecins d’Afrique, Terre Sans Frontières and Croix Rouge Congolaise. These NGOs conducted social mobilization activities that centred on the utilization of health care facilities, maternal health, antenatal care visits, immunization and COVID-19 prevention.

Furthermore, WHO Congo worked with the MoH on designing a comprehensive set of 18 performance indicators for health facilities in 12 districts. These data have been instrumental in monitoring health outcomes based on WHO standards. Over the two-year implementation of the programme, data indicated that restoring the community’s trust in the health care facilities and improvements in district functioning had resulted in increased service utilization.

"Thanks to the support of the World Health Organization (WHO), the health centre now has access to a variety of essential health products, equipment, and materials that we previously lacked. These resources, including solar panels, will help us provide better care and improve the health of our community."

- Mr Olivier Kitsoki, Head of Mbamou Village

The initiative’s success stands as a testament to the effectiveness of WHO Congo and the MoH’s comprehensive operational approach which encompassed local governance, supportive supervision, financial seed funds to cover operational deficits and NGO-orchestrated promotion activities. The presence of strong national-level MOH support for decentralization and WHO Congo’s direct support at the district level was crucial, as was accessing a common pool of funds. This enabled resources from a variety of programmes to be amalgamated for district-strengthening, allowing numerous gaps in the health workforce, health financing and accountability to be addressed efficiently. Taking a district strengthening approach is also expected to sustain results more effectively into the future.

Eswatini is a high-burden country for both tuberculosis (TB) and HIV. According to the 2022 Global Tuberculosis report, 4200 new cases of TB (348 cases per 100,000 people) are reported each year in the country, of which 65% are coinfected with HIV. In addition, drug-resistant TB (DR-TB) was identified in 44% of previously treated TB cases and in 5% of new TB cases. To improve the programmatic management of DR-TB, the World Health Organization (WHO) provided technical assistance to Eswatini’s Ministry of Health (MoH) and convened a variety of stakeholders. This resulted in revision of the DR-TB diagnostic algorithm, introduction of targeted genome sequencing, revision of treatment regimens and rapid adoption of all-oral shorter regimens for DR-TB. These efforts shortened time to diagnosis, increased the detection of previously missed mutations and improved patient acceptance of treatment, leading to a countrywide improvement in DR-TB treatment success rates from 74% in 2018 to 81% in 2021.

“The Eswatini TB programme is open to explore new innovations and we are ready to implement and learn. As a programme, we have created a conducive environment that encourages partner support and fruitful collaborations” – Mr Themba Dlamini, National TB Programme Manager, Eswatini.

Photo credit: National Tuberculosis Programme, Eswatini/Trevor Mancoba Tsabedze.
How did Eswatini, with the support of the WHO Secretariat, achieve this?

The Eswatini MoH conducted a nationally representative anti-TB Drug Resistance Survey (TBDRS) in 2017–2018, with the WHO providing technical support to develop a protocol, implement the survey, analyse the data and interpret the findings. The survey revealed that approximately 60% of Mycobacterium tuberculosis complex (MTBC) strains in Eswatini contain a rifampicin-resistance mutation called rpoB Ile491Phe. This mutation is not detected by classic WHO-recommended diagnostic tests, resulting in cases of true rifampicin-resistant TB being incorrectly diagnosed as rifampicin-sensitive and patients being initiated on the wrong TB treatment regimen. The survey findings highlighted an urgent need to review the country's diagnostic technologies in order to detect the mutation, as the current programme was missing multidrug-resistant TB (MDR-TB) cases resulting in a poor treatment success rate.

In 2019, a small team was formed by WHO during Eswatini’s TB programme review to evaluate the diagnostic algorithm and treatment regimens, and to make recommendations to address the missed mutations. Guidelines were rapidly revised to enable the early identification and treatment of presumed MDR-TB cases, and WHO recommended that an oral shorter treatment regimen be used under operational research instead of an injectable regimen, in line with WHO’s global drug-resistant TB guidelines. This oral short regimen pilot study was implemented in seven out of 14 multidrug-resistant TB (MDR-TB) facilities in two regions of the country (Lubombo and Shiselweni), with financial support from Médecins Sans Frontières (MSF). In June 2021, the Green Light Committee (GLC) of consultants from the WHO Regional Office performed an independent assessment of the MDR-TB programme and recommended that the all-oral shorter treatment regimen be offered in all 14 DR-TB sites. The oral shorter treatment regimen was subsequently scaled up nationwide from September 2021.

In 2020, WHO provided technical expertise to modify the diagnostic algorithm for DR-TB to incorporate new molecular sequencing technology. In response, the Ministry of Health
Germany funded the implementation of a targeted sequencing project through the Global Health Protection Programme. To ensure a smooth transition from policy to practice two Illumina iSeq 100 next-generation sequencing machines were procured, along with reagents and supplies, and laboratory personnel trained to conduct operational research. Due to the COVID-19 pandemic, the implementation of the project was delayed as supplies were shipped late and laboratory trainers were unable to travel to Eswatini. Despite this, by the close of 2021, the new molecular sequencing technology was fully operational at the National Reference Laboratory.

“I am immensely proud of the technical support that WHO Eswatini, Regional Office and headquarters have provided to the Government of Eswatini in the fight against drug-resistant tuberculosis. Through effective partnership and collaboration of stakeholders Eswatini was able to translate local evidence to policy and adopted technologies and treatment regimens that are necessary to improve the outcomes of those infected with multi drug resistant TB. This leap forward would not have been possible without the strong commitment of the Government of Eswatini, the ongoing dedication of WHO and other key partners including the German Government, Médecins Sans Frontières, and the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR).”

– Dr Geoffrey Bisoborwa, Acting WHO Representative in Eswatini

In 2022, the MoH officially launched a targeted sequencing project, forming a Clinical Advisory Committee (CAC) to provide guidance on how sequencing data could be used for personalized treatment regimens for patients. The CAC is a multidisciplinary team, composed of clinical, laboratory, pharmaceutical and public health experts, all coordinated by the Programmatic Management of Drug-Resistant Tuberculosis (PMDT) technical advisor at the National TB Programme. With the support of WHO and the CAC, the MoH is hoping to be able to develop standardized treatments and train clinicians in the near future, based on the comprehensive analysis of a large pool of sequencing data. Further investments in capacity-building for data analysis is however essential to make this a reality.

Patients and clinicians have reported increased satisfaction in the diagnosis and treatment of DR-TB, thanks to an evidence-informed approach and multistakeholder collaboration. An evidence-based approach was used to identify the problem, while the collaboration of various stakeholders was essential to formulate national guidelines, mobilize resources and put in place the necessary changes to resolve it. In Eswatini, case-finding for both TB and DR-TB remains a critical issue, with only 49% and 31% of cases, respectively, being detected. Addressing this gap requires the allocation of resources to investigate the problem and devise effective solutions.

Ensuring access to routine vaccination throughout the COVID-19 pandemic in Gabon

Key WHO contributions

• Developing the strategic and operational plan
• Successfully advocating for funds to cover operational costs
• Training the workforce and coordinating with partners to ensure safe and effective implementation
• Developing and implementing a communication campaign to improve community awareness
• Monitoring vaccination services.

In 2021, the World Health Organization (WHO) collaborated with the Government of Gabon to launch an intensified vaccination activities (IVA) programme. This programme was developed in response to declining immunization coverage, increasing vaccine hesitancy and interruptions to routine immunization due to the COVID-19 pandemic. In October 2021, approximately half of all unvaccinated children aged 0 to 11 months received three doses of pentavalent vaccine (penta 3), oral poliovirus vaccine type 3 (OPV3), inactivated polio vaccine (IPV), varicella vaccine (VAR) and yellow fever vaccine (YFV) through the IVA programme. Follow-up rounds conducted monthly resulted in the further administration of penta 3 and OPV3 vaccinations to more than 2700 children, with 2371 children receiving IPV, 5415 children VAR and 3139 pregnant women tetanus vaccine. Implementation of the IVA programme successfully restored immunization coverage for vaccine preventable diseases (VPD), even surpassing pre-pandemic levels. Penta 3 vaccine coverage, which protects against five VPDs, rose from 63% in 2020 to 72% by the end of 2021.

How did Gabon, with the support of the WHO Secretariat, achieve this?

In an effort to ensure high vaccination coverage in all districts, WHO Gabon provided technical support and funding to the Government of Gabon to develop an operational plan based on the “reach every district” (RED) approach. This approach, outlined in the WHO Regional Strategic Plan for Immunization, is designed to ensure equitable access to vaccination. This operational plan was used to advocate for additional funding from partners and donors, and WHO Gabon successfully raised US$ 400 000 to cover operational costs for a catch-up immunization campaign.

In order to mitigate the disruption caused by the COVID-19 pandemic, WHO provided technical advice to the Ministry of Health (MoH) to adjust the routine vaccine schedule. In September 2021 COVID-19 vaccines were received through the COVAX mechanism, a partnership between the Coalition for Epidemic Preparedness Innovations (CEPI), Gavi the Vaccine Alliance, United Nations Children’s Fund (UNICEF) and WHO. Routine vaccinations were then administered through the IVA programme in three rounds between October and December 2021, integrated with the national COVID-19 vaccination campaign.

WHO Gabon provided comprehensive technical and financial support to the Ministry of Health (MoH) to ensure effective implementation of the IVA programme. This included training 20 national-level trainers from the MOH and STOP programme consultants on the RED approach and surveillance techniques; providing financial support to train
and deploy 256 health facility staff, including nurses and midwives, for each phase of the IVA; and ensuring training and financial assistance to central and regional supervisors to improve campaign management and monitor adverse events following immunization (AEFI). It also included technical advice and funding for teams of vaccinators and social mobilizers who visited villages and neighbourhoods to actively search for children who had not yet been immunized, and operational support for transporting materials and vaccinations.

WHO Gabon acted as the lead government partner, communicating and coordinating with UNICEF in all regions and with the Red Cross in some regions, to ensure that vaccination activities were conducted effectively and efficiently while protecting staff and patients from COVID-19.

WHO and UNICEF worked together to raise awareness of vaccine availability in the community, conducting a communication campaign that aimed to build and maintain public confidence in immunization and the health system. WHO provided technical support to create messages for the campaign, which were then distributed countrywide via multiple channels, such as radio, television, websites, newspapers, SMS messages and the existing social mobilizer network. In Gabon, social mobilizers, who are funded by the government, are responsible for informing their communities about health matters and initiatives.

"The COVID-19 pandemic posed a great challenge to Gabon, but routine vaccinations were prioritized and protected. WHO analysed health system indicators and mobilized resources. By partnering with the government of Gabon and engaging with diverse stakeholders, WHO channelled implementation support to fill identified gaps in the health system, making it more resilient."

- Dr Magaran Monzon Bagayoko, WHO Representative in Gabon

WHO, in collaboration with UNICEF, has been closely assessing the progress of vaccination services in Gabon. Evaluation meetings,
supervisory visits and surveys conducted using Open Data Kit (ODK)\(^3\) have been used to evaluate service performance and identify any potential barriers to vaccination. Data collected has been used to guide investments to improve services in areas of need. The IVA programme demonstrated success in addressing vaccine hesitancy and increasing coverage despite the disruption of health services caused by the pandemic. This success highlights the necessity of strong partnerships between government, WHO and other partners, along with clear communication and engagement with the public, in order to achieve successful vaccination outcomes.

GHANA

Empowering health workers and mobilizing communities to improve early detection and treatment of noncommunicable diseases in Ghana

Key WHO contributions

- Providing technical expertise in the development of PEN training modules adapted to the country context
- Offering technical expertise in the development of NCD screening registers and screening guidelines
- Conducting onsite supervision and mentorship to health care workers performing NCD screening
- Delivering basic medical devices such as blood pressure measuring devices, glucometers and test strips, height measures and weighing scales
- Ensuring catalytic funding to support the NCD screening exercise.

In 2019, noncommunicable diseases (NCDs), including cardiovascular disease, diabetes, cancer and chronic respiratory diseases, became the leading cause of death in most countries, accounting for approximately 74% of deaths globally. In Ghana, 45% of all deaths were due to NCDs (2019), yet the capacity to address NCDs in primary health care (PHC) is limited. In 2020, Ghana was selected as one of five countries for the NCD Flagship Initiative (2020–2024) by the Norwegian government in collaboration with WHO. The aim of this initiative was to address the NCD burden by strengthening key components of PHC in the health system in six regions. It has led to an improvement in NCD services in health facilities, making it possible for NCD cases to be identified in a timely manner and referred for appropriate treatment, thus minimizing further complications. In addition, work on NCDs in the country has sparked high-level political momentum, with the President of Ghana co-hosting an International Strategic Dialogue on NCDs and the Sustainable Development Goals in April 2022. This took place alongside a National Strategic Roundtable on NCDs that provided an avenue for partners to discuss sustainable support for the NCDs in Ghana.

How did Ghana, with the support of the WHO Secretariat, achieve this?

In Ghana, the probability of premature mortality due to NCDs was estimated at 22% (2019), and many of these deaths are highly preventable. To address the growing burden of NCDs, WHO Ghana in collaboration with the national authorities jointly established a multisectoral NCD Steering Committee and put in place prevention policies for NCD risk factors. However, care for people living with NCDs is still at an early stage.

Through a regional and national consultation and comprehensive proposal development, WHO Ghana was selected for the NCD Flagship Initiative. All three levels of WHO worked closely with the Ministry of Health to provide technical support to conduct training for the WHO package of essential noncommunicable (PEN) disease interventions and facilitate the rollout of NCD screening at selected sites. This included provision of medical diagnostics and devices (500 blood pressure devices, 200 weighing scales, 200 height measures, 100 glucometers and strips, and 200 tape measures) distributed to 25 community health posts, five health centres and one district hospital in six implementing districts. In December...
2022, a total of 515 health care workers across different occupational groups (physicians, nurses, midwives, health information officers and laboratory technicians) at regional/district level were trained on WHO PEN to strengthen early detection, initiation of treatment and follow-up care for NCDs. The PEN modules covered different disease areas across the main NCDs as well as NCD risk factors, palliative care, mental health, paediatric NCDs and medical ethics, and included procedures for entering NCD data into the district health information software (DHIS2). This will enable health workers to identify NCD cases and prescribe appropriate treatment or referral if necessary.

"Due to lack of training, we are currently not conducting cervical cancer screening at our health facility, but with the WHO PEN training, I am happy that now I am able to clearly identify cancer infected cervix and will start screening in my health centre soon."

- Vivian Opoku-Kyremeh, Midwife at Dumasua Health Center in the Sunyani West Municipality

Screening for diabetes and hypertension was conducted at sites such as Birim Central Municipality, in the Eastern Region of Ghana, from July–September 2022. To successfully plan and deliver the NCD screening session and mobilize the community to attend, WHO Ghana worked closely with the Ghana Health Service, community health committees, traditional councils and faith-based organizations. The teams applied the WHO PEN package and relevant tools, such as a NCD screening register, which was uploaded onto the “Kobo collect tool” for data collection of screened individuals. Raw data was then downloaded, cleaned and analysed by the Ghana Health Service team, showing that 73.2% of women and 26.8% of men were screened for diabetes and hypertension out of a total eligible population of 2858 people aged 30–70 years of age. Findings indicate that of those screened, 5.9% had been previously diagnosed with diabetes, but 94.1% did not know their status; 29.1% of people screened had raised blood pressure and 9.7% of those screened were referred to the next medical care level. These findings provide a snapshot of the NCD burden in Birim Central Municipality, which will enable district managers to better plan and
allocate resources to ensure that appropriate care is available. The screening event also raised awareness in the community, empowering people to seek care for NCDs.

“Currently, our screening efforts for diabetes are focused on people who present symptoms. But using the WHO PEN module, our health centre is now going to implement routine screening for early detection and treatment.”

- Vog-Enga Sebastian, Physician Assistant, Seikwa Health Center

Screening services that are opportunistic, routine and community-based should be strengthened at PHC level to enable people living with NCDs to be detected and referred for treatment and benefit from follow-up care. By empowering health workers with the tools and skills to detect and treat NCDs and providing both technical and financial support for community-based screenings, WHO and its partners have worked to catalyse demand for improved NCD services at the district, health facility and community level. In parallel, the Norway NCD Flagship Initiative further supports national level action to develop robust governance, advocacy and financing for NCDs, and to effectively embed NCDs within the health information system and provide continuous support for monitoring impact.

“The vision is to reduce the negative impacts of NCDs and ensure that there is access to equitable, comprehensive, affordable, and quality treatment and care.”

- Dr John Otoo, Deputy Director for Public Health, Eastern Regional Health Directorate

2 Ghana Health Service, internal data. December 2022.
India Hypertension Control Initiative: a patient-centred approach to control hypertension at the primary care level

Key WHO contributions

- Providing evidence-based technical guidance to the India Hypertension Control Initiative (IHCI)
- Directing steps for efficient IHCI field implementation as a member of the national Technical Advisory Group (TAG)
- Holding national and regional workshops to gain support from participating states
- Placing dedicated IHCI teams in states and districts to provide implementation support
- Training health care professionals based on the WHO HEARTS technical package.

Noncommunicable diseases (NCDs), particularly cardiovascular diseases (CVDs), are a major contributor to premature mortality worldwide, with hypertension being especially prevalent in India. An estimated one in four adult Indians suffers from the disease, only 10% of whom have their blood pressure under control. To help India reach its target of a 25% reduction in the prevalence of raised blood pressure, the India Hypertension Control Initiative (IHCI) was launched in November 2017, with the Government of India and state governments providing leadership, and the World Health Organization (WHO) India providing technical assistance. The IHCI was implemented in 141 districts across 25 states, covering 303 million people, and resulted in 21,579 health facilities providing support for those suffering from hypertension. Over the past four years, 12.5% of India’s estimated hypertensive adult population have been enrolled in the IHCI, with a 72% patient retention rate. This has led to the number of patients with controlled blood pressure increasing from 65,240 in the first quarter of 2019 to 777,243 in the first quarter of 2022.

How did India, with the support of the WHO Secretariat, achieve this?

IHCI was implemented under the strong leadership of the Government of India and state governments, with technical assistance provided by WHO India and funding support from the global health initiative Resolve to Save Lives. It was guided by WHO HEARTS, a technical package aiming to promote comprehensive cardiovascular health strategies, which focuses on healthy lifestyle habits, evidence-based treatment protocols, access to essential medicines and technology, patient-centred care, team care and task-sharing, and systems for monitoring. WHO India, as a member of the national Technical Advisory Group (TAG), directed the steps for efficient IHCI field implementation. WHO India held national and regional workshops to gain support from participating states and placed dedicated IHCI teams in states and districts to provide implementation support.

The IHCI team conducted a comprehensive baseline assessment of hypertension services at both the state and district levels to develop state-specific protocols for hypertension treatment. The team further provided technical support to 30 states to develop treatment protocols and drug management tools such as forecasting and ready reckoners. WHO India developed a training package based on HEARTS technical package for local settings and it was revised in 2022. IHCI dedicated staff (Cardiovascular Health Officers) placed by WHO India were responsible for training
Outcome 1.1 Improved access to quality essential health services

nearly 60,000 health care professionals, including 7,600 medical officers, 8,200 Staff Nurses, 10,500 Paramedics, and 32,000 community workers up until December 2022. This training focused on the diagnosis, treatment and monitoring of hypertension, as well as drug forecasting, patient tracking and reporting of facility-based cohorts.

In 2018, the IHCI programme was launched in 25 districts across five states, deploying 36 cardiovascular health officers and 100 senior treatment supervisors to primary health care facilities. This successful implementation resulted in rapid programme expansion to 141 districts across 25 states, providing IHCI services to 303 million people. Six new states and 40 new districts started IHCI implementation in 2022, with more than 7,500 health facilities added under IHCI in 2022. The programme enabled 21,579 health facilities, 15,270 of which were either peripheral subcentres or health and wellness centres, to provide IHCI services. Furthermore, first- and second-line hypertension protocol drugs were streamlined in 19 out of the 25 states, resulting in two months of stock availability at all health facilities, thereby reducing travel times for patients and allowing for patient-centred care.

“...the India Hypertension Control Initiative (IHCI) is a highly impactful programme that has the potential to reach those who may otherwise go unserved. Its unique strategies make it key to meeting the country’s goal of enrolling 75 million patients by 2025. WHO India will continue to work closely with the Ministry of Health and Family Welfare to ensure the success of IHCI.”

- Dr Roderico H Ofrin, WHO Representative in India

India’s IHCI programme has enrolled an impressive four million hypertensive patients representing 12.5% of the estimated hypertensive adult population. Out of these, in 2022, 1.8 million patients were enrolled under IHCI. Moreover, the programme has achieved a retention rate of 72% or higher, leading to an increase in the number of patients with their blood pressure under control from 65,240 in the first quarter of 2019 to 777,243 in the first quarter of 2022. This improvement can be attributed to the programme’s efficient strategies such as a simple treatment protocol that facilitates easy understanding and...
implementation by health staff, decentralized and patient-centred care, the use of forecasting and other tools to ensure an uninterrupted drug supply, opportunistic screening for early patient detection, rational drug use and a robust, real-time information system.

"The strengthening of hypertension and diabetes services at the primary health care level through the India Hypertension Control Initiative has had a positive impact on the national public Health Insurance programme, Ayushman Bharat Yojana. It ensures that high-quality health care is available to patients close to their homes. India is committed to reducing the number of people suffering from high blood pressure by 25 percent by the year 2025. In light of the growing burden of noncommunicable diseases (NCD) in India, we must mainstream IHCI interventions across the country through our National NCD program."

Shri Vishal Chauhan, Joint Secretary (NCDs and Policy) Ministry of Health and Family Welfare, Government of India

Despite challenges such as inadequate community awareness, an absence of validated digital blood pressure monitors at health facilities, and difficulties in sustaining uninterrupted drug and logistic supplies and engaging the private sector, the IHCI has made a substantial impact in reducing the burden of NCDs and improving the health and well-being of Indian citizens. As a result, the programme has been incorporated into the National NCD Programme and is now being implemented in all districts of the country.


How did Iran (Islamic Republic of), with the support of the WHO Secretariat, achieve this?

In 2010, WHO Iran (Islamic Republic of) provided technical assistance to Iran (Islamic Republic of)’s national malaria programme to formulate robust national strategic plans and policies that reoriented the country’s malaria strategy towards elimination. The national plan aimed to eliminate Plasmodium falciparum malaria by 2015 and all forms of malaria by 2025, using an integrated approach encompassing vector control, disease surveillance and case management. To ensure that global guidelines, such as WHO’s framework for malaria elimination, were effectively implemented in the national context, WHO Iran (Islamic Republic of) provided technical expertise to conduct situation analyses, antimalarial medicine efficacy studies and implementation research.

Iran (Islamic Republic of)’s malaria programme was comprehensive and adopted a “Health for All” approach to tackle malaria in line with the principles of Universal Health Coverage (UHC) and WHO’s Global Technical Strategy for Malaria 2016–2030. Free prevention, diagnosis
and treatment for malaria are provided for all, including for unregistered workers from other countries, through Iran (Islamic Republic of)’s health care system. When positive cases are found, community health workers or volunteers conduct active case detection in the patients’ surroundings to ensure prompt and effective treatment. To boost surveillance, case management and information system capacity in Iran (Islamic Republic of)’s health care system, WHO Iran (Islamic Republic of) conducted capacity-building activities such as training and study tours, and procured public health goods, medicines and diagnostics. To further strengthen malaria elimination activities at Iran (Islamic Republic of)’s borders, WHO Iran (Islamic Republic of) conducted a malaria border coordination meeting between Iran (Islamic Republic of) and its neighbours, Afghanistan and Pakistan. This meeting fostered political commitment for cross-sectoral coordination on environmental vector control activities.

“I trust that through utilizing innovative approaches for mobilizing local resources and new technologies, engaging communities and cross-sectoral collaboration, the Islamic Republic of Iran can share its valuable experiences and show its commitment to the world for ending malaria.”

- Dr Jaffar Hussain, WHO Representative in Iran (Islamic Republic of)

In 2021 and 2022, political instability in Afghanistan and floods in Pakistan led to an increase in malaria outbreaks and a significant flow of migrants and refugees, which increased the risk of imported malaria cases into Iran (Islamic Republic of). Consequently, local malaria cases increased significantly. In response, WHO has been providing critical technical and logistical support to Iran (Islamic Republic of)’s malaria programme. To address the increased risk of malaria in border areas, WHO Iran (Islamic Republic of) is providing technical support to the country’s malaria programme to review the classification of reported cases. Additionally, WHO Iran (Islamic Republic of) is offering logistics support for malaria detection and vector control to effectively combat malaria in these high-risk areas. One of the most effective strategies for early case detection and treatment has been the community volunteer network. This network includes outreach services at entry points along the border with Pakistan and in communities and farms in adjacent districts. The community volunteers have played a pivotal role in identifying and treating malaria cases early, thereby reducing spread of the disease.

To ensure that Iran (Islamic Republic of)’s malaria elimination efforts stay on track, WHO Iran (Islamic Republic of) has conducted progress-review missions as part of the E-2020 initiative of 21 malaria eliminating countries. Currently, WHO Iran (Islamic Republic of) is working closely with the government of Iran (Islamic Republic of) to revise the malaria elimination strategy, in line with the E-2025 initiative, to ensure that local transmission is prevented from re-establishing itself in the country. To remain on course for elimination Iran (Islamic Republic of) needs to further strengthen its surveillance, case management and cross-border cooperation, particularly with neighbouring Pakistan, and to increase investment in developing these areas.

A potential mosquito breeding site is inspected. Photo credit: WHO Iran/Leila Javadi Shalkouhi.
Despite the challenges posed by the COVID-19 pandemic, efforts to eliminate malaria were still maintained. While there was an increase in the number of malaria cases, these were primarily due to imported and introduced cases, and there were no reports of indigenous malaria in Iran (Islamic Republic of). The programme was able to continue moving towards Iran (Islamic Republic of)’s Free of Malaria goal through the effective utilization of external technical support, notably provided by WHO, as well as through the provision of public health goods and items from organizations such as UNICEF, UNHCR, and ECHO, which played a critical role in filling some gaps.”

- Dr Hossein Farshidi, Deputy Minister for Public Health, Iran (Islamic Republic of)

Iran (Islamic Republic of) integrated malaria into its development agenda and has sustained domestic funding for decades, but after several years of international economic sanctions and economic hardship, resources available for a public health response are limited, particularly in the context of the ongoing COVID-19 pandemic. Malaria remains a funding priority in Iran (Islamic Republic of) and WHO Iran (Islamic Republic of) has succeeded in mobilizing technical and financial resources to maintain essential health services and vector control activities for the malaria programme during past crises, but a sustainable source of funds is needed to ensure that Iran (Islamic Republic of) stays malaria free into the future.

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JORDAN

Strengthening primary health care services to improve routine immunization coverage for infants in Jordan

Key WHO contributions

- Deployment of immunization tools for a holistic assessment of the programme
- Training programmes to increase NITAG management capacity
- Procurement of vaccines and related materials to expedite campaigns
- Digitization of vaccination programme records
- Provision of technical support for a communication strategy.

Jordan’s national immunization programme experienced a complex decline in programme performance at all levels which, exacerbated by the COVID-19 pandemic, resulted in a decrease in routine vaccine coverage. Coverage with the third dose of hexavalent vaccine, which protects children against multiple communicable diseases, dropped from 99% in 2017 to 96% in 2018, 89% in 2019 and 77% in 2020 \(^1,2\). Syrian refugees and vulnerable Jordanians were particularly affected.

In 2020, WHO Jordan received a large grant of 43 million euros from the European Union to strengthen the immunization programme under the leadership of Jordan’s Ministry of Health (MoH). This allowed for comprehensive support to all components of the national immunization programme, reaching children who had not previously been immunized and vaccinating 20% of Syrian refugee and vulnerable Jordanian infants. This led to an increase in the nationwide hexavalent vaccine coverage rate to 91% in 2021 \(^1,2\).

Improved vaccine equity and coverage is expected to reduce the incidence of vaccine-preventable diseases and associated morbidity and mortality.

“...The National Expanded Programme on Immunization at the Ministry of Health of Jordan strongly appreciates the support provided by the World Health Organization. The technical and financial support helped the Ministry to build back better after COVID-19 pandemic, strengthen the programme capacity at all levels and significantly increase routine immunization rates.”

- Dr Nizar Maswadeh, Jordanian Ministry of Health

How did Jordan, with the support of the WHO Secretariat, achieve this?

In 2021, financial, technical and consultative support was provided by WHO Jordan and the Regional Office for the Eastern Mediterranean to conduct a series of assessments of the country’s immunization programme. WHO’s Expanded Programme on Immunization (EPI) Review provided a better understanding of the strengths and weaknesses of the immunization programme at the national, subnational and service-delivery levels; WHO’s Data Quality Self-Assessment methods toolbox was deployed to evaluate different aspects of the immunization monitoring
WHO and UNICEF’s Effective Vaccine Management (EVM) assessment tool was used to generate evidence about bottlenecks in the supply chain. Multiple gaps were identified in all components of the immunization programme and highlighted in the assessment reports to enable targeted action.

WHO Jordan worked with the MoH to strengthen the National Immunization Programme’s (NIP) management and service delivery capacity. This included developing an organigramme to define roles and responsibilities, producing terms of reference (TORs) for staff and the National Immunization Technical Advisory Group (NITAG), as well as training 27 managers in WHO’s mid-level management course for Expanded Programme on Immunization (EPI) managers. The modules covered programme management and monitoring, and effective vaccine management.

To support the operationalization of mobile immunization sessions, WHO Jordan procured vaccines and equipment for transportation and storage (47 cars, four refrigerated vehicles and 10 refrigerators) through international and local tenders with the support of the WHO Global Service Centre.

WHO Jordan supported the country’s National Expanded Programme on Immunization with assessments, procurement of vaccines, cold chain equipment, vehicles, and capacity building of the immunization staff. The strong leadership and ownership of the Ministry of Health is truly commendable; it resulted in long-term sustainable changes and improved immunization coverage.”

- Dr Chinara Aidyralieva, WHO Jordan Country Office

Jordan’s existing vaccination programme information system relies heavily on paper-based materials (76% of records are paper-based), so WHO Jordan offered technical support to the MoH to create an electronic Immunization Information System (IIS). This will help health professionals to record and report vaccinations, ensuring their timeliness and allowing the MoH to monitor the performance of immunization programmes, identify gaps in immunization coverage and address them efficiently. In order to determine the most appropriate platform
for Jordan’s needs, WHO evaluated a range of information management platforms, including DHIS2 and Jordan’s national platform for COVID-19 vaccination. The latter is under consideration by the MOH as a potential platform for tracking of routine vaccines.

With WHO Jordan’s technical and financial support, Jordan’s MoH developed a communication strategy for routine immunization, aiming to address vaccine hesitancy by increasing public awareness and understanding of the importance of vaccines. Several public and private stakeholders, including the MoH and the media, were consulted when developing the strategy, and a creative company is being hired to create and distribute communication materials.

This close working relationship between WHO and the MoH was essential to strengthen Jordan’s National Immunization Programme. WHO continues to collaborate with the MoH, providing technical expertise to monitor, evaluate and sustainably build the immunization programme’s capacity.

A mobile vaccination team supported by WHO personnel delivers routine vaccinations for infants in Jarash, Jordan. Photo credit: WHO Jordan.


LEBANON

Improving health in Lebanon’s largest prison, so that no one is left behind

Key WHO contributions

- Situational assessment and strategy development
- Adapting national health care protocols to the prison context and deploying and training a team of interdisciplinary health professionals to deliver health services
- Development of food checklists and a menu tailored to prisoners’ nutritional needs
- Renovating medical clinics and providing medical and information technology (IT) equipment
- Supporting the development of an electronic medical file for prison inmates
- Conducting project evaluation.

In recent years, Lebanon has been facing a range of political, socioeconomic, financial and health crises, leading to a rapid decline in infrastructure and energy supply, high levels of poverty and unemployment, and mass migration. The health system has been particularly stretched due to the departure of health care workers, the Syrian Arab Republic crisis and the Beirut Port explosion. The Roumieh central prison, the largest in the country with 5,000 inmates, was particularly affected, with shortages of health personnel and medication, and challenges in managing the COVID-19 pandemic. In response, the World Health Organization (WHO) collaborated with the Ministry of Interior and Municipalities, with funding from the Royal Norwegian Embassy in Beirut, European Union and KfW (Germany’s state-owned development bank), to improve the health care system within the prison in the context of the COVID-19 pandemic. The project increased access to health services, improved quality of care and nutrition for inmates, and enabled the health clinic’s integration into the Ministry of Public Health’s primary health care (PHC) network, improving health outcomes immediately while paving the way for the future.

How did Lebanon, with the support of the WHO Secretariat, achieve this?

WHO Lebanon developed the project’s strategy in close consultation with the Ministry of Interior and Ministry of Public Health, aligning it with Lebanon’s health strategy. Its focus was to improve access to health and mental health services and nutrition in Roumieh central prison, targeting noncommunicable diseases and inmates aged 50 and over.

A nurse recruited under the project supported by WHO in Roumieh prison prepares medical equipment for a consultation with a patient. Photo credit: WHO Lebanon/F. Choufany.
WHO recruited an interdisciplinary team of health care professionals, which included four family physicians, eight nurses, a social worker, a psychiatrist and an ophthalmologist, to provide health services. WHO provided the team with oversight and training based on national health care protocols adapted to the prison context. The team received regular training from WHO on protocols and forms, and on a people-centred primary care approach. They provided health education and conducted comprehensive health assessments and follow-up based on national health care protocols for the PHC level. By increasing the number of health workers, establishing a physician-patient relationship focused on partnership, inmate involvement in health care decisions, guaranteed confidentiality and informed consent, the project improved the quality of care delivered in Roumieh prison. Two thousand five hundred prisoners in Roumieh prison received a comprehensive health assessment, and more than 8000 consultations were provided in addition to continuous health education and awareness sessions.

WHO Lebanon renovated the medical clinics and provided essential medical and information technology (IT) equipment based on the minimum list of equipment for PHC centres. The equipment included exam tables, electrocardiogram and glucose monitors, blood pressure machines and spirometers. WHO Lebanon procured the equipment to ensure that the medical centre in Roumieh could be integrated into the Ministry of
Public Health's PHC network, allowing inmates to receive sustained access to the same quality of health care as the rest of the population.

WHO Lebanon recruited a senior nutritionist who conducted a thorough assessment of the nutrition situation, including field visits, focus groups and meetings with inmates, Internal Security Forces (ISF) members and prison staff, as well as an analysis of the prison decree. The nutritionist then developed checklists for food safety and service and collaborated with prison officials to create a two-week menu tailored to prisoners with chronic diseases and those without specific health needs.

“The World Health Organization has been a steadfast partner for us, standing by our side since the early days of the COVID-19 pandemic. The expertise and technical support has been invaluable, helping us develop protocols and procedures to effectively combat the virus. WHO also conducted awareness campaigns to educate our staff and inmates about the risks and how to stay safe. We are grateful to WHO for their support and for helping us to manage the pandemic.”

- Internal Security Officer in Roumieh prison, Ministry of Interior and Municipalities

WHO Lebanon, in partnership with other organizations and under the guidance of the Ministry of Interior and Municipalities, worked to develop an automated medical file for inmates in Roumieh prison. The project focused on general consultation and health care management. WHO Lebanon provided technical expertise and IT support, and capture-related forms and indicators. In preparation for operationalization of the system, WHO Lebanon also procured essential equipment such as desktops, printers and scanners.

“A great advantage of the automated medical file is its ability to provide access to the inmate’s health file, allowing us to make informed decisions regarding their medical care. This information is crucial for transferring patients between locations. For example, a patient with a health condition that requires an air-conditioned vehicle can be quickly identified and transported safely.”

- Member of Roumieh prison Internal Security Forces

WHO Lebanon conducted an evaluation, which rated the project as relevant since it filled critical gaps in health care and was appreciated by inmates. Despite the complexity of crisis situations, such as those faced by Lebanon, there are opportunities to mobilize resources and collaborate among stakeholders. WHO’s project and support for Roumieh prison’s health care system was one such opportunity: it led to integration of the medical centre into the Ministry of Public Health’s PHC network, providing a path forward for future collaboration and improved health outcomes and paving the way for more respect for human rights and basic needs.
Liberia takes giant steps towards 90 percent COVID-19 vaccination coverage

Key WHO contributions

- Partnering with county health teams (CHTs) to strengthen coordination, planning and supervision of the vaccination campaign including mapping communities and applying district and team vaccination targets
- Shifting from passive to performance-based vaccination and mobile money payment mechanisms
- Providing transportation to take vaccines the last mile
- Providing mobile teams with equipment to produce vaccination certificates in the field
- Coordinating with the educational sector for parental outreach
- Involving influential community leaders in social mobilization efforts.

Liberia recorded its first COVID-19 case on 20 March 2020, prompting the government to implement a range of strategies and interventions through the National Incident Management System. COVID-19 vaccines were one of the vital tools introduced in April 2021 to prevent and respond to COVID-19. Despite Liberia’s successful history of introducing new vaccines, rollout and uptake of the COVID-19 vaccine was slow in the first phase of deployment from April to December 2021. Challenges included misinformation and mistrust in public health interventions, inadequate community engagement, operational and logistical issues, inconsistent constitution and follow-up of vaccination teams, and payment delays from a previous vaccination campaign, all of which affected motivation on the ground. In the second phase of deployment from February to July 2022, WHO worked with the government to make improvements based on lessons learned from the first phase. As of December 2022, Liberia had fully vaccinated 81% of its population, up from 22% in February 2022, with a coverage rate of over 91% in each of the six counties for which WHO was responsible. The COVID-19 disease burden was lowered substantially and no COVID-19 death has been reported since March 20221.

How did Liberia, with the support of the WHO Secretariat, achieve this?

In the second phase of the COVID-19 vaccination campaign in Liberia, the government delegated planning and implementation to the county level, assigning six counties to WHO Liberia. Working in collaboration with the Expanded Programme on Immunization (EPI), community health teams (CHTs), and WHO field coordinators, WHO Liberia developed a clear roadmap for the vaccination campaign through microplanning. This involved mapping communities and setting district and team vaccination targets to ensure that resources were utilized effectively, and vaccination teams deployed to areas with the highest priority.

WHO Liberia shifted its vaccination approach from passive to performance-based, using mobile money payments to disburse funds directly to counties and beneficiaries. Counties then determined their own operational needs, with guidance from WHO field coordinators, fostering ownership and boosting team motivation. Underperforming teams were identified and given targeted support for improved results, leading to better vaccine coverage, strengthened health systems and a culture of performance and accountability. To ensure effective implementation, WHO Liberia held weekly
monitoring meetings, providing a platform to assess progress, identify operational challenges and guide improvements. This played a critical role in ensuring the timely and efficient movement of vaccines and supplies from regional cold-chain stores to the counties, where vaccination teams were stationed.

To ensure vaccines reached even the most remote areas, WHO Liberia took proactive measures, hiring additional vehicles and utilizing alternative modes of transportation such as airlifts. These efforts significantly reduced vaccine stockouts, ensuring equitable distribution across the country. Vaccination teams were provided with generators and printers to promptly issue vaccination cards upon vaccination. The reliable presence of both vaccines and vaccination cards generated demand for the vaccination campaign in the community.

“
I am proud to say that the county administration, as a whole, took the lead in getting vaccinated and engaged the community to follow suit, thanks to our awareness activities. Our awareness campaign involved every sector in Nimba and included community radio which was pivotal in spreading the word. We continue to advocate for more people in the community to get vaccinated. Our success would not have been possible without our partners including WHO, and we thank them for their invaluable support.”

- Hon. Nelson N. Korquio, Superintendent, Nimba County.

Boosting demand for the COVID-19 vaccine was possible with WHO’s support to county administration, in close collaboration with local leaders and community players such as superintendents, district commissioners, town chiefs, community radio stations, women’s groups and youth groups who mobilized communities and raised awareness about the importance of getting vaccinated. To ensure that all age groups were
reached, WHO Liberia also assisted the Ministry of Health in partnering with the educational sector to inform parents that the Pfizer vaccine was available for children aged 12 and above.

“I am Bendu Karngar, a 12th grade student, I got vaccinated on campus and did not experience any side effects after the administration. Most of my school mates took the vaccine the next day because I had taken the vaccine.”

- Bendu Karngar, student, Liberia

Close partnership between WHO field staff and county health teams (CHTs) ensured coordination, data-driven planning, community engagement and timely provision of logistical supplies. This was crucial for success, as was generous funding from multiple sources: the United States (US) Government, German Government, US Centers for Disease Control and Prevention and European Civil Protection and Humanitarian Aid Operations. In the next phase of the vaccination campaign, Liberia aims to achieve 90% vaccination coverage across the country by introducing paediatric vaccines, administering booster doses, providing additional support to low-performing counties, integrating COVID-19 vaccination into routine immunization and engaging the government in cofinancing for health care services. As requested by the Liberian government, WHO Liberia will extend its support to an additional county, Margibi, in the next phase of the campaign.

Malawi has reduced under-five child mortality rates in recent years. However, as under-five mortality rates have declined overall, the proportion of deaths occurring in newborns has become higher. This phenomenon has been attributed to poor quality of care (QoC) resulting from inadequate infrastructure, untrained health workers, and limited medical practitioners and supplies. In response, the Ministry of Health (MoH), in collaboration with the World Health Organization (WHO) and other partners, implemented a maternal, newborn, and child health (MNCH) QoC initiative. It aimed to empower health workers to monitor and address the underlying causes of maternal and newborn morbidity and mortality. Through the initiative, quality improvement (QI) interventions have been implemented in 280 health facilities. Routine monitoring data suggest that maternal and neonatal deaths have decreased in several districts. Malawi’s overall maternal mortality ratio decreased from 439 to 381 per 100,000 live births between 2017 and 2020. Thyolo district hospital, a secondary-level facility, was particularly successful, managing to reduce maternal and neonatal mortality by more than 50% between 2017 and 2022.

How did Malawi, with the support of the WHO Secretariat, achieve this?

In 2017, ten countries joined forces with WHO, UNICEF, UNFPA and other partners to establish the global Network for Improving Quality of Care for MNCH. The network was launched in Malawi and aimed to support WHO’s vision of ensuring that “every woman, child, and adolescent should receive quality care throughout the continuum of their life course and care”, to halve maternal and newborn deaths and stillbirths in participating countries by 2022, and to improve patients’ overall experience of care.

To ensure effective governance and coordinated investment in QoC interventions, WHO provided technical support to the MoH in Malawi to develop the National Quality Management Policy in 2017. This policy aligned with Malawi’s Health Sector Strategic Plan II (2017–2022), National Quality Management Strategy (2017–2022), National MNCH Quality of Care Roadmap (2017–2022), MNCH Quality of Care Standards and Assessment Tools, and National Quality of Care Standards (2022). Moreover, WHO adapted its global standards and assessment tools for maternal, newborn, and paediatric care to the Malawi
context in 2017, 2019 and 2021, respectively, and updated and disseminated MNCH guidelines in 2021. These efforts facilitated the establishment of a coordinated and integrated quality management system at all levels, from national to facility.

WHO and the MoH engaged stakeholders and established a National Coordination Committee that identified nine learning districts and appointed QoC focal points to guide district-level initiatives and support facility-level improvements. Nine MNCH QoC standards were then introduced to 37 health facilities in the nine districts via training, supportive supervision and mentorship, for which WHO provided technical and financial support. This included collaborative learning sessions for health workers to share experiences and progress on their QI projects, with the aim of widespread uptake of successful QoC initiatives. After refining the intervention in the initial districts, it was scaled up to the national level by training more than a thousand health workers. As a result, 280 health facilities initiated over 300 MNCH QI projects. These included Thyolo district hospital, whose success in reducing maternal and neonatal mortality was attributed to its emphasis on maternal death audits and review of near misses, improved monitoring of pregnant women in labour through the development of monitoring tools, continued professional development activities, improvement in referral systems, allocation of ambulances in clusters and ongoing clinical mentorship of health workers. To facilitate the analysis of key MNCH QoC indicators for the improvement of health service delivery, WHO provided technical support and data visualization tools to over 120 targeted facilities.

“The MNH Quality Improvement mentorship programme was an exceptional training experience. Not only did we receive comprehensive refresher training, but we also benefited from monthly visits by national mentors. After participating in five mentorship visits, my knowledge and skills in QI have improved. I have been able to assist my work improvement team and colleagues in other health facilities to enhance the quality of care we provide.”

- Mentee from Kasungu District

In 2022, WHO provided technical and financial support to the MoH to launch an online continuing professional development (CPD) platform, aiming to sustain QoC training in the long term.
Over 500 health workers enrolled to use the platform. In October 2022, the Minister of Health officially opened the National QoC Conference, engaging 400 district health officers, facility staff and other stakeholders. To further support learning and knowledge sharing, the MoH’s Quality Management Directorate is working with academia to establish a national learning centre.

“I have gained a wealth of knowledge and skills in Quality Improvement through my mentorship experience. My leadership skills have been greatly enhanced and I am now confident in my ability to mentor others in health care quality improvement. We have achieved a lot through the projects in our health facilities. For example, in 2022 we successfully reduced puerperal sepsis cases from 7.4% to 1.7%, and asphyxia cases from 3.2% to 1.5%.”

- Mentee from Thylo District

Collaborative learning – where districts share their experiences, adapt them to their own settings and rapidly test changes – has proved valuable for deriving collective strategies for the continuity of essential health services and recovery following multiple emergencies, including COVID-19. In 2021, the Ministry of Health conducted an evaluation of the perinatal death surveillance and response (MPDSR) programme, which identified gaps in staff training and involvement and proposed solutions, including the integration of MPDSR within quality improvement (QI) efforts and the institutionalization of perinatal death audits and verbal autopsy. An evaluation of the Network for Improving Quality of Care for Maternal, Newborn, and Child Health’s QoC initiative is currently under way and will guide strategic action in the next phase of the initiative.

The Maldives Expanded Programme on Immunization (EPI) was among the first in South-East Asia to introduce a hepatitis B vaccine birth-dose, achieve maternal and neonatal tetanus elimination, eradicate polio, eliminate measles, and control rubella and congenital rubella syndrome. While programmatic data indicates that vaccine coverage has remained over 95% for the past decade, decreasing coverage had been signalled by survey results even as the antivaccination movement has been growing. To ensure the accuracy of vaccination coverage estimates, an Electronic Immunization Registry (EIR) was developed. It was successfully piloted by WHO and partners and launched nationwide in October 2022. More than 9000 children and more than 65,000 vaccination events had been entered by November 2022. By ensuring vaccine record accuracy – and therefore that the right vaccination is provided at the right time – the EIR will increase awareness about vaccine preventable disease protection for individuals and the whole community, along with help to increase vaccination coverage.

How did the Maldives, with the support of the WHO Secretariat, achieve this?

WHO Maldives conducted a review of the country’s vaccination programme in 2019 and a COVID-19 and HPV vaccines post-introduction evaluation (cPIE) in 2021 with the support of WHO headquarters, WHO Regional Office and other invited international experts. Based on the results of the review, the Maldives Ministry of Health (MoH) expressed the need for an Electronic Immunization Registry (EIR) to ease some of the challenges being faced by data users and the public.

WHO is the lead technical agency for health in the Maldives and has a good working relationship with the MoH. WHO Maldives vaccine-preventable disease and COVID-19 vaccination teams collaborated with the MoH to conceptualize the EIR as a single digital platform through which children’s vaccine information from all vaccination

Key WHO contributions
- Conducting programme reviews to highlight gaps needing addressing
- Financial contribution to establish electronic immunization registry (EIR)
- Provision of technical expertise on immunization monitoring and digital health
- Guidance on scale-up and expansion of EIR.
Maldives Electronic Immunization Registry enables children’s vaccine information to be managed confidentially and securely.

Photo credit: WHO Maldives.

centres across the Maldives could be routinely tracked and managed securely. Financed by WHO and Gavi, the Vaccine Alliance, the EIR was developed by the WHO Maldives digital health team based on DHIS2 with technical support from the WHO Regional Office and Health Information Systems Programme (HISP) Sri Lanka. DHIS2 is a globally accepted, free and open-source health information management platform.

“Digital technologies are integral to daily life, and the world’s population has never been more interconnected. WHO is committed to transferring technology to the Maldives to sustainably build immunization information system capacity.”

- Dr Nazneen Anwar, WHO Representative in Maldives

The EIR captures and stores individual-level information on all vaccines delivered and provides dashboard displays of immunization performance and coverage at the health centre, subnational and national levels. This enables vaccination centres to easily verify routine childhood vaccines, optional vaccines, influenza vaccines, special vaccination campaigns, and vaccines for pregnant women, travellers and health workers. Tailored functions for the Maldives context added by HISP include a beneficiary portal that helps parents track the vaccination status of their children and download digital vaccination certificates. The system also enables SMS alerts and planning functions for vaccination, as well as customized, advanced data analytics.

The EIR was successfully piloted in 80 of the Maldives 189 inhabited islands and on 4 October 2022, WHO Maldives and the MoH launched its nationwide expansion. This was a huge leap
forward for immunization programme given that no centralized digital data system had previously existed in the Maldives to support the efforts of government and health workers. Now, more accurate, timely and complete information is available for decision-makers, enabling better planning, monitoring and evaluation.

“The Electronic Immunization Registry (EIR) ensures a secure mechanism to record and track vaccination records of individuals. The EIR will assist immunization service providers to monitor vaccination records, early identification of individuals at risk of not receiving the required set of vaccinations; and help produce the immunization coverage efficiently. It is a venture which will importantly facilitate the implementation of timely interventions to strengthen the National Immunization Programme.”

- Ms Maimoon Abooakuru, Director General Public Health, Health Protection Agency, Ministry of Health, Maldives

WHO, as lead technical partner in the Maldives, has been monitoring data systems and advocating for the creation of a digital blueprint in the country since 2017. This advocacy was crucial to generate momentum for the EIR. Strong political commitment was fundamental for a successful and timely roll-out, as was the dedication of health care professionals who were keen to adopt the digitalized EIR and have been using the platform efficiently. Good internet connectivity was also crucial for the Maldives’ success as a Small Island Developing State (SIDS): it enabled geographical barriers to be overcome to allow roll-out across the whole population. WHO continues to provide technical and financial support for information-system strengthening in the Maldives and the MoH is exploring the possibility of DHIS2 roll-out in other public health programmes.

1  Electronic Immunization Registry, Ministry of Health, Maldives (accessed on 20 November 2022).
Cervical cancer is the fourth most common cancer in women. It is caused by persistent infection with a virus commonly transmitted through sexual contact called human papillomavirus (HPV). According to WHO’s estimates, Montenegro has the highest rate of cervical cancer in Europe. In 2020, 26.2* women developed cervical cancer and 10.5 women died from the disease for every 100,000 women in the country. Cervical cancer is preventable through vaccination and screening: although the first HPV vaccine was introduced in many countries in 2006, HPV vaccines were still unavailable in Montenegro in early 2022. One of the four vaccines currently prequalified by WHO against HPV is the 9-valent HPV vaccine. It protects against nine types of HPV and approximately 90% of cervical cancers. To enable its launch in Montenegro, WHO’s Country Office mobilized resources for planning and preparation. Introduced for nine-year-old girls in September.

Key WHO contributions

• Coordination and convening of stakeholders and advocacy for political commitment
• Facilitation of multisectoral dialogue in HPV vaccination for buy-in
• Strengthening of NITAG through guided capacity-building
• Technical support for community engagement for wider sensitization.
2022, the 9-valent HPV vaccine coverage had been extended to 13.07% of the target population by mid-November 2022. The HPV vaccine is expected to drastically reduce cervical cancer morbidity and mortality in Montenegro within a generation.

How did Montenegro, with the support of the WHO Secretariat, achieve this?

To pave the way for the HPV vaccine, a comprehensive systems strengthening approach was conducted. WHO Montenegro provided technical and financial support to organize and implement government meetings and engagements designed to strengthen policy, planning and technical capacity. At the highest level, the Prime Minister of Montenegro committed to global roadmaps that aligned the country’s cancer control strategy with WHO’s Roadmap for Health and Well-being in the Western Balkans, 2021–2025 and WHO’s European Programme of Work, 2020–2025, creating an overarching policy environment that enabled HPV vaccination.

The government of Montenegro had originally planned to launch an HPV vaccination programme in 2020, but the COVID-19 pandemic severely limited resources available for strategic thinking and action on non-COVID-19 health issues. As a result, plans for HPV vaccination were put on hold and HPV screening programmes either suspended or considerably affected, putting thousands of women at heightened risk of cervical cancer.

After the most critical phase of the COVID-19 pandemic was over, WHO catalysed HPV vaccination by mobilizing resources for planning and preparation. Given the shortage of resources, the government had only secured a limited number of vaccines necessitating a revision of the vaccination plan. In order for it to be a success, the plan had to be backed by all stakeholders. A WHO Montenegro expert, with technical inputs from two WHO Regional Office and five WHO headquarters technical experts, collaborated with counterparts in the Ministry of Health (MoH) to organize national stakeholder consultations around HPV immunisation. Parents, schools and institutions across Montenegro were consulted and a draft national action plan was developed. In June 2022, WHO facilitated a multisectoral national dialogue on HPV vaccination. The draft national action plan was presented to attendees including the Minister of Health and Minister of Education, and consensus generated on HPV vaccine introduction. With the problem of cervical cancer at the forefront, the MoH also decided to resume cervical cancer screening programmes in late 2022.

Input from the country’s National Immunization Technical Advisory Group (NITAG) was crucial in driving the process forward. WHO had invested in strengthening NITAGs in Montenegro and other middle-income countries of the WHO European Region for many years through training, technical support and peer-to-peer learning. This included a 2019 training session held in Montenegro for NITAG representatives from nine middle-income countries. To build up sufficient technical capacity for vaccine administration at the subnational level, WHO in October 2022 trained 35 trainers from the MoH and other institutions.

The circulation of false or misleading information – otherwise known as an infodemic – in Montenegro was exacerbated by the COVID-19 pandemic, contributing to heightened vaccine hesitancy and a lack of trust in health authorities. There was a risk that HPV vaccine hesitancy would be further intensified given that the HPV virus is sexually transmitted and the HPV vaccine ideally administered before the recipient becomes sexually active. To improve uptake of the vaccines, it was necessary to ensure that parents understood the need for the vaccine as a proven intervention for cancer control. A communications expert from the WHO Regional Office created messages tailored for Montenegro’s cultural context, based on the data collected during the stakeholder consultation.
The COVID-19 pandemic demonstrated that effective communication is a pillar of a strong response. Clear communication helps to counter any myths or misunderstandings, as well as build understanding and trust. The same is true for the HPV vaccine - to have a successful vaccination campaign, effective communication between health care providers and patients is essential."

- Dr Mina Brajović, Head of WHO Montenegro

On September 26, 2022, the HPV vaccine was rolled out in the country, targeted at nine-year-old girls. The vaccine is expected to dramatically reduce cervical cancer-related morbidity and mortality within a generation. By mid-November 2022, 654 doses had been administered, covering 13.07% of the target population. On October 28, 2022, WHO met with the National Health Parliamentary Committee to discuss issues related to health and well-being, and a political declaration on Universal Health Coverage was adopted. WHO continues to work with the government of Montenegro to strengthen HPV vaccination programmes. One of the major strengths of the approach taken so far has been the use of local instead of international experts, which has led to increased ownership, commitment and institutional capacity that is likely to be sustained into the future.

* age-standardized estimate

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1 Centers for Disease Control and Prevention. HPV Vaccine Information for Young Women [factsheet]. Atlanta; Georgia: CDC; 2022 (https://www.cdc.gov/std/hpv/stdfact-hpv-vaccine-young-women.htm#:~:text=Ideally%20females%20should%20get%0Athe%20,vaccines%20targeted%20by%20the%20vaccines, accessed 22 February 2023).

NEPAL

Improving access to mental health services by integrating them into general health services in Nepal

Key WHO contributions

- Co-leading the Mental Health and Psychosocial Support (MHPSS) coordination platform
- Providing technical support to draft and fund Nepal’s National Mental Health Strategy and Action Plan 2020
- Tailoring WHO’s Special Initiative for Mental Health to Nepal’s needs, resources and gaps
- Developing medical curricula and in-service training packages
- Facilitating collaboration to implement a ban on highly hazardous pesticides and share experiences from SEARO Region
- Integrating mental health indicators into Nepal’s Health Management Information System.

Mental illness is estimated to account for 18% of all noncommunicable diseases in Nepal. Despite this, in 2021 only one in four health facilities offered mental health services and most of these were concentrated in major cities, leaving rural populations underserved. Of those offering mental health services, only 16% had a health worker trained in mental health within the past two years. To address this lack, the Government of Nepal launched the National Mental Health Strategy and Action Plan 2020 and implemented the World Health Organization’s (WHO) Special Initiative for Mental Health. This included WHO Nepal providing evidence-based guidelines, technical intervention packages, rights-based frameworks, implementation guidance and training to the Ministry of Health and Population (MoHP). As a result, mental health services were extended to 35 of the 77 districts in Nepal.

How did Nepal, with the support of the WHO Secretariat, achieve this?

In 2020, the Government of Nepal activated its humanitarian cluster system to coordinate the emergency response to the COVID-19 pandemic, including a Mental Health and Psychosocial Support (MHPSS) coordination platform co-led by the Government and WHO Nepal. WHO Nepal provided technical support for subcluster meetings, attended by representatives from NGOs, Government offices, experts, academia and members of the public with lived experience of mental health problems. By November 2022, partners had provided psychosocial support to over 40,000 people, including 20,000 children and 3,000 health providers. This included the launch of the “1166” National Suicide Prevention Hotline which by November 2022 had received 1,764 calls from people with suicidal ideations or mental health concerns; and the school Mental Health Initiative which provided training and supervision to school nurses and teachers. One hundred and sixteen school nurses and 269 schoolteachers...
across 120 schools in Bagmati Province were trained in social-emotional learning, mental health screening and initial management. It is anticipated that this will benefit 10,000 children and adolescents.

"The magnitude of mental disorder in Nepal underlines an urgent need to strengthen and expand effective, affordable, and quality mental health care in Nepal. This will require adopting a holistic approach that emphasizes multi-sectoral coordination, community participation, strengthening health systems, and effective collaboration between federal, provincial, and local levels. WHO remains committed to supporting Nepal as it implements its national programme on mental health care strengthening."

- Dr Rajesh Sambhajirao Pandav, WHO Representative in Nepal

WHO Nepal provided technical support to the MoHP in drafting and funding Nepal's National Mental Health Strategy and Action Plan 2020, launched in December 2020. In February 2021, Nepal joined WHO's Special Initiative for Mental Health. WHO Nepal conducted a Rapid Assessment and held a multistakeholder meeting attended by representatives from MoHP, education and social sectors, people with psychosocial disabilities and civil society in order to tailor the initiative to Nepal’s needs, resources and gaps. After the MoHP approved the Mental Health Special Initiative's workplan, WHO Nepal provided one technical expert at the federal level and five public health professionals at the provincial level. This augmented the governance capacity in all seven Provinces in Nepal, allowing for programme planning and further organization to integrate systems and services for mental health across all levels of health care delivery and administration.
In 2022, WHO Nepal supported the development of essential mental health competencies for preservice medical curricula and updated in-service training packages to increase mental health workforce capacity. More than 1700 health workers, including 215 programme managers, 584 primary care providers and 938 female community health volunteers, were trained in mental health. Primary health care (PHC) providers were taught to diagnose, identify and manage basic mental health issues. At least one medical doctor in each of Nepal’s 35 district hospitals was trained in mental health. Thirty-five of the country’s 77 districts now have PHC and district hospital mental health services.

Furthermore, intentional pesticide poisoning represents a significant clinical and public health concern in agricultural communities in Nepal. WHO Nepal is facilitating collaboration between health and pesticide management authorities to implement a ban on highly hazardous pesticides, and adapting a global publication to develop a national guidance on responsible reporting on suicides. As a pilot, 35 media persons have been trained on the new national guidance.

Accurate and up-to-date information on mental health interventions is essential for effective policies and practices. WHO Nepal and the Government collaborated to integrate eight mental health indicators into the Health Management Information System (HMIS). WHO Nepal identified data elements for a mental health register and developed a reporting tool to measure indicators. WHO Nepal also supported the monitoring of 13 general hospitals providing acute care inpatient mental health services. By December 2022, three of the 13 hospitals had established acute care mental health services following a baseline check and workshop with hospital teams, and visits by WHO Nepal and ministry officials.

“Building the capacity of the mental health workforce and expanding mental health services beyond the cities have been our core priorities to ensure an effective response to the mental health situation in the country. Through the WHO-supported Special Initiative for Mental Health, several activities were undertaken in the past three years which helped the country achieve significant progress in the priority areas, and we will continue to further work on strengthening the mental health systems and services.”

- Dr Chuman Lal Das, Director, Epidemiology and Disease Control Division (EDCD), Ministry of Health and Population

To further build and sustain mental health care capacity, on 10 October 2022, WHO Nepal supported the development of the National Mental Health Care Strengthening Programme, endorsed by the government and focusing on people-centred care, community participation and access to care. It provides a framework to deliver PHC-oriented mental health services, in line with the Public Health Service Act 2018, Regulation 2020 and National Mental Health Strategy and Action Plan 2020. Collaboration between health and non-health sectors, as well as multiple levels of the federal system, has so far enabled the successful building of implementation capacity. WHO Nepal plans to implement a support system whereby specialists from referral hospitals regularly provide mental health care and assistance to teams in district hospitals, persons with lived experience and their families are engaged in peer support and advocacy, and a toolkit will be developed for municipalities to plan and organize mental health care.
Outcome 1.1 Improved access to quality essential health services

A counsellor at Nepal’s Suicide Prevention Helpline Center responds to a call. Photo credit: WHO Nepal.

Somalia has reoccurring episodes of drought which have led to continual displacement of populations across the country with many more affected. In such conditions, access to food and water becomes limited along with health services, including during epidemics. To address the lack of access to health services and following the COVID-19 outbreak, WHO Somalia and the Federal Ministry of Health (FMoH), together with other UN agencies, established a response centred around the deployment of 1538 community health workers (CHWs) and 171 district rapid-response teams (RRTs) for COVID-19 surveillance and awareness raising. Upon their successful rollout and acting as a vital bridge between communities and the public health system, the FMoH and WHO Somalia deemed it beneficial to expand the scope of CHW services to include 12 prioritized health conditions. The numbers of CHWs and RRTs were scaled up to 2164 and 237, respectively, in 79 districts across all seven states of Somalia. In addition to COVID-19, these cadres were able to provide consultations for cholera, malaria, malnutrition, and maternal and child health, as well as other health conditions. Between December 2021 and December 2022, over 2.1 million households were visited, with nearly half a million children referred for further treatment.

How did Somalia, with the support of the WHO Secretariat, achieve this?

Since December 2021, Somalia has been experiencing an escalating drought that has affected 7.9 million people and displaced 1.1 million (in addition to the 2.5 million already displaced) in search of food, water and humanitarian assistance. Over 6.4 million people (38% of the total population) do not have access to safe water and proper sanitation. The situation is worsened by protracted conflicts and the COVID-19 pandemic which has led to further weakening of an already underresourced and -staffed health system: the effect has been a higher proportion of people with limited access to primary health care services. This has created an environment of continued mistrust between the people and their government.

To address this, WHO Somalia, together with the FMoH and other UN agencies, came up with an integrated health response to improve access to services across 281 operational health facilities in 79 priority districts of the country. The existing CHW programme, which had been established with 1538 CHWs for COVID-19, was expanded with the recruitment of an additional 626 CHWs.
Supportive supervision through rapid response teams helps bring accountability and results-based management to the community-based surveillance system across Somalia: A member of RRT collecting feedback from community members about CHW services at an internally displaced camp in Baidoa. Photo credit: WHO Somalia.

through state-level stakeholders. They were trained by WHO Somalia and partners on case detection for epidemic-prone diseases other than COVID-19, to provide home-based care for children with diarrhoea, malaria and other illnesses, and to identify danger signs, especially among children and women, prior to referral to the nearest health facility. They were also trained on delivering a range of risk communication and community engagement (RCCE) messages during house-to-house visits in order to detect epidemics as early as possible and reduce the turnaround time for a response. Training on maternal health was also provided. They were then deployed to expand the efforts of primary health care services in a country where health facilities are sparsely distributed and more than 90% that do exist are managed by private partners.

To complement the CHWs, the number of district-based RRTs was also increased from 171 to 237 across the 79 districts, comprising of an epidemiologist/surveillance officer, laboratory technician and communication officer. Their role is to verify alerts reported by CHWs and investigate credible alerts with sample collections. RRTs are also responsible for providing supportive supervision to health facilities through the Early Warning Alert and Response Network (EWARN) system and CHW activities at household level and points of entry.

“These community health workers are a means to an end. They are serving as a kingpin to revive the confidence of communities in the government as well as helping the Federal and State ministries of health to get a hand on the pulse of communities, understand their real needs, and fix the shortcomings to revive a system which has remained dysfunctional for almost four decades.”

- Dr Mamunur Rahman Malik, WHO Representative in Somalia

With this added human resource capacity, it was equally important to maintain operational capacity across key areas of the country in terms of health care provision. WHO Somalia supported 64 stabilization centres, 9 cholera treatment centres, 15 oral rehydration points and 281 primary care health facilities in the 79 districts across all seven states. This support included interagency emergency health kits, trauma kits, cholera kits, severe and acute malnutrition (SAM) kits to treat children with health complications,
PCR testing machines with testing kits and genome sequencing devices including laboratory consumables, reagents and RNA extraction kits, oxygen concentrators, PSA plants, job aids, and office and IT equipment to set up emergency operation centres. The CHWs and RRTs were able to leverage this added operational capacity to ensure that cases referred for further examination and management received the required services at referral points. In addition to this support, WHO Somalia also procured supplies of micronutrients and treatments for home-based management of mild ailments by CHWs, which also led to improved survival rates due to the provision of appropriate care at the point of contact.

“WHO has helped us to rediscover the broken health system in Somalia by supporting us to train and deploy these frontline health workers across the country. These CHWs and vaccinators have literally helped us get in touch with the communities and for the first time we are realizing the depth and scale of the public health issues confronted by the communities.”

- Mukhtar Abdi Shube, Head of the Expanded Programme on Immunization (EPI) section, Ministry of Health, Federal Government of Somalia

Between December 2021 and December 2022, a total of 2,101,700 households were visited by CHWs and RRTs combined, and RCCE messages were delivered to 1,400,188 people. A total of 21,507 alerts were reported by CHWs of which 10,471 were investigated. In 2022, 328,519 children were screened for malnutrition, of which 97,786 were referred to health facilities for necessary treatment. A further 15,807 children were referred due to severe respiratory issues and 3,960 due to dehydration. CHWs were able to provide iron and folic supplements to 95,524 pregnant women, along with zinc and vitamin A supplements to 30,547 and 115,491 children, respectively.

The expansion of service availability via CHWs and RRTs has enabled the provision of essential health services to the most vulnerable and remote populations in the country. These efforts continue to be strengthened by WHO Somalia, working in collaboration with local and national authorities, along with many partners, to reach as many people as possible in challenging contexts.

1 Epidemiological data from CHWs and RRTs collected by WHO Somalia.
Neglected tropical diseases (NTDs) including lymphatic filariasis (LF) are mainly prevalent in tropical regions. Commonly known as elephantiasis, LF causes pain and disfigurement, and patients can suffer mental, social and financial losses that contribute to stigma and poverty. In 2012, it was estimated by the national survey that LF prevalence ranged from 10% to 35% in children aged 7 to 16 years, while the prevalence of another NTD, soil-transmitted helminthiases (STH), ranged from 4% to 55%. Since 2014, WHO has provided technical and financial support to Timor-Leste’s government to eliminate NTDs through Mass Drug Administration (MDA) targeted at LF and STH (although one of the drugs administered is also active against scabies) and by boosting health-provider capacity to detect and treat NTDs. The quality of life for people affected by LF was improved through Morbidity Management and Disability Prevention (MMDP).
activities. A nationwide Transmission Assessment Survey (TAS) conducted in 2020–2021 showed that the programme had successfully reduced cases of LF to near the elimination below which MDA is no longer required, and that STH had decreased to between 2% and 50%. Scabies prevalence was estimated at approximately 0.5%3, a big decrease from its 22.4% prevalence in a 2016 survey. No yaws cases have been found since 2018.

How did Timor-Leste, with the support of the WHO Secretariat, achieve this?

NTDs are considered “neglected” as they have historically been absent from the global health agenda. To generate awareness, NTDs were made one of WHO’s Regional Flagship Priorities in 2014; in the same year, the government of Timor-Leste launched an integrated NTD control and elimination programme. WHO Timor-Leste provided comprehensive technical support to the NTD and school nutrition teams. Expertise, guidelines and tools were also provided by the WHO Regional Office and headquarters. The Korean International Cooperation Agency (KOICA) provided funding until June 2022, when WHO Timor-Leste began funding the programme directly.

Between 2015 and 2022, four MDA drives were conducted in 13 municipalities. The first three MDA rounds targeted LF and STH using two medicines, diethylcarbamazine citrate (DEC) and albendazole, while a third medicine, ivermectin (which is active against scabies), was added in the fourth round. WHO Timor-Leste facilitated medicine donation in collaboration with the WHO Regional Office and headquarters. To spread awareness and encourage increased uptake among the community, WHO created pamphlets and broadcasted messages on television and in radio spots. MDA reached 100% of schools, and each of the four rounds exceeded the 65% target threshold with coverage rates of 67%, 78%, 82% and 76%, respectively.

In 2019 and 2020, through WHO’s MMDP initiative, periodic LF patient monitoring was established in all 71 Community Health Centres (CHCs) in Timor-Leste. To develop training for health care providers, WHO Timor-Leste adapted WHO’s global guidelines, training materials and advocacy materials for use in the local language, Tetum. In collaboration with the Ministry of Health (MoH), in October 2021, 155 focal points and heads of the CHCs and District Public Health Officers received training on disease identification, data collection, setting up treatment protocols and patient follow-up. Then, from November 2021 until May 2022, the MoH and WHO Timor-Leste jointly reviewed the case registration books and provided on-the-job training to 61 CHC focal points. WHO Timor-Leste and the MoH also trained 1650 doctors, nurses and laboratory technicians on detection and examination of LF patients. Consequently, all 499 suspected LF cases were re-evaluated, registered and visited by CHC focal points, who trained LF patients on daily self-care, provided medication and monitored disease progress. Hydrocoele cases were referred to a national hospital for surgical treatment. After the sixth follow-up, in June 2022, 435 patients remained in the registry (38 had died, 4 were relocated, 2 refused follow-up, 12 were confirmed as non-LF and 14 new cases were added).

To ensure active case detection and targeted treatment of yaws and scabies, health care workers conduct visual skin inspections and send blood samples from suspected cases for testing. WHO and the MoH have introduced protocols and surveillance systems and trained CHC staff to conduct these activities over many years.

Timor-Leste’s MoH had launched its very first LF elimination programme in 2005, but after two rounds of MDA in 2006 and 2007, implementation stalled due to lack of funds, resulting in high NTD prevalence. This renewed effort, launched by WHO Timor-Leste and the MoH in 2014, has lowered the prevalence of NTDs despite the COVID-19 pandemic which delayed implementation and made procurement, transport and storage challenging. Although LF and yaws are close to elimination and STH and scabies under control,
further advancing towards complete elimination of NTDs requires sustained technical and financial support from WHO and donors. There is an inadequate commitment on funding to end NTDs. WHO will continue to provide technical assistance to build capacities for the national team, but sustained funding from other development partners will be critical for successfully sustaining the programme going forward.

“To end NTDs, WHO Timor-Leste is committed to supporting the MoH in organizing Mass Drug Administration (MDA) drives, vector control activities to prevent dengue, Morbidity Management and Disability Prevention (MMDP) for lymphatic filariasis, and in strengthening surveillance for these neglected diseases.”

- Dr Arvind Mathur, WHO Representative in Timor-Leste.

Deworming tablets are distributed at a primary school in in Dili during an MDA drive in October 2022. Photo credit: WHO Timor-Leste/Cirilo Danis.


Well-functioning and sustainable laboratory services that adhere to international standards of quality and safety are essential for strong health systems and are crucial to improving public health. In Uzbekistan, the World Health Organization’s (WHO) Better Labs for Better Health (Better Labs) initiative was deployed to tackle the issue of public laboratories, particularly those in rural areas, not being able to provide quality services for the detection, assessment, response, notification and monitoring of health threats. This initiative has had a positive impact on the quality and safety of laboratory services in the country, enabling them to provide reliable and timely results, and strengthening the public health system’s capacity to comply with International Health Regulations. The investment in laboratory services saw great success in 2020, with the national reference centre for antimicrobial resistance (AMR) becoming the first laboratory to be accredited ISO-15189, the international standard specifying requirements for the quality and competence of medical laboratories.

How did Uzbekistan, with the support of the WHO Secretariat, achieve this?

WHO Uzbekistan provided technical support to the Government of Uzbekistan for strengthening of the national laboratory system. This included developing a national laboratory policy, strategic and operational plans, and guidelines to facilitate reforms. With an overarching framework in place, WHO Uzbekistan then worked closely with the Ministry of Health and National Committee for Laboratory and Epidemiological Surveillance to establish the key structures and processes that would be necessary for a successful national laboratory system, such as standardized assessment, costing of laboratory expenses and tests, and a laboratory quality management system.

In order to strengthen laboratory capacity, Better Labs organized training courses for National Laboratory Working Groups and laboratory managers. These training sessions focused on topics such as laboratory quality management, sample and waste management, biosafety and biosecurity. Additionally, laboratory managers from central and regional labs were trained on WHO’s Laboratory Quality Stepwise
Implementation (LQSI) tool, which provides a step-by-step plan to help laboratories implement a Lab Quality Management System (LQMS) that meets international standard ISO-15189.

To enable continuous improvement and preparation for ISO-15189 accreditation, from 2016 the Better Labs initiative seconded international quality management officers from ISO-15189 accredited laboratories in Eastern Europe and Central Asia. The country’s national reference laboratory, the Antimicrobial Resistance (AMR) Centre, joined the programme in 2018. In the course of their in-country visits, the WHO-trained mentors responded to queries, created action plans, conducted external audits and delivered training. Regular communication helped develop staff competencies in national laboratories and ensured that plans were followed up. As a result of these efforts, the AMR Centre became the first laboratory in Uzbekistan to receive ISO-15189 accreditation from the National Accreditation Centre of Uzbekistan, a member of the International Laboratory Accreditation Cooperation (ILAC).

“The mentoring program for AMR Centre was timely. Thanks to the competent assistance of WHO experts during mentoring visits, the quality of microbiology diagnostics has improved at the AMR Centre. The introduction of a quality management system in medical laboratories means the delivery of high-quality services to the public. This is the motto of the AMR Centre’s team.”

- Dr Gulnora Abdukhalilova, Head of the AMR Centre
The AMR Centre is now responsible for diagnosing, identifying and tracking the emergence of drug-resistant bacteria, and is a key player in training laboratories and sustaining the surveillance network in Uzbekistan. This accreditation demonstrates the success of the Better Labs initiative in improving the quality and safety of laboratory services in Uzbekistan, thereby strengthening the country’s overall public health system.

“Better Labs AMR Mentoring has been helping us to maintain standards of diagnostics and treatment of severe cases referred/coming from our provinces. There has been a considerable improvement in our seamless interaction/collaboration with the laboratory. We were able to achieve even better treatment outcomes for our patients. Previously, hospital stays were as long as 15-20 days and now, because quality of [laboratory test] results has improved, we have succeeded in ensuring that patients receive treatment for 7-8 days and are then discharged in better health condition.”

- Boltaeva Manzura Nishanovana, Head of the Department of Pathology of Young Children, Republican Specialized Scientific Practical Medical Centre of Pediatrics of Uzbekistan

WHO Regional Office, WHO Uzbekistan, and mentors achieved a major milestone in the successful implementation of a laboratory quality management system. This achievement is a testament to the effectiveness of WHO’s mentoring approach to support the improvement of laboratory services. The success of the Better Labs mentoring programme has resulted in the creation of other national mentoring programmes in Uzbekistan to improve public health, antimicrobial resistance (AMR) and clinical diagnostic laboratories. For instance, the WHO-supported proof-of-principle (PoP) AMR routine diagnostics surveillance project used mentoring to improve AMR surveillance and patient treatment through rapid and reliable tests. The establishment of national mentoring programmes serves as a model for other countries to follow in order to improve laboratory quality management and AMR surveillance, ultimately leading to better patient treatment and care.

A paediatrician talks to the mother of a child who was diagnosed and treated at the paediatrics centre in Tashkent, Uzbekistan. Photo credit: WHO Uzbekistan.
BENIN

Towards universal health coverage (UHC): Government of Benin expanding health coverage to the extreme poor

Key WHO contributions

- Support to the government of Benin to assess the pilot phase of the ARCH programme
- Identification of gaps in the health insurance component of the ARCH programme and recommendation of corrective actions
- Collaboration with the Regional Public Health Institute Comlan Alfred Quenum (IRSP-CAQ) on training in health emergency management
- Guidance on implementing recommendations of the assessment report on strengthening the health insurance component of the ARCH programme.

Before “Assurance pour le renforcement du capital humain” (“Insurance for strengthening human capital”) or ARCH was launched in 2019, the national health insurance scheme in Benin was characterized by a user-fees policy which had adverse effects on the demand for health services. This led to the poorest being unable to access and/or pay for such services when they needed them most. To combat this, the ARCH programme was set up with the ultimate goal of stimulating socioeconomic growth. The programme entails a package of four integrated services including training, credit and retirement insurance, with health insurance as the programme’s main component. WHO Benin supported the national authorities to design a more holistic approach for
social insurance by assessing the one-year pilot phase of the health insurance component and formulating recommendations for its scaling up. As of December 2022, a total of 867,944 individuals from the poorest strata had been identified and enrolled into ARCH and now benefit from free treatment in public health facilities in Benin. The state subsidizes up to 100% of contributions for this population.

How did Benin, with the support of the WHO Secretariat, achieve this?

Health insurance is a mechanism by which individuals can access a range of quality health services without incurring serious financial hardship. This is a critical element for Universal Health Coverage (UHC). Every country adopts a different path towards UHC after considering which health services to cover based on population needs and in the light of available resources. However, the importance of access to health services as a basic human right is universal.

In Benin, prior to development of the ARCH, the health financing system was severely fragmented and not yielding the expected outcomes. Contributary schemes for the salaried formal sector coexisted with voluntary community-based health insurance, but these schemes proved to be non-synergistic. Before 2016, only 8.4% of the population was covered by health insurance, which was mainly addressed to civil servants and other salaried staff. It was inefficiently managed by the state often with exorbitant transaction costs. There were no compulsory schemes for the private sector and no large-scale, operational social protection mechanisms in place for the informal sector. Although the informal sector contributes about 68% towards gross domestic product, it is typically composed of people in the lowest socioeconomic strata who have difficulty accessing basic social services.

In 2020, the WHO Benin Country Office and Regional Office for Africa supported the national authorities to conduct a review of the pilot phase of the health insurance component of the ARCH.
programme. This was done by screening key UHC aspirations and targets in collaboration with the Regional Public Health Institute (Institut Regional de Santé Publique Comlan Alfred Quenum or IRSP-CAQ). This assessment identified key challenges and formulated recommendations for effective scaling up of the health insurance component, which included:

- the importance of extending the access to health insurance benefits to the most vulnerable groups such as the extremely poor in order to reduce out-of-pocket costs as a significant barrier to care-seeking in this group;
- the necessity of expanding the fields of service to be included in the basket of health care services;
- the need to put in place timely and responsive reimbursement mechanisms for health facilities; and
- the requirement to improve communication about the health assurance component at the community and grassroots levels.

With the support of other technical and financial partners, the scaling up phase for ARCH’s health insurance component was expanded to the most vulnerable groups, in line with the assessment recommendations. Early successes of this scaling up phase include extension of the scheme from three health zones in seven municipalities to all 34 health zones in the 77 municipalities of the country to achieve greater financial protection against the impoverishing cost of illness and reduce social exclusion from organized health financing instruments. As of December 2022, a total of 867,944 extremely poor persons have been identified out of a target of 1,000,000 (representing 86.79%), enrolled in the health insurance system and given a health insurance card. They are now able receive free treatment in public health facilities in Benin. The state subsidizes up to 100% of their contribution.
I was involved in a serious car accident with multiple fractures and my family could not afford emergency care. But thanks to the health insurance card, I was able to be taken care of immediately and free of charge. During the days following my treatment, I had to undergo surgery due to complications. Both the surgery and the prescribed medication were free.”

- Ms Laurence KPAKPO, 20-year-old beneficiary.

Thanks to the leadership of the government through the Ministry of Social Affairs and Microfinance and ongoing reform of the health sector through the Government Action Programme 2021–2026, national laws governing social and health protection have been amended (Law 2022-07 of 4 October 2022 amending Law 2020-037 of 3 February 2021) to include compulsory subscription in insurance mechanisms for all workers in the formal and informal and public and private sectors as of 1 January 2023. This was made possible due to the findings of the pilot-phase assessment of the ARCH programme. In addition, the institutional organization of the Agence Nationale de la Protection Sociale (National Agency for Social Protection) or ANPS, created in 2019, was revised to lead the practical implementation and governance of the ARCH programme.

The basic basket of health care services has been extended, based on WHO guidance, to cover 22 medical conditions including diarrhoeal diseases, intestinal parasitosis, malaria, dermatological treatments, respiratory infections and other infections for children under age five, birth control, abdominal surgery, surgical emergencies and trauma. These represent 75% of the most common health problems affecting the Beninese population.

“Regarding this basket there are three levels. The basic health care basket is about primary health care and has been accessible to the identified extreme poor from the pilot phase to the extension phase.”

- Dr Atade NAWANA, Coordinator of the Health Zone Abomey-Calavi/Sô-Ava

For its next steps, the government is planning to extend health insurance coverage to persons in the informal sector including farmers, merchants, carriers, craftsmen and artists in order to move towards universal health insurance for all. WHO Benin will be implicated in helping to identify these populations prior to their enrolment.


UKRAINE

UKRAINE's national health system maintains financing and service provision in wartime

Key WHO contributions

- Convening and leading policy dialogue with the National Health Service of Ukraine and partners
- Provision of technical guidance on options for maintaining financing flow to and within the health system
- Capacitating frontline health care personnel and health facilities with knowledge and skills to manage finances and maintain services
- Conducting research on costing to monitor progress and advise on policy options, including primary health care
- Leveraging expertise from across WHO offices.

The war in Ukraine has had a devastating impact on the country's National Health Service (NHSU), reversing several years of important health financing reforms. Thousands of civilians have lost their lives and the millions of internally displaced people (IDPs) throughout the country have heavily impacted the need for health services. Attacks on health facilities have weakened the health system and service delivery, with the World Health Organization (WHO) reporting 859 attacks on health care facilities in Ukraine, as of March 2023. In this context, the National Health Service of Ukraine (NHSU) has also faced budget cuts due to the economic crisis caused by the conflict. To provide help in this situation, health-financing experts from the three levels of WHO (Country Office, Regional Office and headquarters) have supported initiatives and outreach at all levels of the NHSU. These have included high-level policy forums and training sessions involving policy-makers and international partners, regular support and capacity-building activities for NHSU managers and staff, and support for primary health care (PHC) service providers, allowing these frontline health practitioners to better understand their facility costs and resources. These health financing skills, at all levels of the NHSU, have proven to be a key factor in maintaining the health system in the face of adversity.

How did Ukraine, with the support of the WHO Secretariat, achieve this?

WHO support to the NHSU has been extensive in 2022, covering policies, operational implementation and on-the-ground activities performed by health care providers. Soon after the invasion of Ukraine by the Russian Federation in February 2022, forums were organized with Ukrainian policy-makers to address specific questions regarding how to adapt the NHSU to the context of war. Regular briefings were provided by WHO Ukraine to support contingent decision-making by managers and administrators within the health system. In addition, family doctors and other medical centres were equipped with health-financing skills and knowledge to help them manage their practices amid disruption.

Specific health-financing policy questions facing the NHSU were addressed across a range of WHO reports, backed by face-to-face engagement with NHSU personnel. These included how to update the NHSU contracting and payment system, how to adapt strategic purchasing of medical services, and how to maintain access to medicines. As part of its recommendations, WHO Ukraine recommended partial resumption of a case-based payment system, in which patients using health
services across different administrative divisions known as oblasts could be better identified, with funding made available according to health needs. On strategic purchasing, WHO Ukraine argued that health financing strategies can stimulate new service models, such as the mental health mobile teams established in 2021. These community-based mental health teams provide services across all oblasts. WHO Ukraine also published a report in 2022 on disruptions in access to medicines in Ukraine, for the period February–June, and made key policy recommendations. On a broader scale, the WHO Country and Regional Office elaborated principles to guide health systems recovery for Ukraine to feed into the policy forums with the national authorities, convening key partners such as the World Bank, EU and USAID for their insights. These actions also led to a separate joint paper on priorities for health system recovery in Ukraine, further elaborating the vision and plans for early recovery efforts.

NHSU operations have also been supported by WHO’s health financing teams by engaging NHSU managers, administrators and decision makers in weekly calls and knowledge exchanges. WHO Ukraine has convened these “fika” meetings since March 2022, named after the Swedish tradition of coming together over coffee during work hours, despite the difficult circumstances. These sessions have provided a forum for feedback on the implementation of NHSU’s goals, as well as for policy reflection. Topics covered include the provision of rehabilitation and mental health emergency services, the practicalities of contracting health care providers, and health financing monitoring and evaluation systems as they currently operate in both Ukraine, as well as within other health institutions across Europe.

These meetings between NHSU and WHO teams also involved international partner organizations, along with colleagues from neighbouring countries such as Estonia, Lithuania, Moldova, Poland, Slovakia and the Czech Republic. The World Bank and USAID health financing experts have also taken part. The forums therefore ensure that NHSU administrators and managers are in regular contact with experts implementing best practices from around the world. Policy options are discussed with NHSU personnel, along with colleagues from the Ministries of Health and of Finance, at health financing training events. For example, WHO Ukraine conducted a capacity-building camp in August 2022 for more than 30 participants from these bodies.
“Holding these meetings with international partners is a sign that our work is ongoing, and we have felt supported in the process.”

- Mariana Hladkevych, former NHSU Chief of Strategic Project Management and International Cooperation

WHO’s health financing team also acted as a reliable partner and consultant for preparation and development of Ukraine’s Programme of Medical Guarantees (PMG) for 2023. This is the programme through which Ukrainians access subsidized, free medical care. On-the-ground NHSU health care providers have also received support from WHO technical teams to help build their health financing skills and knowledge. The PHC costing study provided training in health financing for PHC service providers. The programme thereby helps to safeguard free access to PHC in Ukraine by ensuring that medical facilities are better able to optimize the resources available to them. This study is part of a broader effort to provide accurate data to the NHSU, update development of the PHC payment system and ensure that all the necessary costs of delivering PHC services are adequately covered in future benefits packages. Following a request from the NHSU, and in cooperation with WHO Ukraine, up to 100 health service providers have agreed to share their cost data. The findings will help the NHSU to make necessary adjustments, and the recommendations will improve the national payment system to strengthen health care delivery in Ukraine. In addition to the PHC costing study, WHO Ukraine is preparing several case studies on restoring small-to-medium sized health care facilities to contribute to the recovery efforts.

“Compiling the cost data gave me a full picture of my medical practice’s financial health.”

- Dr Mykhailo Danylchuk, family doctor in the city of Shumsk, Ukraine

In these various ways, WHO teams at country, regional and headquarter levels have adopted a coordinated and multipronged approach to addressing the challenges resulting from the war. This work has engaged all levels of the NHSU and has contributed to tangible improvements in 2022, despite the devastating impact of the war. A comparison of two health needs assessments (HNAs) in September and December 2022 showed a slight improvement in access to PHC, despite differences between IDPs and the resident populations. The report also shows a slight improvement in access to medicines, although the cost of medicines and medical services remains a key barrier in access to health care. Improvements to the PMG, meanwhile, include a new mental health service package and an expected new rehabilitation package in 2023. However, the main achievement of the NHSU in 2022 has been to maintain the system in wartime.
Dr Mykhailo Danylchuk, one of the participants in the Primary Health Care costing study. Photo credit: WHO Ukraine.


HONDURAS

Volunteers support teleconsultation to improve access to and quality of prenatal care in Honduras

Key PAHO/WHO contributions

- Technical guidance to develop a teleconsultation pilot project
- Technical expertise to develop the capacity of midwives and volunteers through training
- Provision of equipment to enable implementation of the project
- Steering and guiding the project, including via monitoring and evaluation activities.

Honduras is taking an important step towards improving maternal and neonatal health care by partnering with the Pan American Health Organization/World Health Organization (PAHO/WHO) to pilot a telemedicine project. In view of the concerns about maternal and neonatal mortality rates in Honduras, with an estimated 125 deaths per 100,000 live births and 11 deaths per 1,000 live births, the country is committed to finding innovative solutions to these challenges. Despite the COVID-19 pandemic creating gaps in health care services, this project has the potential to increase access to prenatal care and reduce delays, ensuring better health outcomes for mothers and babies. Teleconsultations were conducted in three prioritized communities in the municipality of Trinidad where they yielded significant benefits. These included improvements in direct contact with users, better access to and quality of care for pregnant women, increased COVID-19, influenza and tetanus toxoid vaccination coverage in these pregnant women, and greater patient satisfaction with health care and trust in personnel. Based on the success of the telemedicine pilot project, it is expected that the initiative will expand to other municipalities in the department of Santa Bárbara.

How did Honduras, with the support of the PAHO/WHO Secretariat, achieve this?

In Honduras, telemedicine emerged as a critical health care solution during the COVID-19 pandemic, particularly in facilitating consultations between rural general practitioners and specialists. To address the challenges of accessing prenatal health care services, PAHO/WHO through its Latin American Center for Perinatology, Women and Reproductive Health (CLAP/WR) provided technical assistance in developing a teleconsultation pilot project as part of the Health of Women and Adolescents in Vulnerable Conditions project. This initiative aims to enhance the access and quality of prenatal care while ensuring timely detection of danger signs to prevent maternal mortality.

“The implementation of the Prenatal Telemedicine care model (hybrid model) improved direct contact with users and enhanced access and quality of care for pregnant women.”

- Gissela Fernandez, Municipal Health Coordinator, Trinidad municipality
To build capacity for the teleconsultation pilot project in Honduras, the Health of Women and Adolescents in Vulnerable Conditions project facilitated training for four volunteers. These volunteers were thus enabled to conduct teleconsultations in three prioritized communities in the municipality of Trinidad: La Zona, El Diviso, and La Huerta. Health centre staff were trained in the use of the Perinatal Information System (SIP+) and in essential neonatal obstetric care. Training sessions were conducted with financial support from the Government of Canada and technical guidance from PAHO/WHO.

PAHO/WHO and partners then facilitated implementation of the teleconsultation project by providing trainees with basic computer equipment, scheduling and medical records software, internet access, prepaid phone cards and digital sphygmomanometers. Additionally, the Ministry of Health (MoH) supplied flipcharts for prenatal education.

Once health centre staff had learned about ongoing pregnancies, they proactively contacted expectant mothers by telephone, reminding them of danger signs and the importance of monitoring blood pressure, and scheduling two additional medical teleconsultations. Trained volunteers conducted monthly visits to pregnant women at the community level, measuring blood pressure and assessing their overall health status while identifying potential danger signs such as headaches or swollen feet. Volunteers also educated families on prenatal and neonatal care using the MoH-provided flipcharts, assisted in developing a birth plan and referred women to health professionals at the health centre, if necessary.

"Teleconsultation users have expressed greater trust in health personnel and increased satisfaction with the care received. An impressive 82% of pregnant women have initiated vaccination for COVID-19, influenza, and Tetanus Toxoid."

- Dr Iveth Moreno, doctor from the Trinidad Integral Health Centre

The MoH participates in the teleconsultation project’s steering group with technical support from PAHO/WHO. The steering group carries out project monitoring and evaluation and is currently holding technical meetings to attain feedback on the project’s progress in order to identify challenges, and document improvement processes that have been, or should be implemented. PAHO/WHO also supports monitoring of the Perinatal Informatics System (SIP+) for pregnant women attending the Trinidad Integral Health Centre. This system provides critical data on the health outcomes of pregnant women in the project, enabling better evaluation of the effectiveness of the teleconsultation initiative.
The successful implementation of the teleconsultation pilot project represents a crucial milestone in enhancing maternal and neonatal health outcomes in vulnerable communities in Honduras. It serves as a prime example of how collaborative efforts between governments, international organizations and local health centres can facilitate innovative solutions to address health care challenges and improve health equity. This hybrid model demonstrates how telemedicine has the potential to improve health care access and quality for pregnant women in low-income settings, leading to improved maternal and neonatal health outcomes. Adopting this approach has the potential to significantly improve health care outcomes for vulnerable communities in Honduras and beyond.

KYRGYZSTAN

Ensuring equitable access to vaccines in Kyrgyzstan through mobile vaccination teams and community mobilisation

Key WHO contributions

- Technical support to the government in developing a comprehensive national vaccination campaign strategy in line with global guidelines
- Training and equipping mobile immunization teams
- Support for national partners’ engagement with village leaders, national partners and religious authorities to promote vaccination
- Conducting regular monitoring visits.

During the COVID-19 pandemic, Kyrgyzstan faced the challenge of ensuring access to essential health services, including immunization, while implementing social and public health measures to control the spread of the virus. The disruption of immunization services resulted in the accumulation of susceptible individuals, increasing the likelihood of vaccine-preventable disease outbreaks. To address this issue, WHO Kyrgyzstan collaborated with the government to deploy mobile vaccination teams to reach unvaccinated individuals, particularly those living in informal settlements where access to health and social services can be challenging. Between May and December 2020, mobile teams vaccinated 155,003 people with tetanus and diphtheria (Td) vaccine; in 2021, an additional 171,161 people were vaccinated with this vaccine. This effort prevented outbreaks of vaccine-preventable diseases, which could have otherwise increased the burden on the already strained health system. Additionally, mobile teams provided vaccination against COVID-19, which protected people from developing severe disease and saved countless lives.

How did Kyrgyzstan, with the support of the WHO Secretariat, achieve this?

With the aim of improving access to vaccines for vulnerable populations in Kyrgyzstan, WHO provided technical support to the government to develop a comprehensive national vaccination campaign strategy aligned with global guidelines. The strategy prioritized reaching people living in remote, hard-to-reach areas and children of internal migrants in large urban settlements. To tackle vaccine hesitancy and misinformation, the strategy also included engaging local leaders to promote vaccination within their communities.

WHO’s technical assistance proved critical in training mobile immunization teams and equipping them with disinfectants and personal protective equipment, which was made possible through funding from Gavi, the vaccine alliance. WHO also played a pivotal role in setting up data systems and conducting data analysis, enabling district immunologists and public health services in remote areas to better plan the work of mobile teams and receive feedback regarding their needs.
Teams were deployed to reach people in remote, hard-to-reach settlements, and proved to be especially vital in vaccinating the children of internal migrants living in large urban settlements.

“As time has shown, our decision to initiate the mobile vaccination teams was both timely and crucial. We extend our gratitude to the team for their unwavering dedication and professionalism.”

- Dr Shahin Huseynov, WHO Special Representative of the WHO Regional Director in Kyrgyzstan and Head of Office a.i.

To promote vaccination and counter vaccine hesitancy among communities, WHO worked closely with village leaders in a collaborative effort to build awareness about routine and COVID-19 vaccination. Selected by their communities, village leaders actively promoted vaccination among their communities and were equipped with risk communication products provided by WHO such as leaflets and posters. By means of these materials, leaders were able to counter myths and misinformation and encourage community members to attend vaccination sessions organized by the mobile immunization teams. Recognizing the critical role that religious leaders play in shaping community beliefs and attitudes towards vaccination, WHO recommended that national partners engage them and provided guidance on suitable methods. Their involvement proved to be particularly important in building trust and removing doubts and fears among communities. Through this collaborative approach, local leaders were able to encourage their communities to take advantage of vaccination opportunities in line with the national immunization schedule and COVID-19 vaccination.
COVID-19 vaccine hesitancy has been a real challenge amid all the rumours and disinformation about the vaccine. The reluctance stems partly from myths such as the pandemic being a foreign conspiracy, plus cultural and religious beliefs.”

- Village leader of a new settlement near Bishkek, Kyrgyzstan

Since the onset of the COVID-19 pandemic, the WHO Country Office and Republican Centre for Immunoprophylaxis in Kyrgyzstan have worked tirelessly to ensure the safe and effective administration of vaccines across the country. In order to monitor vaccination process, regular visits have been conducted by monitoring teams to mobile immunization sessions in the field. The teams found that all required infection prevention and control measures were being strictly followed, ensuring that vaccines were administered safely and effectively to those who needed them most.

A coordinated, multi-stakeholder approach has been vital for the success of the implementation of the vaccination strategy in Kyrgyzstan. WHO recognizes the importance of sustained efforts to ensure easy access, promote vaccination and address vaccine hesitancy, and is committed to continuing to coordinate with partners to support mobile vaccination teams in Kyrgyzstan to ensure equitable access to vaccines.
Revitalization of Tuberculosis services in Libya following the COVID-19 pandemic

Tuberculosis (TB) has been prevalent in Libya for centuries, with an estimated 4000 cases of TB occurring in 2021, an incidence of 59 cases for every 100 000 people. Libya is categorized as a moderate TB burden country by the World Health Organization (WHO). The emergence of COVID-19 disrupted TB services in Libya and led to a decrease in the detection and treatment of TB cases. To address this issue, WHO Libya, in collaboration with the International Organization for Migration (IOM) and other partners, mobilized resources to strengthen the management of TB services holistically. Public sector TB services were reactivated and strengthened, resulting in increased health-seeking behaviour by the public and a corresponding increase in the notification of TB cases. TB new case notifications declined from 2209 in 2019 to 1744 in 2020, before increasing again to 1932 in 2021 across both host and migrant populations, including refugees.

How did Libya, with the support of the WHO Secretariat, achieve this?

TB is caused by a bacterium (Mycobacterium tuberculosis), and most often affects the lungs. TB is spread through the air when people with pulmonary TB cough, sneeze or spit. A person needs to inhale only a few germs to become infected and every year 10 million people fall ill with TB. The disease can be treated by a standard six-month course of four antibiotics. Common drugs include rifampicin and isoniazid but, in some cases, TB bacteria do not respond to the standard drugs. In these cases, patients have drug-resistant TB (DR-TB), treatment for which takes longer and is more complex.

As the COVID-19 pandemic took hold, health services across Libya became severely disrupted, including for TB. Lockdowns led to reduced health-seeking behaviour along with cessation of outreach campaigns which would normally seek out and diagnose TB patients. Laboratories previously used for TB diagnoses were repurposed to cater for COVID-19 testing, further limiting access to TB services and as a result, TB diagnostic services decreased. Overall, TB notification declined from 2209 in 2019 to 1748 in 2020, a reduction of nearly 20%. Libya is particularly vulnerable to the risk of infectious diseases such as TB, as the country hosts more than 570 000 migrants, many of them living in unsanitary and crowded conditions which can easily lead to disease transmission. Many of the migrants are from TB-endemic countries, further increasing the risk of spread in both migrant and host populations.

In recognition of this, WHO Libya along with IOM sought support from the European Union (EU) to the tune of €3.3 million to strengthen TB screening, laboratory diagnosis, referral and treatment services for migrants, refugees,
internally displaced people and other vulnerable populations. Specifically, WHO Libya in collaboration with IOM and both the Libyan Thoracic Society and Tripoli Medical University trained 277 health care workers on TB prevention and care and provided on-the-job training to an additional 110 health care workers during the project period (August 2020 to October 2022). WHO Libya contextualized the materials for these training sessions and developed a practical guide for comprehensive TB management based on the latest WHO guidance. WHO Libya, together with WHO headquarters and the Regional Office for the Eastern Mediterranean, also conducted a workshop for 25 professionals working for the national TB programme to scale up TB preventative treatments for vulnerable population groups such as refugees and migrants.

"The National TB Programme highly appreciates the support provided by WHO Libya, which had a positive impact in increasing the detection rate of TB cases and the treatment success rate. The technical support for the development of the treatment guide in Arabic and English and subsequent support are undoubtedly adding value to the national efforts to combat TB across the country."

- Dr Mohamed Al-Furjani, Director of the National TB programme at NCDC Libya

With the support of the EU, WHO Libya was able to procure 50 patient courses of oral DR-TB drugs which were delivered to TB treatment facilities in Tripoli and Benghazi. Three state-of-the-art portable X-ray machines were sourced and provided to the National Centres for Disease Control (NCDC) in Tripoli, Benghazi and Tobruk to facilitate the rapid diagnosis of TB patients.
To complement this support, a network of 54 national print, radio and TV journalists was trained to increase TB awareness via various available electronic and social media platforms. This enabled the dissemination of accurate, evidence-based information to counteract any misunderstandings about TB. In addition, thousands of print materials were also distributed to all health facilities across the country with TB-awareness messages to increase public awareness and reduce related stigma.

As a result of these activities, TB services have improved across the 26 specialised units in the country with enhanced diagnosis and treatment delivery. TB notification in Libya increased to 1932 cases in 2021 from 1744 in 2020. WHO Libya provided technical expertise to develop the TB national strategic plan 2023–2027, and will continue to build the capacity of national staff and advocate for additional resources through multisectoral collaboration.

“The portable X ray equipment, GeneXpert machine and GeneXpert cartridges provided by WHO are highly useful for early diagnosis of the TB patients in Al-Kuwaifiya hospital. We are thankful to WHO for providing these essential items to reduce the TB burden in the country.”

- Dr Mohsen Issa Aljawhery, Internal Medicine and Respiratory Diseases, Al-Kuwaifiya Hospital, Benghazi

MAURITIUS

How swift and high COVID-19 vaccination uptake contributed to effective population protection against illness and deaths and to the country’s back-to-normal life and development: the case of Mauritius

In Mauritius, a population with a high prevalence of noncommunicable diseases and comorbidities, high population density and a large elderly population, the risk of severe COVID-19 disease was high. To mitigate this risk, the Government of Mauritius launched a COVID-19 vaccination campaign in January 2021, with technical and financial support from WHO. By leveraging existing primary health care and noncommunicable disease (NCD) programmes, COVID-19 vaccination delivery was deployed equitably throughout the country. By December 2022, two-dose vaccination coverage among adult population was 91% and booster dose coverage was 66%. This high level of vaccine coverage enabled borders to be reopened, allowing the economy to return to pre-COVID-19 growth, and was effective at preventing severe illness and fatalities. The bed occupancy rate and admissions in COVID-19 wards fell substantially. The overall country case fatality rate was 0.39%.

How did Mauritius, with the support of the WHO Secretariat, achieve this?

As an upper income country, Mauritius was not eligible for COVAX donations. WHO Mauritius, however, facilitated a negotiation process to purchase COVID-19 vaccines through the COVAX Facility in order to speed up access. In December 2020, WHO Mauritius provided technical support to the Ministry of Health and Welfare (MoHW) to develop the National Vaccine Deployment Plan (NDVP) in alignment with WHO guidelines. The plan aimed to introduce and roll out COVID-19 vaccine deployment on a phased basis, and clearly described how to organize deployment, implementation and monitoring of COVID-19 vaccines. The plan used WHO’s Reaching Every

Key WHO contributions

- Facilitating negotiations for the purchase of COVID-19 vaccines through the COVAX Facility
- Developing the National Vaccine Deployment Plan (NDVP)
- Improving vaccination storage and handling
- Training health care workers on safe and efficient vaccine administration
- Providing guidance and information, communication and education materials for RCCE.

Counselling as parents sign consent forms for vaccination of children. Photo credit: WHO Mauritius.
District strategy with the goal of achieving 80% immunization coverage in all districts and 90% nationally.

To ensure efficient storage and handling of the vaccines, WHO Mauritius deployed an expert in cold-chain management to evaluate and assess the capacities and needs for COVID-19 vaccine storage, and to develop standard operating procedures (SOPs) for safe and effective vaccine storage and handling. The expert also trained health professionals on using these SOPs to manage cold chain systems. Furthermore, WHO Mauritius procured 60 temperature data loggers for the MoHW.

Subsequently, WHO Mauritius provided technical expertise to facilitate a five-day training programme in early January 2021, at which 300 health care workers gained knowledge and skills for safe and efficient vaccine administration. These workers were mostly nursing officers assigned to the COVID-19 mobile vaccination team under the health promotion unit.

In January 2021, the NDVP launched a COVID-19 vaccination campaign targeting health care workers (HCWs), frontline workers in essential services, and individuals aged 60 and above. Three months later the vaccine was offered to the general population.

At the beginning of the vaccination campaign, vaccine hesitancy was rampant. To counter the infodemic, a nationwide risk communication and community engagement (RCCE) strategy was launched which included radio talks, television programmes and social media events. WHO’s global information, communication and education materials were adapted by WHO Mauritius to suit the local context. Eminent personalities and community role models encouraged vaccination by setting examples. In collaboration with the private sector, worksite sensitization campaigns were held prior to vaccination sessions.
As I was anxious about how the vaccine might affect my health, I sought information from my doctor. The staff at her local health centre was very reassuring on the benefits of the vaccination. Thanks to them, I am quite confident that the vaccine will help me to avoid getting severe forms of COVID-19.”

- Cindy Frederic, member of the public

Tourism is an important driver of economic growth in Mauritius and constitutes around 15% of GDP. Opening the borders for tourists was a priority, but to protect public health the authorities decided to limit incoming tourists until 60% of the population were vaccinated and had accumulated antibodies to protect them against COVID-19. The vaccination programme achieved this goal by September 2021, one month ahead of schedule. In late 2021, Mauritius launched a targeted vaccination campaign for children aged 12–17 years, followed by paediatric vaccination, allowing children to go back and safely attend in-person classes, thus reducing disruption to the school calendar that had been experienced in the past years.

“

We have put in place seven mobile teams to ensure the vaccination of children, including a team for domiciliary vaccination. Now that vaccines for children are available in Mauritius, we need to protect our children and I am sure no parent would like to take any risk with the emergence of new COVID-19 variants.”

- Dr Hon. Jagutpal, Minister of Health, Mauritius

The key to the country’s success in combating the virus has been the combination of political determination to protect the population, technical assistance from WHO Mauritius, large-scale vaccine donations from international partners and a robust health care system. As the severity and case fatality rate of the virus have decreased, there has been a tendency for the elderly and those with serious comorbidities to be complacent about getting their booster doses. To guarantee a lasting defence against the virus, it is imperative that comprehensive COVID-19 vaccination efforts be sustained into the future.

PARAGUAY

Access to vaccines for indigenous populations in Paraguay: a joint effort

Key PAHO/WHO contributions
- Provision of technical expertise to contextualize vaccination plan
- Procurement of transportation equipment for teams and vaccines
- Procurement of IT equipment to strengthen local immunization information systems
- Implementation of training to sensitize indigenous populations on vaccine safety
- Administration of vaccines in collaboration with local and national counterparts.

Indigenous communities are often marked by health inequalities. These populations are regularly marginalized with limited access to mainstream public services. In Paraguay, the COVID-19 pandemic created additional challenges to provide public health services to these, often remote communities which are at disproportionate risk during public health emergencies. Between March 2020 and September 2021, the case fatality rate was 12.5% among this population, almost four times higher than the national rate of 3.5%\(^1\). To address this, between September 2021 and October 2022, the Ministry of Public Health and Social Welfare (MSPyBS) and PAHO/WHO Paraguay devised and implemented a holistic plan of vaccination across

Vaccination teams going out in the Caaguazú region. Photo credit: PAHO/WHO Paraguay.
six of the country’s 18 departments, covering roughly 60% of the indigenous population. As a result, by December 2022, the case fatality rate for COVID-19 fell to 8.3%, and was only 2.5% for the period between September 2021 to December 2022. The plan also included the delivery of routine vaccines to increase coverage among these populations.

How did Paraguay, with the support of the PAHO/WHO Secretariat, achieve this?

The COVID-19 pandemic is a grave health threat to indigenous people around the world. Indigenous communities already experience poor access to health care, significantly higher rates of communicable and noncommunicable diseases, lack of access to essential services, sanitation and other key preventive measures, such as clean water and disinfectants. Likewise, most nearby local medical facilities, if there are any, are often underequipped and understaffed. Even when indigenous people are able to access health care services, they can face stigma and discrimination, along with cultural barriers. According to the Federation for the Self-determination of Indigenous Peoples (FAPI) in Paraguay, there are approximately 115,944 indigenous people, categorized into 19 ethnic groups.

Between March 2020 and September 2021, a total of 589 cases were identified across 14 indigenous populations in 22 municipalities of the country, with 75 reported deaths or a case fatality rate of 12.5%. As this was substantially higher than the national rate of 3.5%, MSPyBS and PAHO/
WHO Paraguay together leveraged their strong partnership to increase vaccine coverage among indigenous populations for both COVID-19 and routine vaccinations such as measles, mumps, rubella, polio, pneumococcus, rotavirus, HPV, influenza and other infectious diseases in the national immunization programme. The vaccination plan for indigenous communities was developed by MSPyBS, via its expanded immunization programme, with technical input from PAHO/WHO Paraguay specifically on explicit approaches to reach and engage these populations. Local-level vaccination teams were set up by MSPyBS to cover key areas across six departments in the country: Boquerón, Presidente Hayes, Alto Paraguay, Canindeyú, Amambay and Caaguazú. This effort encompassed roughly 60% of the total indigenous population.

PAHO/WHO Paraguay provided transportation for vaccines and vaccination teams and procured a total of 66 computers to improve registration and monitoring of the programme using the immunization information system. Technical support was also provided to develop a social communication strategy, emphasizing an intercultural approach through development of audiovisual materials in nine native languages. A total of 342 indigenous health promotors and community leaders were trained on the benefits of vaccines and their safety by MSPyBS and PAHO/WHO Paraguay.

"PAHO’s accompaniment came at an excellent time, because we did not have the means to reach those communities.”

During the vaccination administration, it was observed that doubts still persisted about the safety and effectiveness of the vaccine against COVID-19, generated by false news or inaccurate information. These doubts were effectively addressed by trained health promotors and community leaders who provided contextualized information in native languages such as Guarani. By being empowered in this way, these individuals were subsequently able to spread health messages to other members of their communities. Furthermore, a series of workshops were organised by PAHO/WHO Paraguay using the knowledge dialogues methodology to better understand the perception of vaccination in indigenous populations. This was critical given the ongoing concerns among the population and the need to build intercultural understanding on health.

“Knowing that, with the support of PAHO, we were able to fulfil our duty to guarantee that all people can live a dignified life and to provide protection through vaccination to indigenous peoples, is very gratifying for all the Paraguayan people.”
- Hector Castro, Director, National Expanded Programme on Immunization

As a result of these efforts, between July 2021 and September 2022, vaccination teams accessed 334 indigenous communities and were able to administer a total of 101 642 vaccine doses (37 839 doses of the COVID-19 vaccine and 63 803 of regularly scheduled vaccines). While cases of COVID-19 continued to increase amongst indigenous populations between September 2021 and December 2022, only 13 new deaths were reported in the same period (among 474 cases), with the overall fatality rate decreasing to 8.3%, and further to 2.5% over that specific period. In some health districts of the Western region, such as the department of Boquerón, it was reported that this strategy made it possible to vaccinate 40% of the indigenous population for COVID-19 in 2021 alone, increasing vaccine acceptance in the process.
These outcomes were made possible thanks to the strong partnership between PAHO/WHO Paraguay and MSPyBS, including members of the national immunization programme and the local health administrations through which much of the implementation was conducted.

4 Internal reports provided for national epidemiological survey.
Strengthening community engagement to increase routine and COVID-19 vaccine coverage in low-performing districts in the Republic of Moldova

Key WHO contributions
- Conceptualization of national plan
- Mobilization of financial resources for implementation
- Technical expertise to contextualize each district plan according to local capacities
- Advocacy with wide range of stakeholders for a whole-of-society approach
- Conducting awareness-building training on vaccines and vaccine-preventable diseases.

As in many countries, the COVID-19 pandemic disrupted routine health services in the Republic of Moldova, including immunization programmes. Health-seeking behaviour declined and children’s vaccination schedules became disrupted, lowering population protection for childhood vaccine-preventable illnesses. Consequently, immunization programmes needed strengthening in preparation for and following the initial COVID-19 vaccine campaigns. WHO Country Office in the Republic of Moldova (WHO Moldova), with the support of the European Union, supported the Ministry of Health (MoH) and National Agency for Public Health (NAPH) to implement an awareness
campaign in 10 districts with markedly lower vaccination coverage to increase concurrently the coverage of childhood and COVID-19 vaccinations. This resulted in an increased coverage of both MMR-1 and DTP3 as well as COVID-19 in target populations and targeted districts. Following this success, WHO aims to support the country to expand the campaign into other districts.

How did the Republic of Moldova, with the support of the WHO Secretariat, achieve this?

Authorities in the Republic of Moldova observed a downward trend in vaccination coverage to below 85% during the COVID-19 pandemic, increasing the likelihood of vaccine-preventable diseases. For example, coverage with the first dose of measles, mumps and rubella (MMR-1) vaccine at 12 months of age fell from 88% in 2019 to 83% in 2021. Further data submitted by each primary health care facility in the country identified specific districts with markedly lower vaccination coverage than others for both routine and COVID-19 vaccinations.

To ensure the population in these districts were aware of the importance of immunization and how to access vaccines, WHO Moldova with the support of the European Union and together with the MoH and NAPH, conceptualized and launched the “Vaccinate yourself! Protect your future!” awareness campaign in 10 districts in the country (out of 37 in total) with the lowest coverage for MMR-1, diphtheria-tetanus-pertussis (DTP3) and COVID-19 vaccines. These regions were Strășeni, Bălți, Criuleni, Comrat, Cahul, Călărași, Căușeni, Chișinău, Sîngerei and Ungheni.

WHO Moldova provided technical support to develop the joint concept paper and established a set of national-level indicators to support the implementation of the campaign. It also arranged transportation for vaccination teams across all the districts. Based on WHO guidelines and recommendations and with the support of WHO Moldova, district plans were developed, tailored to the local context and linked to the operational capacities of immunization and other health.
programmes, given the scarcity of resources at local level. During the three-month campaign (June–August 2022), local coordinators, immunization managers and health care workers took part in main launch events in every district. Over 3000 community members (school directors, teachers, social workers, priests, mayors, members of the police force, etc.) were identified and trained with technical support from WHO Moldova to deliver and distribute the campaign’s evidence-based messages on the importance of vaccination and risks of vaccine-preventable diseases.

Throughout the campaign, religious leaders were engaged to mobilize members of their communities who may have been reluctant to vaccinate. Additionally, WHO Moldova colleagues conducted door-to-door outreach to sensitize the local populations. In all these actions, community members took charge of campaign coordination for each district.

“From the first stage until the end of the campaign, primary health care worked jointly with all departments: social assistance, police inspectorate and local public administrations to inform the population and to raise awareness of the need for vaccination among people.”

- Victor Bahnaru, Head of Strâșeni Health Centre

Based on the national report developed by the NAPH with the support of WHO Moldova, from June to August 2022, there was a 1.4-fold increase in the number of doses of COVID-19 vaccine administered in targeted regions compared to others which did not implement targeted actions for the same period. A significant increase was recorded in the number of COVID-19 doses administered in the same period compared to the previous three months, with 4.8, 3.3 and 3.2 times...
more doses administered in Sîngerei, Ungheni and Comrat districts, respectively. Similarly, there was a 1.2-fold increase in MMR-1 dose administration during this period in targeted regions, with a 1.2-fold increase for DTP3 vaccination. Overall, actions taken during the awareness raising campaign led to an increase in vaccination coverage by 1.2 times more for MMR-1 in the same period (June to August 2022) than in the previous two years (2020 and 2021), and by 1.4 times more for DPT3. By the end of the campaign, all administrative territories attained COVID-19 vaccination coverage of more than 70% for the prioritized groups including those with comorbidities, persons aged 60 and over, and educational and social workers. Among health care workers, over 95% coverage for COVID-19 vaccination was achieved prior to the campaign.

The activities and actions undertaken as part of the campaign were aimed at strengthening the capacity to increase the administration of key vaccinations and to inform the populations. It involved citizens from different walks of life, from medical and public health specialists to local political and religious figures. WHO Moldova played a critical role in this process by providing technical expertise to develop key campaign documents and conduct local training sessions and door-to-door campaigns. Advocacy for involvement of religious figures was also critical to the success of the campaign. In view of the results recorded in the 10 districts, the “Vaccinate yourself! Protect your future!” campaign is to be extended to other districts in the country, and WHO Moldova will continue to work with the national authorities to replicate this success.
BAHRAIN

Improving Bahrain’s preparedness to threats at the human-animal-environment interface by creating formal mechanisms for One Health collaboration

Key WHO contributions

- Coordinated and convened national authorities for a One Health workshop
- Conducted technical trainings on One Health event-based surveillance
- Facilitated training sessions on One Health risk messaging
- Coordinated multipartner efforts to strengthen preparedness for health emergencies and advance health security.

WHO Eastern Mediterranean Region is affected by diverse health threats at the human-animal-environment interface including zoonotic disease, antimicrobial resistance, food safety and security, and vector-borne diseases. Bahrain, a high-income country in the region, has a well-established health care system, and is working towards addressing emerging health threats through collective and coordinated action between sectors as promoted by the One Health approach. The WHO Country Office in Bahrain, opened in 2021, identified One Health initiatives in line with national priorities. Different ministries and key authorities in the country had informal channels of collaboration, as reflected in WHO assessments for One Health collaborative efforts. In 2022, WHO provided technical support to Bahrain to conduct a national bridging workshop which formally brought together human health, animal health and environmental authorities. The workshop is a testament to Bahrain’s commitment to the One Health approach, which is evident in the country’s strategies for early detection, verification, assessment and communication of public health threats, making the country more resilient and better prepared for evolving health emergencies.

To optimize crossborder sharing of information WHO Bahrain conducted in-person training as part of the global Epidemic Intelligence from Open Sources (EIOS) initiative in 2022. Photo credit: WHO Bahrain.
How did Bahrain, with the support of the WHO Secretariat, achieve this?

Several global and regional initiatives have been put in place to address threats relating to One Health issues including vector control, antimicrobial resistance (AMR), emerging and epidemic-prone diseases, food safety and climate change, but plans have mostly been implemented through vertical programmes at the country level. While progress has been made, achieving all global and regional targets presents a challenge. The devastating impact of the COVID-19 pandemic was a global wake-up call signalling the urgent need for a paradigm shift. At the global level in March 2022, the Quadripartite alliance for One Health, comprising the Food and Agriculture Organization of the United Nations (FAO), the United Nations Environment Programme (UNEP), WHO and the World Organisation for Animal Health (WOAH) launched the One Health Joint Plan of Action 2022–2026 through consultations with Member States and created the One Health High Level Expert Panel. At the regional level, the One Health approach was highlighted in a 2021 plan of action for the Eastern Mediterranean Region that was endorsed at the 68th session of WHO Regional Committee to end the COVID-19 pandemic and prevent and control future health emergencies.

In 2020, Bahrain established the National Taskforce for Combating the Coronavirus (COVID-19), which consisted of multisectoral experts and specialists collaborating to develop and implement a comprehensive national strategy. In September 2022, the Regional Committee for the Eastern Mediterranean drafted a resolution based on the global 2022–2026 Joint Plan of Action that aims to advance the implementation of One Health activities in the Region. By this stage, Bahrain’s preparedness in tackling COVID-19 during the pandemic had successfully strengthened the country’s response, developed national capacities and shown a way forward by developing a One Health coordination committee.
The relevance of crossing animal-human-environment borders is applicable today more than ever. Bringing forward the lessons learned and best practices from the COVID-19 response, while recognizing the immense value of an integrated One Health approach to public health, animal health and the environment, together can strengthen capacities for prevention and preparedness of future pandemics.”

– Dr Tasnim Atatrah, WHO Representative in Bahrain

Bahrain's One Health coordination gaps had been identified in a series of assessments including a 2008 Performance of Veterinary Services (PVS) Evaluation, 2016 WHO Joint External Evaluation (JEE) and annual reporting using WHO's State Party Self-Assessment Annual Reporting tool (SPAR). While these assessments had, in the past, fed into national commitments such as Bahrain's national action plan on AMR, they had not previously led to structural changes in governance. In 2022, the One Health national bridging workshop was fronted by the Supreme Council of Health and Ministry of Health and coordinated by the WHO Country Office in Bahrain. It invited experts from across the human-animal-environment interface in the country to take part in interactive approaches towards developing an understanding of frameworks, tools and guidelines across institutions and systems to prevent, detect and control diseases and strengthen capacities for the early detection of health threats. Outcomes of the workshop were the development of a roadmap for strategic interventions to strengthen preparedness for health emergencies and advance health security, and the proposed establishment of a One Health coordination committee.

At the national level, WHO Bahrain is now working to further elevate collaboration by bringing different sectors together for risk communications training to identify, address and unify national messaging approaches and develop national capacities across sectors. WHO Bahrain has also conducted pilot training to build capacity for a unified all-hazards One Health approach to event-based surveillance within the Ministry of Health. WHO Bahrain, together with national counterparts, participated in an EMRO meeting on Strengthening Risk Communication and Community Engagement (RCCE) systems. At the global level, WHO Bahrain together with national counterparts, has begun to participate in WHO's global Epidemic Intelligence from Open Sources (EIOS) initiative to optimize cross-border sharing of information for the early detection, verification, assessment and communication of public health threats.

“The team in Bahrain approached the One Health interface with dynamic plans to implement prevention, detection and response strategies to health threats at a whole-of-society level, to advance the well-being of all people and the surrounding environments.”

– Dr Tasnim Atatrah, WHO Representative in Bahrain

Bahrain’s plans to establish a formal One Health mechanism demonstrates the country’s commitment to the collaborative approach and is a major step forward in developing capacity in the country. Building on the country’s success in line with national priorities, WHO Bahrain endeavours to support multisectoral collaborations to adopt the One Health approach and sustain it long into the future.

Health care facilities combating the effects of climate change following hurricane Lisa

Key PAHO/WHO contributions

- Conceptualization of Smart Hospitals initiative
- Development of technical directives to guide operationalization of initiative
- Delivery of training programmes to coach local officials on retrofitting
- Inspection of facilities following disasters to assess effectiveness of retrofit.

Health facilities in Belize are vulnerable to natural hazards and the effects of climate change. This often results in weather-related disasters which may impact the capacity of health facilities, both functionally and structurally, to provide critical and routine services. PAHO/WHO Belize, through the support of the United Kingdom’s Foreign, Commonwealth and Development Office (UK-FCDO), implemented the Smart Health Care Facilities in the Caribbean project, which aims to update and adapt health facilities in the region to deal with natural and climate disasters, enabling them to continue to provide emergency care to victims and ongoing health care for other communities. Following the passage of hurricane Lisa in November 2022, PAHO/WHO Belize provided technical support, applying the rapid assessment tool for health facilities following emergencies and disasters to identify whether various health facilities including Cleopatra White Polyclinic, one of the retrofitted facilities, were fully functional. Since hurricane Lisa mainly affected the central region of Belize, Cleopatra White Polyclinic was the main facility to be assessed. However, the five health facilities retrofitted as “smart hospitals” remained functional during and after hurricane Lisa made landfall. There was no disruption of utilities and service delivery continued for both emergency and routine needs. Following this success, further support was forthcoming to expand the retrofitting initiative to other health facilities.

How did Belize, with the support of the PAHO/WHO Secretariat, achieve this?

According to the Plan of Action for Disaster Risk Reduction 2016–2021, 77% (13,566/17,618) of the hospitals in the AMRO/PAHO Region are situated in areas of potential climate risk and require urgent remedial measures to protect personnel and patients’ lives during and after a disaster. As extreme weather events become more prevalent, vulnerabilities in systems will become more evident. Health systems are amongst the most vulnerable to climate variability. The consequences of a health facility post-disaster include the inability to provide emergency care...
and ongoing health care for communities. Health care facilities are also intensive energy users due to the services provided and equipment used. Knowledge of the condition of the facilities, their level of exposure and their role within the health service network is indispensable. Certain conditions can therefore be created to mitigate these vulnerabilities before such effects are manifested.

Because of this, AMRO/PAHO with the support of UK-FCDO established the Smart Hospitals Initiative in the Caribbean which focuses on improving hospital resilience, strengthening structural and operational aspects, and providing green technologies. Energy improvements include solar panel installations, electric storage batteries and low-consumption electrical systems, which, in addition to reducing energy consumption, reduce the health sector’s carbon footprint in the environment and provide hospitals with energy autonomy, allowing them to continue running during emergencies and disasters. Health care facilities are “smart” when they link their structural and operational safety with green interventions, at a reasonable cost-to-benefit ratio.

PAHO/WHO Belize supported the Ministry of Health and Wellness and other partners to implement this initiative through the application of guidelines and a toolkit for retrofitting existing facilities. The toolkit provides a step-by-step guide and includes the Hospital Safety Index (HSI), Baseline Assessment Tool (BAT) and green checklist, and utilizes cost-benefit analysis to support investment decision-making. Complementary training was provided to the national authorities on use of the toolkit, as well as maintenance, conservation, contingency planning and procurement procedures.

Following the arrival of hurricane Lisa in November 2022, considerable damage was reported in its path. Although the health sector was also impacted, the five health facilities retrofitted as “smart hospitals” remained functional during and after the hurricane made landfall. No structural damage was
identified, and no power or water disruption was reported, thanks to the smart (safety and green) interventions implemented under the initiative.

“\nIn terms of natural disasters, the retrofitting will help us a lot. For the fact that whenever we have heavy rain or disasters, we would have to be packing up everything in plastic bags including medications and equipment and raising them off the floor from flooding and leaks and now that doesn’t have to happen because of the retrofitting.”
- Nathalie Brown, Pharmacist at Cleopatra White Polyclinic

These health facilities were able to serve their catchment populations, especially those affected by the hurricane. Critical services such as immunization, sexual, maternal and child health care, and chronic medical services were accessible to communities. Key infrastructure and critical systems such as electricity from solar power, water supply from rainwater harvesting and effective drainage provided the requisite backup for facilities to remain operational for those in need, including persons with COVID-19.
We had some ongoing leakage from the ceiling, but the majority of that has been solved. One of the other aspects was the protection of the windows. Every hurricane season we use to get wood and nail them to protect the windows then take it down. Now, we have shutters that are easy to open and close and it’s permanent and I call that ‘smart’.

- Dr Rayford Rancharan, Medical Coordinator/Director of Independence Polyclinic

Smart hospitals have already shown their cost-effectiveness and resilience to disasters in other countries. Following heavy rain in St. Vincent and the Grenadines in 2013, Georgetown hospital, having benefited from the smart hospital initiative remained the only functional health facility after a severe storm affected 39 clinics and the main reference hospital. In addition, Georgetown hospital became a water supply centre for the community after the storm, using its rainwater reserves.

Through the initiative, PAHO/WHO Belize has been able to increase the resilience of the health system in the country. These renovated facilities are now safer, greener and more resistant to the impact of natural hazards and climate change. Furthermore, PAHO/WHO was able to seek additional funding support from the European Union, which will enable retrofitting of an additional four health facilities in Belize, expanding the smart standards for disaster and climate resilience.

BRUNEI DARUSSALAM

Brunei Darussalam strengthens emergency preparedness, readiness and response as well as routine health programmes using behavioural and social science

Key WHO contributions

- Providing technical expertise for training sessions and workshops on integrating BI into health programming and design
- Providing technical expertise to the MoH to set up a BI unit
- Developing BI tools and resources, and adapting them to the local context.

To counter the COVID-19 pandemic, governments and the World Health Organization (WHO) have recommended numerous protective measures including mask-wearing, crowd avoidance, hand hygiene, ventilation improvements and vaccination. Convincing individuals to comply with these measures has however become increasingly challenging as the pandemic enters its third year. Effective communication entails more than simply disseminating information; it must consider the social, individual and environmental factors that affect decision-making. Recognizing this, Brunei Darussalam partnered with the WHO to strengthen the use of social and behavioural science for emergency preparedness, readiness and response, as well as for routine health programmes in the country. Capacity-building efforts increased understanding of how science, evidence and data influence people’s behaviour patterns and decision-making processes in support of better population health and well-being.

How did Brunei, with the support of the WHO Secretariat, achieve this?

In late 2021, the Ministry of Health (MoH) in Brunei Darussalam expressed a need to identify more effective ways to influence behaviour patterns related to COVID-19. Consequently, the MoH requested that the WHO host a behavioural insights (BI) training programme aimed at building national capacity to apply behavioural science in the health sector. In response, the WHO Representative Office in Malaysia, Brunei Darussalam and Singapore funded, designed and conducted a training programme together with Singapore's Behavioural Insights Team and speakers from the European Centre for Disease Prevention and Control (ECDC), WHO Regional Office for the Western Pacific Region (WPRO) and the BI unit from WHO headquarters.

The workshop took place virtually over three days and aimed to help participants understand the relationship between behavioural science (BS) and health, and how to integrate behavioural science into the early stages of health programme planning and design. Emphasis was placed on strategies for adherence to COVID-19 protective behaviours and vaccine uptake. Throughout training, participants were introduced to various tools, methodologies, models and concepts that could impact their work, including how to run a BI project, conduct data analysis and trials, and develop interventions. Over 30 participants from the MoH attended training, including social science researchers, public health experts, risk communications and media relations officers, health educators and health promoters.
We need to delve into factors such as convenience, social pressure, religion, trust, cost, and other factors which affect what people do. Understanding this human element remains crucial as we work to sustainably manage COVID-19 in Brunei Darussalam, Malaysia and across the globe.”

– Dr Rabindra Abeyasinghe, WHO Representative in Malaysia, Brunei Darussalam and Singapore

Following the successful BI training in 2021 and guidance from the WHO BI unit, the WHO Country Office conducted multiple consultations with different government ministries beyond health to develop a roadmap for the establishment of the BI unit. These sessions covered the usage of various tools for situational, stakeholder and resource analyses. The newly established BI unit is intended to manage the demand for BI services across ministries and ensure that behavioural science theory, methods and approaches provide timely and relevant evidence to inform policies, programmes and communications to guide the Ministry’s strategic priorities.

“We must harness behavioural insight tools to reach out to the target audience with the right call to action and empower the public to make informed decisions to better manage their health.”

- Awang haji Maswadi bin Haji Mohsin, Permanent Secretary of the Brunei Darussalam Ministry of Health

In 2022, WHO conducted three additional workshops in Brunei Darussalam using WHO headquarters’ latest tools and resources to support Member States which had been adapted to the local context by the WHO Country Office.
While one of the workshops focused on infodemic management and delved into the interplay between risk communication, behavioural science and data management, other workshops extended beyond COVID-19 to address all cross-cutting issues. These included the harmful use of tobacco and noncommunicable diseases, with a specific focus on understanding the low uptake of the national health screening programme and identifying key challenges among HIV-affected populations.

During the 2022 Legislative Council in Brunei Darussalam, it was announced that BI would be integrated into the country’s National Multisectoral Action Plan for the Prevention and Control of Noncommunicable Diseases 2021–2025. WHO Country Office is providing continuous technical guidance throughout this process through a consultant who has been contracted to support the BI unit to implement various projects outlined in the roadmap. This is expected to pave the way for the development of evidence-based policies, programmes and strategies that will ultimately improve health outcomes in the country.

In the same year, Brunei Darussalam proudly cosponsored the global resolution “Behavioural Science for Better Health” at the 75th World Health Assembly, demonstrating the country’s commitment to using behavioural science to advance health outcomes, not only within its own borders but also on a global scale. By actively integrating BI into its national plan and contributing to the global discussion on the importance of behavioural science in health, Brunei Darussalam is demonstrating leadership in their pursuit of improving public health.

NORTH MACEDONIA

Strengthening the monitoring of and response to health emergencies in North Macedonia: establishing a Public Health Emergency Operation Centre

Key WHO contributions

- Conducting technical workshops to identify response capacity gaps
- Leveraging WHO tools to establish PHEOC
- Providing technical guidance on institutionalization of PHEOC
- Procuring ICT materials for operationalization of PHEOC and EOCs
- Organizing training sessions on PHEOC procedures.

In the early phases of the COVID-19 pandemic, the epidemiological and information landscape evolved rapidly. North Macedonia’s Ministry of Health (MoH) recognized that there was a need for stronger coordination among health institutions to ensure a timely and efficient response. Joining forces with North Macedonia’s Institute of Public Health (IPH), WHO North Macedonia, the Robert Koch Institute (RKI) and USAID North Macedonia, the MoH launched a joint action project and created a Public Health Emergency Operation Centre (PHEOC) in August 2020. Serving as an advisory body to the MoH, the PHEOC has enabled rapid sharing of information across a nationwide network of 10 Emergency Operation Centres (EOCs) in Regional Centres for Public Health (RCPHs). By strengthening the monitoring of and response to health emergencies, PHEOC has enabled North Macedonia to better meet the 2005 International Health Regulations (IHR) and save lives.

How did North Macedonia, with the support of the WHO Secretariat, achieve this?

In July 2021, WHO conducted two workshops with 32 participants from the MoH, IPH, RCPHs, the eHealth directorate and the Institute of Epidemiology. These workshops were designed to gain a better understanding of existing capacities, gaps, and needs, and were guided by WHO’s PHEOC framework. Participants discussed planning and operational processes, physical infrastructure, information and communication technology infrastructure, human resources and data analysis standards. The RKI, the United States Centers for Disease Control and Prevention (USCDC), plus a representative from Israel’s MoH presented PHEOC models from other countries; and a data collection tool was developed to enable capacity assessment. The tool was then deployed by WHO and other members of the joint action project team during a series of field visits to the PHEOC and EOCs. WHO supported analysis of information from the workshops and assessments, and a three-day workshop was held to develop a detailed action plan for operationalization of the PHEOC.

“At the very beginning of the pandemic, coordination was a big challenge. New information was constantly released and the situation was changing rapidly. The founding of this centre enabled ongoing real-time monitoring of events in all regions of the country and continuous and fast information exchange.”

- Dr Shaban Memeti, Director of the Institute of Public Health, North Macedonia

OUTCOME 2.1 COUNTRIES PREPARED FOR HEALTH EMERGENCIES
The joint action team, which included WHO, presented the action plan to decision-makers in the MOH. The IPH approved the plans and the United States Agency for International Development (USAID) provided additional funding. Subsequently, a PHEOC coordinator and 10 EOC focal points were officially nominated, an Emergency-Steering committee was appointed, and plans and procedures were developed. Following in-depth analysis of existing public health laws in North Macedonia, a legal framework was developed for institutionalization of the PHEOC. Technical inputs for both activities were provided by WHO North Macedonia and the WHO Regional Office. The government subsequently endorsed the legal framework following a workshop to discuss its terms.

WHO procured basic equipment and tools to improve the information and communication technology (ICT) infrastructure for the PHEOC and EOCs and provided technical support to conduct trainings. The PHEOC core team has 14 full-time employees, of whom five are epidemiologists, three medical doctors, three medical analysts and three medical technicians. A three-day workshop on PHEOC was held during which the core team developed standard operating procedures for the PHEOC. Six epidemiologists who were selected as facilitators attended an Epiconcept Field Epidemiology Training and then conducted a five-day training programme in basic field epidemiology for IPH and RCPH epidemiologists. The ten newly appointed EOC focal points in the RCPHs were trained on the use of digital tools and capacity building. To facilitate knowledge exchange, a three-day visit to the RKI was organized for the joint action team in July 2022 as North Macedonia had chosen to deploy a model similar to that of the RKI.

Since its inauguration in August 2020, the PHEOC has carried out a range of activities to coordinate and support the RCPHs: it has collected and processed surveillance data and prepared and disseminated reports, both nationally
and internationally (e.g. TESSy\(^2\)). In order to continually build capacity, the PHEOC carries out emergency preparedness reviews, simulation exercises and trainings, develops health strategic plans and checklists, and advises on plans for repurposing of staff at the regional level, as well as task sheets and deliverables. It also monitors and strengthens the public health emergency system by conducting periodic evaluations and documenting good practices to enable evidence-informed decision-making. Furthermore, the PHEOC holds regular coordination meetings with EOC focal points and the MoH as well as the Commission for Infectious Diseases to ensure strong information flows across the network.

"Timely information sharing, strategic coordination, and efficient management of resources are all critical elements for an effective response to public health emergencies such as COVID-19. Having a central hub for collecting information, making decisions on priorities, and coordinating action and communication can help countries to better direct emergency operations and save lives."

- Dr Anne Johansen, WHO Special Representative to North Macedonia and Head of Office a.i., WHO North Macedonia

The PHEOC in North Macedonia is a pioneering example of how WHO can partner with national authorities to extend public health intelligence and help countries address both the current COVID-19 pandemic and future emergencies. This initiative is unique in that it involves a broad range of stakeholders and puts emphasis on creating the conditions needed to institutionalize the operation of the PHEOC and RCPHs, and thereby ensure that North Macedonia is well equipped to address future pandemics.

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OCCUPIED PALESTINIAN TERRITORY

Enhancing the emergency preparedness and response capacity of occupied Palestinian territory: focus on Gaza

Key WHO contributions

- Identifying the need to improve critical aspects of the trauma care pathway
- Renovating and rehabilitating three primary health care centres
- Enhancing the capacity of Emergency Medical Teams and training emergency responders
- Developing hospital emergency plans and training health workers in mass casualty management
- Prepositioning medical supplies and equipment
- Proactively promoting a policy change to enhance preparedness.

Gaza has been facing recurrent violence and escalation for more than a decade. Despite experiencing many mass casualty incidents, its hospitals lacked preparedness and trained personnel, and regularly faced shortages of supplies, resulting in significant clinical and operational challenges during emergencies. It is likely that these factors contributed to increased direct and preventable mortality from acute events and everyday conditions. To address these challenges, the World Health Organization’s office for the West Bank and Gaza (WHO) implemented a range of activities to strengthen the resilience of public hospitals. The effectiveness of these efforts was demonstrated during the recent escalation of violence in Gaza in August 2022 when there was a pivotal change in response efforts. Newly developed mass casualty management plans were activated with health workers using their training to manage the surge in casualties, and limited resources efficiently allocated to save lives. The experience of Gaza highlights the crucial importance of preparedness in chronically volatile contexts. WHO thus remains committed to scaling up efforts to strengthen emergency preparedness and response in Gaza and across the occupied Palestinian territory.

How did the occupied Palestinian territory, with the support of the WHO Secretariat, achieve this?

In 2018, weekly protests in the Gaza Strip, known as the Great March of Return, resulted in a surge in weekly casualties and heavy loss of life. WHO identified the need to improve critical aspects of trauma care and, as a result, established the trauma care referral pathway to enhance health services for patients from prehospital level all the way through to reconstruction and rehabilitation. Despite the success of these efforts, one of the least developed links in the chain of care was the emergency departments: the response was entirely dependent on a handful of experienced health care workers since most medical staff were unfamiliar with hospital mass casualty management plans.

In July 2021, WHO launched a training programme for health workers across seven major hospitals in Gaza. By December 2022, the programme provided 135 health workers with standardized skills, a shared technical language and an updated hospital mass casualty management (MCM) plan. These efforts allowed rapid activation, better coordination among health workers and...
establishment of clinical zones for the treatment of the wounded during emergencies. In future, this unified approach across seven major public hospitals will enable health workers to provide surge support by deployment from one hospital to any of the seven hospitals when needed – a first in Gaza.

“The blockade of the Gaza Strip limits the access of Palestinian medical teams to external knowledge and expertise. The Mass Casualty Management training is a much-needed form of international exchange, which is at par with global standards since it is developed and delivered by WHO accredited trainers.”

- Dr. Atef Al-Hout, Director General, Nasser Medical Complex, Gaza

WHO also expanded its efforts and invested in the local surge capacity by training over 150 emergency responders, who are part of two national Emergency Medical Teams in Gaza, to fill gaps in trauma care at all levels during emergencies. In addition, supplies and equipment were prepositioned to ensure seamless deployment of lifesaving resources when needed.

Three primary health care centres were integrated into the trauma care pathway so that they could manage minor casualties and thereby reduce the load on the public hospitals. Essential equipment and training to 55 primary health care workers was provided by WHO. These efforts are expected to benefit up to one million people per year.
“We had developed the hospital emergency plan during our training and now we are putting it into action. Though we all did our best during previous emergencies, the ad hoc approach added to the chaos. This time was different. We were like a well-oiled machine, all units working together as one against a plan.”

- Dr Naseem, Head of Emergency at the Al Aqsa Hospital, Gaza

During the escalation of violence in Gaza from 5 to 7 August 2022, six hospitals activated their newly developed mass casualty management plans, and health workers used their training to divide responsibilities and prioritize patients in need of immediate lifesaving care. The hospitals also effectively managed crowds so that clinical care could be optimized. The Ministry of Health mobilized WHO’s prepositioned tents and emergency medical kits including supplies and equipment, which enabled three hospitals to expand their emergency departments by setting up additional patient management areas.

With 50 Palestinians killed and 360 injured during the August 2022 escalation in Gaza and continuation of violence across the West Bank, enhancing the health system’s emergency preparedness and response capacity remains a crucial priority for WHO across the occupied Palestinian territory. Central to these efforts is the understanding that health care workers are the backbone to any effective emergency response.
On 15 January 2022, the Hunga Tonga-Hunga Ha’apai volcano unleashed a powerful eruption, sending an ash plume soaring to an estimated height of 57 km and triggering a tsunami that wiped out infrastructure across the Kingdom of Tonga. This devastating event, the largest eruption Tonga had experienced in 30 years, could be heard and felt hundreds of kilometres away, triggering tsunami alerts throughout the Pacific. In response, the Tonga government activated and deployed the WHO-trained Tonga Emergency Medical Assistance Team (TEMAT), to provide medical aid and psychosocial support to affected communities in the hardest-hit Ha’apai islands within 48 hours of the eruption and tsunami. The team cared for 381 patients with a variety of health complaints. Only five of the patients were referred to the main island for further care.

How did Tonga, with the support of the WHO Secretariat, achieve this?

Since 2017, the World Health Organization (WHO) has provided technical support to strengthen the capacity of Emergency Medical Teams (EMTs) in Pacific Island countries and areas, including the Kingdom of Tonga. Based on WHO’s Classification and Minimum Standards for Emergency Medical Teams, training sessions were designed to ensure that EMTs are rapidly deployable and fully self-sufficient, regardless of the type of response, remoteness of the deployment location or austerity of the environment in which they operate. Training continued despite the COVID-19 pandemic as a remote, interactive training series. WHO conducted 11 training sessions, with a total of over 300 individual participants from 23 countries across the Pacific. To increase participant engagement, training sessions were adapted to incorporate the local style of communication known as “talanoa”. Representatives from Tonga joined these sessions both as participants and presenters.

The TEMAT was formally launched in September 2018. WHO supported the Ministry of Health to ensure that the TEMAT roster was regularly updated and prepared with pre-positioned emergency supplies. In 2018 and 2019, WHO facilitated team member training for TEMAT’s multidisciplinary team members including doctors, nurses, and logisticians in collaboration with colleagues from Australia and New Zealand. WHO purchased and pre-positioned supplies and, in 2019, TEMAT was equipped with deployment equipment such as tents, backpacks, water treatment supplies and backup power equipment, allowing for self-sufficiency during deployments. The WHO Regional Office then provided ongoing training and technical support for TEMAT and other Pacific EMTs through webinars and regular online meetings.
WHO country stories: Delivering for all

“It would seem like nothing could prepare you for the kind of apocalyptic scenario we faced here in Tonga following the volcanic eruption and tsunami but, in fact, the Ministry of Health’s preparedness efforts, supported by WHO over many years, set them up for a successful response. The deployment of the Tongan Emergency Medical Assistance Team within 48 hours of the eruption demonstrated the progress that has been achieved in how emergencies are handled in Tonga -- no longer do they need to wait for outside assistance, Tonga now has the capacity available in-country.”

- Dr Yutaro Setoya, WHO Country Liaison Officer to Tonga

When a crisis strikes, Emergency Medical Teams rapidly deploy to wherever they are needed and provide crucial clinical care. In the Pacific, we are seeing worsening natural disasters due to climate change and the emergence of infectious disease outbreaks such as measles, dengue and now COVID-19. Having well-prepared and well-equipped EMTs ready for immediate deployment can make the difference between life or death.”

Sean Casey, WHO EMT Focal Point in the Western Pacific Region.

Prior to the establishment of TEMAT and 10 other similar EMTs in the subregion, Pacific island countries and areas often had to rely on the deployment of outside emergency medical personnel to provide life-saving care in times of emergency. TEMAT’s swift response ensured that the people in the worst affected areas of the country were able to immediately receive medical attention and did not have to wait for support to arrive from outside the country, thus saving lives.
WHO’s Division of Pacific Technical Support continues to actively support Tonga’s TEMAT and the establishment, development and deployment of emergency medical teams (EMTs) across the Pacific areas. Many of these teams have already been instrumental in responding to the COVID-19 pandemic in the subregion, as well as to other outbreaks and disasters. By having this capacity available in-country, Tonga and other Pacific island nations are better prepared to face potential future emergencies, such as volcanic eruptions, super storms caused by climate change and pandemics.

AFGHANISTAN

Afghanistan influenza surveillance system stands solid in spite of challenging circumstances

Key WHO contributions

- Investment to establish surveillance systems
- Procurement of financial and human resources for operationalization
- Capacity-building for optimum functioning of laboratories
- Procurement of laboratory equipment and supplies for PCR and COVID-19 variant testing
- Canvassing of national authorities for continuation of surveillance activities.

Afghanistan’s health care system was on the verge of collapse following the regime change in August 2021 and the subsequent freeze of funds by external sources. These developments had serious repercussions on the health system resulting in full or partial closures of health facilities. Many health workers either quit their posts or left the country, leaving fewer workers trying to respond to emergencies. Concurrently, COVID-19 continued to spread across the country even as resources available to address it were limited. Despite all these challenges, the country’s influenza surveillance system continued to function, albeit at a limited capacity. The National Influenza Centre (NIC) and WHO’s influenza team in Afghanistan successfully canvassed the Ministry of Public Health to rejuvenate influenza surveillance activities and continue to build on previously achieved successes. The well-trained influenza focal points at sentinel sites acted as the country’s shield, collecting specimens of suspected COVID-19 cases throughout the pandemic and subsequently training additional national teams on the proper usage (donning and doffing) of personal protective equipment (PPE) and specimen collection.

How did Afghanistan, with the support of the WHO Secretariat, achieve this?

The country has experienced considerable conflict and political turmoil in the past several decades. This unstable security and political situation has taken a heavy toll on the country’s public health services. There is a strong association between conflict and the emergence and re-emergence of high-threat pathogens owing to rapid displacement of populations, interrupted access to health care and health commodities, and general reallocation of country resources 1.

In such a situation, influenza surveillance is essential to monitor the potential emergence of novel influenza viruses of epidemic and pandemic potential 1. To prevent this, a robust influenza surveillance system needs to be in place along with the appropriate and adequate technical, human and financial capacities to detect, diagnose, confirm and respond to influenza and other high-threat respiratory pathogens. WHO Afghanistan in partnership with health partners continues to support strengthening of national capacities for influenza surveillance to be able to detect, diagnostically confirm and manage
influenza viruses. This was made possible by the support from the Pandemic Influenza Preparedness (PIP) framework: Partnership Contribution (PC) – an international arrangement adopted by the World Health Assembly (WHA) in May 2011 to improve global pandemic influenza preparedness and response.

As of January 2023, there are nine severe acute respiratory infection (SARI) and influenza-like illness (ILI) sentinel sites for influenza surveillance in nine major hospitals across nine provinces in Afghanistan. These sites were selected because of their geographical location and population density. With WHO Afghanistan’s support, each site has a trained influenza assistant to collect specimens from both SARI and ILI suspected cases and enter the epidemiological and virological data in the Global Influenza Surveillance and Response System (GISRS) online platforms on a regular basis.

At the beginning of the COVID-19 pandemic, these sentinel sites were collecting samples from suspected cases of COVID-19 until the COVID-19 laboratories were established. The first COVID-19 sample was collected at a PIP-supported influenza sentinel site in Herat province and shipped to the NIC for confirmation by polymerase chain reaction (PCR) test. Fully trained and skilled teams had been set up with the expertise of WHO Afghanistan and were ready to take samples from infected patients. WHO Afghanistan procured the needed reagents and supplies to perform differential diagnostic tests for influenza and COVID-19 at the laboratories. Afghanistan was among the very few countries in the Eastern Mediterranean Region using the integrated approach to detect influenza and other respiratory pathogens of epidemic and pandemic potential promoted by the GISRS.

Furthermore, Afghanistan’s NIC participates annually in the WHO External Quality Assessment Programme (EQAP) for the detection of influenza viruses by reverse transcriptase-PCR. The most recent result obtained was a full score in panel 20. The management of the Central Public Health Laboratory (CPHL)/NIC appreciated PIP support in building up NIC capacity and equipment.

SARI & ILI sample arrangement for Influenza and COVID-19 diagnosis by RT-PCR at NIC. Photo credit: WHO Afghanistan/Momin Khan Murad.
I am proud that we attained full score in panel 20, thank you WHO for the support.”

- Dr Abdul Stanikzai, Head of CPHL/NIC

Afghanistan’s health system remains fragile and stretched in many ways. The country continues to grapple with economic difficulties making it challenging to provide and maintain basic health services, especially given the geographical barriers linked to access and insecurity. Nonetheless, WHO Afghanistan and its partners have been able to invest in disease surveillance systems, particularly for influenza, which were strongly leveraged for the COVID-19 pandemic. The established system and network enabled an integrated approach to surveillance: this has continued following the political change that led to a freeze in external resources for the country’s health system. Furthermore, the response to the pandemic would not have been efficient were it not for the existing surveillance system with well-trained influenza focal points at sentinel sites.

This success in advocacy was the result of years of partnership building and investment by WHO Afghanistan and other partners. It is thanks to this commitment that an influenza surveillance system was already up and running when COVID-19 hit Afghanistan in February 2020 and one which could be leveraged to support the country’s pandemic response. Throughout the pandemic, testing and reporting for both influenza and SARS-CoV-2 has carried on within its sentinel surveillance network. The integrated system will continue to be supported by WHO Afghanistan to maintain its capacity under challenging circumstances.

OUTCOME 2.2 EPIDEMICS AND PANDEMICS PREVENTED

INDONESIA

Strengthening pandemic preparedness in Indonesia amid the COVID-19 response

Key WHO contributions

- Developing a pandemic influenza contingency plan for Indonesia through a participatory approach
- Revising and updating Indonesia’s National Influenza Pandemic Preparedness Plan (NIPP) in response to Intra-Action Reviews
- Conducting tabletop exercises to test response plans
- Providing technical support for sentinel sites to enhance their function in monitoring COVID-19.

Indonesia recognizes influenza as a priority hazard and is committed to strengthening and streamlining its pandemic preparedness process, including adherence to the International Health Regulations (IHR). Nevertheless, when COVID-19 swept across Indonesia, it became apparent that additional improvements in health resilience were necessary, prompting the Government of Indonesia (GoI) to request technical assistance from the World Health Organization (WHO). WHO responded by collaborating with the GoI to enhance the country’s capacity to prevent, detect and respond to potential pandemic influenza outbreaks. This included revising Indonesia’s National Influenza Pandemic Preparedness Plan (NIPP) and expanding Indonesia’s influenza-like illness (ILI) and severe acute respiratory infection (SARI) sentinel surveillance sites. These initiatives have better equipped the country to detect both influenza and COVID-19, and enabled a more effective and coordinated response effort to current and emerging health crises.

A demonstration of sample collection during a 2023 influenza-like illness (ILI) review meeting and refresher training in Bandung, Indonesia. Photo credit: WHO/Dr Endang Widuri Wulandari.

Outcome 2.2 Epidemics and pandemics prevented
How did Indonesia, with the support of the WHO Secretariat, achieve this?

In 2017, WHO and the GoI conducted a full-scale epicentre pandemic simulation exercise to evaluate multisectoral capacities in responding to pandemics in Indonesia and to identify strengths and gaps for further improvement, guided by IHR core capacities. Based on this evaluation, the GoI joined forces with WHO in 2019 to create a pandemic influenza contingency plan that aimed to promote a comprehensive “whole-of-society” approach to preparedness. With financial support from WHO, a multisectoral team of representatives from the MoH, National Disaster Agency (NDA) and other key stakeholders participated in a series of workshops to develop the plan. During this collaboration, WHO guidance on pandemic influenza risk management was adapted to suit the local context. The national contingency plan covers critical technical areas such as surveillance and risk communication and underwent development and testing via tabletop exercises.

“Indonesia developed an influenza pandemic contingency plan based on lessons learned from COVID-19 as part of ongoing capacity-building and preparedness efforts. We hope it can address the COVID-19 pandemic while preparing us for future pandemic threats.”

- Minister of Health, Budi Gunadi Sadikin

When the COVID-19 pandemic hit Indonesia in March 2020, the GoI used the pandemic influenza contingency plan to create a COVID-19 response plan. In August 2020, an Intra-Action Review (IAR) was conducted to assess the initial response, followed by periodic IAR monitoring meetings. This review process identified lessons learned and proposed revisions to the NIPP to enhance pandemic preparedness and response strategies. Revisions included defining roles and responsibilities for key stakeholders, and mapping

Health workers from severe acute respiratory infection (SARI) sentinel sites attended a review meeting and refresher training in Jakarta, Indonesia, 2023. Photo credit: WHO/Dr Endang Widuri Wulandari.
resources to ensure adequate preparedness levels. The review process also aimed to enhance stakeholder coordination in pandemic preparedness and response efforts.

WHO provided Indonesia’s MoH and NDA with financial and technical assistance to update the country’s existing NIPP, leveraging insights gained from the COVID-19 response. In May 2021, a scenario-based tabletop exercise evaluated the revised NIPP’s effectiveness. The updated plan prioritizes four critical areas of work: preparedness, emergency alert, emergency response and emergency transition. It aligns with WHO’s COVID-19 strategic preparedness and response plan and health cluster approach, aiming to ensure an efficient, effective, coordinated and integrated response to a pandemic influenza outbreak, from pre- through to post-pandemic stages. The updated plan will be essential to support Indonesia’s preparedness and response efforts to any future pandemic influenza virus or novel respiratory pathogen, enabling prompt and effective responses.

To improve influenza and COVID-19 monitoring, WHO Indonesia provided technical support, including refresher training about case definitions, data collection and analysis, sample collection and shipment, and field monitoring and evaluation. A comprehensive, two-stage ILI and SARI refresher trainings and review meetings were held. The first trainings on ILI targeted 120 health care professionals from 31 primary health care-based ILI sentinel sites plus district and provincial health officers in 26 provinces. A second meeting focused on SARI and involved 68 participants from 14 hospital-based SARI sentinels and district and provincial health officers in 10 provinces. During the meetings, participants from ILI and SARI sentinel sites identified gaps and challenges in implementing influenza surveillance and developed solutions to improve processes.

These efforts aim to enhance the function of sentinel sites as well as improve Indonesia’s capacity to monitor and respond to future outbreaks of influenza and other respiratory pathogens. Sentinel sites are crucial in Indonesia’s public health emergency management as they collect specimen samples, follow case definitions, and submit weekly reports to designated laboratories for testing and case recording. The MoH ensures that these reports are complete, conducts data analysis, and uploads data to the Global Influenza Surveillance and Response System (GISRS) platform.

“Sentinel surveillance for influenza and COVID-19 through the Global Influenza Surveillance and Response System (GISRS) is critical to acquire the epidemiological and virological information that is needed to formulate policy recommendations for improved pandemic preparedness.”

- Dr Imran Pambudi, Director of Communicable Disease Control, MoH

While these efforts are expected to strengthen Indonesia’s capacity to monitor and respond to future outbreaks, challenges to pandemic preparedness in Indonesia persist. These include variations in capacity across regions due to a decentralized system, high turnover at the subnational level requiring refresher training, and logistical and sample shipment issues in a large archipelagic country. To address these challenges and maintain the country’s readiness to respond to public health emergencies, regular NIPP reviews and exercises at both national and subnational levels will be essential.
SEYCHELLES

COVID-19 vaccination to restart the economy while protecting the vulnerable in the Seychelles

Key WHO contributions

• Providing technical support to update national response and vaccination plans and address vaccine hesitancy and misinformation
• Successfully advocating for COVID-19 vaccines to be supplied through the COVAX mechanism
• Training the workforce and procuring equipment to enable safe and effective vaccine delivery and safe reopening of schools, businesses, public venues and borders
• Facilitating vaccination campaign performance monitoring to enable corrective action.

In March 2020, Seychelles reported its first case of COVID-19 at a time when the country was undergoing a period of political transition. The World Health Organization (WHO) worked alongside the government, providing technical assistance to help contain the spread of SARS-CoV-2 and then reopen the economy. In January 2021, the country became the first African nation to launch a vaccination campaign: 64,000 people had received their first dose and 34,000 their second dose when travel restrictions were eased in March 2021. By October 2022, 82% of the adult population and 69.7% of adolescents (12 to 17 years) had received their primary vaccine series, while 44% of adults had received booster doses. In January 2023 the campaign was extended to include 5 to 11-year-olds. Thanks to the country’s strong efforts and high vaccination coverage, thousands of severe cases of COVID-19 were prevented, saving lives and allowing the economy to recover.

How did Seychelles, with the support of the WHO Secretariat, achieve this?

On 14 March 2020, Seychelles reported the first case of COVID-19, prompting WHO Seychelles to strengthen its existing team of readiness and response experts by adding two data managers, three epidemiologists, a risk communication and community engagement (RCCE) specialist, a logistician, a lab specialist, two infection prevention and control specialists and an expert in the continuity of essential health services. Alongside the Ministry of Health (MOH) and the Disaster Risk Management Division (DRMD), the team provided technical advice to update Seychelles’ national response plans. The pandemic and travel ban led to an economic downturn: gross domestic product (GDP) fell from 3.1% in 2019 to -7.7% in 2020. Grocery stores were depleted and key industries such as fisheries struggled to survive. Although there was palpable fear about whether the country would navigate the crisis, public health and social measures proved successful in preventing community transmission between March and November.

“WHO is proud to have been acknowledged for being there alongside the government as they navigated difficult decisions, within a context of limited availability of evidence during that unprecedented time. The appreciation from the President and other officials for WHO’s presence is inspiring, and we are truly humbled to have had the opportunity to provide support.”

- Dr Rex Gadama Mpazanje, WHO Representative in Seychelles
In late 2020, as the Delta variant began to spread and transmission increased, Seychelles prioritized vaccination as a key strategy. The government finalized the national vaccination plan based on WHO’s Guidance on developing a national deployment and vaccination plan for COVID-19 vaccines and used the momentum generated during the election campaign to launch a social movement for vaccination. WHO was instrumental in building the capacity of health and safety officers, allowing the safe reopening of businesses, public venues and borders, and the resumption of normal activities.

Seychelles’ vaccine access was initially limited, but the government secured a Sinopharm donation and the President of Seychelles and WHO advocated in the diplomatic community for more vaccines through the COVAX initiative. WHO trained health workers, data collectors and logisticians, and procured and provided vaccine refrigerators to the MOH to enable safe and effective vaccine delivery.

Seychelles became the first African nation to launch a COVID-19 vaccination campaign on 10 January 2021. To assist the country in achieving its goal of immunizing more than 70% of the population by June 2021, WHO linked the national immunization technical advisory group (NITAG) to its Strategic Advisory Group of Experts on Immunization (SAGE) and facilitated performance monitoring of the vaccination campaign using routine data and supportive supervision. This allowed for timely gap identification and corrective measures. COVAX vaccines arrived in the country in December 2021, further advancing the vaccination campaign.

To address vaccine hesitancy and misinformation, WHO provided technical assistance to prepare the country’s Risk Communication Plan, adapt WHO’s global information, education and communication (IEC) materials to the local context, and set up a toll-free phone line (141). Throughout the campaign, Seychelles leaders took a very visible role with the President and First Lady setting the
tone for the entire nation by being the first and second to be publicly vaccinated, with the former President following—all of which united the nation and encouraged vaccination uptake.

This overwhelming response from the population to follow the country’s leaders and get vaccinated enabled Seychelles to reopen public services and tourism, jump-starting economic growth. Driven by tourism and fisheries, GDP rebounded to an estimated 7.9% in 2021.

In April 2022, Seychelles surpassed its 70% vaccination global target. By October 2022, 82% of adults had received the primary vaccine series with 44% receiving booster doses. To prepare for schools reopening the vaccination campaign was extended to 12 to 17-year-olds in September 2021. To ensure safety, the Ministry of Education implemented infection surveillance, prevention and control strategies, with WHO providing technical support. In October 2022, 69.7% of 12 to 17-year-olds were vaccinated and 5 to 11-year-olds were included in the campaign in January 2023.

The country achieved the vaccination coverage target quickly which prevented severe COVID-19 cases and maintained a case fatality rate (CFR) below 0.4%, despite the risks posed by an ageing population and noncommunicable diseases. When the Delta variant caused the CFR to spike to 0.5% in December 2021 the country introduced a booster dose rollout, reducing the CFR back to below 0.4%.

Health care workers heroically rose to the challenge of COVID-19 in the face of burnout and fatigue. Their efforts, combined with Seychelles’ exemplary leadership, strategic planning and communication enabled the nation to successfully face the crisis and unite despite adversity.
South Sudan has suffered from perennial cholera outbreaks with devastating effects on the health, well-being and socioeconomic status of its people. Since the 2013 crisis, cholera cases have been reported every year between 2014–2017 (at least 28,676 cases including 644 deaths) in major urban centres such as Juba, in internally displaced populations and cattle camps, flood affected locations and other sites with inadequate access to safe water, sanitation and hygiene (WASH)\(^1\). A cholera outbreak was declared by the government on 7 May 2022 in Rubkona county and as part of the ongoing response and preventive measures, two rounds of pre-emptive oral cholera vaccination (OCV) campaigns were implemented \(^2\). WHO South Sudan financially supported the procurement of vaccines and provided technical assistance to vaccination teams in the county and

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**Key WHO contributions**

- Installation and operationalization of EWARS platform for early warning
- Procurement of OCV for administration to a large at-risk population
- Provision of technical support to strengthen surveillance and monitoring
- Deployment of rapid response teams in affected regions.

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WHO’s Dr Abraham Abenego administering oral cholera vaccine in Rubkona, Unity State. Photo credit: WHO South Sudan.
strategic guidance at national level. As of week 42 (17–23 October 2022), zero new cases were reported from Rubkona county and zero cases in admission to cholera treatment units.

How did South Sudan, with the support of the WHO Secretariat, achieve this?

Cholera is an acute diarrhoeal infection caused by ingestion of food or water contaminated with the bacterium *Vibrio cholerae*. It remains a global threat to public health and an indicator of inequity and lack of social development. A multifaceted approach is key to control cholera, and to reduce death. When used along with improved access to safe water, sanitation and hygiene, two doses of oral cholera vaccine are very effective in preventing cholera, giving protection to those at risk. Currently there are three WHO prequalified oral cholera vaccines (OCV): Dukoral®, Shanchol® and Euvichol-Plus®. All three vaccines require two doses for full protection.

Since 2017, WHO South Sudan has supported the national authorities and partners to set up and implement WHO’s Early Warning, Alert and Response System (EWARS) to improve disease outbreak detection in emergency settings, such as in countries in conflict or following a natural disaster. EWARS was rolled out to all 80 counties of South Sudan with the second phase of the rollout from 2019 to early 2020 further decentralizing data collection and alert management down to the health facility level in order to improve disease outbreak detection in emergency settings. WHO supported this through the EWARS server, capacity building, development of guidelines and directives, procurement of ICT equipment and technical support for routine functioning of the system.

In anticipation of a cholera outbreak due to the unprecedented floods in 2021 in Rubkona county with persistent flood waters (often used for bathing and playing), and following the government declaration, over 1.6 million doses of OCV were received in South Sudan. As of 31 December 2022, over 1.5 million OCV doses have been administered in the areas of Awerial, Leer, Yirol East, Rubkona, Malakal and Juba to develop herd immunity against cholera. WHO South Sudan secured and deployed oral cholera vaccines in collaboration with the government and partners by supporting the national emergency preparedness and response department of the Ministry of Health and providing overall strategic, financial and technical support for prevention and control of infectious diseases. WHO South Sudan also provided technical support on surveillance measures and investigation by support for data reporting, collation, analysis and dissemination of cholera situation reports, and provision of technical guidance on WASH measures in health facilities. Furthermore, consistent with this holistic approach to the response, technical assistance was provided for water-quality testing and treatment, waste management, community engagement and risk communication, case management, and infection prevention and control. Rapid response teams were also deployed to support state- and county-level investigation and response activities. These included the development and distribution of cholera control guidelines, reporting and monitoring tools as well as the provision of cholera case investigation and treatment kits.
As a social mobilizer, WHO and the Ministry of Health staff oriented us for one day where we developed messages to share with the communities on the benefits of cholera vaccines and how they can get vaccinated, we were provided with posters and megaphones and our work mobilized many people who turned up for the vaccination.”

- A social mobilizer

Thanks to the response capabilities of WHO South Sudan, and in close collaboration with local and national government authorities and partners, zero cases of cholera were reported by week 42 (17–23 October 2022)⁴. These support activities further strengthened local capacities in surveillance and early warning systems to detect future cases of cholera as well as other infectious diseases. WHO South Sudan continuously identifies any gaps in preparedness and response capacities including those affecting surveillance tools in collaboration with the national authorities. WASH strengthening remains the mainstay for cholera control and efforts will continue to sensitize at-risk populations.


Dengue fever is a viral disease that has long been a significant public health concern in Sri Lanka, with outbreaks occurring twice annually during monsoon seasons. However, in the last decade, the frequency and intensity of these outbreaks have increased dramatically. An economic crisis and COVID-19 restrictions presented new challenges for dengue fever control in Sri Lanka, hindering health professionals from carrying out site visits due to shortages of supplies and fuel. In 2022, 36,000 cases of dengue fever had been reported across 12 high-risk districts by June – the same number of cases as were reported for all of 2021. The World Health Organization (WHO) recognized that dengue control in Sri Lanka could not be achieved by the health sector alone and advocated for community involvement. WHO Sri Lanka and the Ministry of Health (MoH) launched a community engagement intervention, which aimed to educate the community on eliminating dengue mosquito breeding sites. It led to a nearly 60% decline in hospital admissions for dengue fever in the intervention districts and prevented major outbreaks that would have otherwise required national-level interventions.

**Key WHO contributions**

- Advocating for community involvement through the creation of evidence-based guidelines
- Collaborating with MoH to launch a community engagement intervention
- Providing technical support to NCDU to establish coordination structures
- Organizing a series of national and subnational level meetings to facilitate collaboration between the Government of Sri Lanka and the Sarvodaya Shramadana Movement
- Providing equipment and supplies, training, tools, and logistical and financial support to enable the implementation of dengue control activities
- Providing supportive supervision to support the coordination of activities on the ground.

How did Sri Lanka, with the support of the WHO Secretariat, achieve this?

WHO Sri Lanka provided technical assistance to the MoH for the creation of an operational guideline and the identification of potential stakeholders for an intervention. The operational guideline was developed from WHO’s international
Outcome 2.2  Epidemics and pandemics prevented

The community engagement approach was aligned with the policy foundation of Sri Lanka’s National Action Plan for dengue 2019–2023, which had been developed previously with WHO’s technical and financial support. The plan, which drew from WHO’s Global Strategy for Dengue Prevention and Control, includes intersectoral collaboration and coordination with community-based and nongovernmental organizations as a key strategic area.

The community engagement intervention aimed to target high-risk areas through prevention and control strategies at the local level. To ensure that geographically dispersed efforts would be well coordinated from the national level, WHO Sri Lanka provided technical support to the National Dengue Control Unit (NDCU) to establish a central operations room. WHO Sri Lanka then conducted supportive supervision visits to share global best practices in risk communication and outbreak response with technical officers at NDCU and the MoH to endow them with the necessary skills and knowledge to support the intervention.

In July 2022, WHO Sri Lanka initiated a series of coordination and planning meetings between the MoH’s National Dengue Control Unit (NDCU) and the Sarvodaya Shramadana Movement, Sri Lanka’s largest civil society organization (CSO) which strives to empower communities through self-help and collective action. The aim of the meetings was to identify effective mechanisms to address the increasing magnitude of the dengue problem through community engagement. To enable coordination on the local level, WHO facilitated connections between regional epidemiologists from selected high-risk districts and Sarvodaya district facilitators. To enhance local knowledge and skills on dengue prevention, WHO technical staff, the NDCU and Sarvodaya collaborated to facilitate online training for Sarvodaya community leaders and facilitators in high-risk districts. This initiative built upon WHO’s previous efforts to strengthen national capacities for dengue control. WHO Sri Lanka had previously provided equipment and supplies such as fogging machines and chemicals for vector control, provided training in integrated vector management, and offered logistical and financial support for field vector control activities, outbreak preparedness and response. Additionally, WHO Sri Lanka had implemented surveillance tools for service availability and readiness assessment (SARA) surveys for dengue.

“In realising our public health mandate, the Sarvodaya Movement strives to promote community-based interventions to address public health challenges. We believe in the capacities of our communities to be both recipients of positive health outcomes as well as to be active participants in shaping their own health, wellbeing, and development. We are delighted to partner with the formal health sector and the World Health Organization to foster sustained preventive action for dengue vector control, knowledge dissemination as well as to promote public health-activism at the grassroots level to reinforce community resilience.”

- Dr Vinya Ariyaratne, President, Sarvodaya Shramadana Movement

In July 2022 the NDCU, Sarvodaya and WHO Sri Lanka launched a programme to target 12 of Sri Lanka’s highest risk districts. The Sarvodaya Shramadana Movement declared a special community engagement week, which included public awareness and source reduction and premises inspection activities that aimed to identify and remove mosquito breeding sites. Efforts focused on high-risk locations for transmission, including schools, religious sites and government offices. To ensure source reduction capacity was sustained, existing platforms
that were integral to the community such as school development and village committees were encouraged to participate. Public health inspectors, public health midwives, local public administration and social security officers oversaw the programme, with WHO Sri Lanka helping to coordinate public health staff and community leaders. Ultimately, 35,000 at-risk community members and 900 households were reached.

Community engagement is critical to the success and sustainability of dengue prevention and control. Through this intervention, WHO has supported the Ministry of Health to strengthen engagement mechanisms with CSOs on the ground in order to promote greater community ownership of vector control and strengthen resilience against future dengue outbreaks.”

- Dr Alaka Singh, WHO Representative in Sri Lanka

The dengue control initiative, which focused on community involvement, was successful and resulted in increased collaboration between community organizations, public health personnel, the NDCU and local authorities in the 12 high-risk areas. The collaboration enabled the reduction of mosquito breeding sites and an increase in public knowledge on how to create and sustain mosquito-free environments. It is anticipated that the community-based approach taken will help sustain progress through continued dengue control activities in the future.

CAMBODIA

Reducing the health and socioeconomic impact of COVID-19 in Cambodia through subnational preparedness and vaccination

Key WHO contributions

- Developing the national preparedness and response plan
- Adapting global and regional policies, guidelines and standard operating procedures on COVID-19 detection and treatment to the local context
- Leading on partner coordination with health and non-health partners across local, national and international levels
- Working with local governments on local preparedness, including joint MoH-WHO field missions to all provinces
- Developing a multisource surveillance and risk assessment framework, including advice on border measures
- Developing and updating the National Deployment and Vaccination Plan
- Providing technical and operational support for capacity building
- Developing and implementing a Risk Communication and Community Engagement (RCCE) strategy, including technical advice on public health and social measures
- Creating and adapting guidance on health care readiness, patient pathways, and clinical management and treatment
- Providing support to laboratory capacity, and technical advice, reagents and training to enable whole genome sequencing.

The World Health Organization (WHO) has been a trusted collaborating partner of the Royal Government of Cambodia (RGC), specifically the Ministry of Health (MoH), for more than a decade during which the country invested in its core health security system. In January 2020, Cambodia recorded its first case of SARS-CoV-2: the RGC, with WHO support, promptly implemented an effective whole-of-government and whole-of-society response that included proactive local preparedness and maintenance of essential health programmes and services. As a consequence, the country reported less than 500 cases and zero deaths as of 1 February 2021. With WHO’s technical support, the response effort shifted towards vaccination campaigns and health care delivery, resulting in 70% of the country’s population being vaccinated by September 2021, eight months ahead of the global target.

By December 2022, over 91% of the population had received primary vaccine doses, with a third dose administered to 73% of people aged 60 and over, and fourth dose to 100% of health workers.

How did Cambodia, with the support of the WHO Secretariat, achieve this?

WHO provided technical expertise to the RGC to tailor global and regional frameworks, policies, guidelines and standard operating procedures to the local context. This included developing Cambodia’s COVID-19 master plan: a national preparedness and response plan that guided the country’s COVID-19 response efforts. To help Cambodia transition out of the early emergency response phase, WHO provided technical expertise to develop a multisource surveillance and risk assessment framework that allowed for
a customized response to different transmission levels in different areas of the country, thereby avoiding the need for nationwide lockdowns and their associated economic consequences.

“Cambodia sincerely appreciates WHO’s evidence-based policy advice, and technical and operational support. WHO has been working actively hand in hand with Cambodia’s health officials and health workers to respond to COVID-19, while contributing to the safe and sustainable re-opening of Cambodia.”

- H.E. Professor Mam Bunheng, Minister of Health

When COVID-19 vaccines first became available in late 2020, WHO provided technical support to the Cambodian government to expand access to them through the National Immunization Programme (NIP). The government procured vaccines and, with WHO’s technical input, rapidly developed the National Deployment and Vaccination Plan (NDVP) which was endorsed in January 2021. Cambodia proactively sought to secure vaccines and, in March 2022, became the first country in the region to receive them through the COVAX initiative. WHO provided technical and operational support to all levels of RGC and NIP on the various components of COVID-19 vaccination necessary for successful deployment, including training, cold chain and vaccine management, immunization and safety data management, community engagement and outreach vaccination.

To promote public health and social measures and build trust in vaccines, WHO, with the support of health partners and donors, including the European Union, provided technical support and guidance to the MoH and other stakeholders to develop and implement a Risk Communication and Community Engagement (RCCE) strategy. The RCCE strategy was launched in March 2022 in nine priority provinces and promoted public health measures such as wearing masks, frequent hand washing,
avoiding crowded places and getting vaccinated. WHO conducted perception and behavioural insight surveys to modify messaging and developed 80 new or adapted RCCE tools and materials that were disseminated through local TV and radio stations and social media platforms. Over 8.5 million people were reached through more than ten COVID-19 and four non-COVID-19 Facebook campaigns. WHO also provided supportive supervision and training to the MoH to enable personnel to support communities with monitoring activities.

"An impressive part of the Royal Government of Cambodia's strategy is that risk-based decision-making is being applied together with insights into the Cambodian context, including social and cultural dimensions. For example, recent social listening research shows that in Cambodia people worry more about the health of their loved ones than their own. This is a powerful motivator to make individual right choices to take COVID-19 measures for protecting their family and community."

- Dr Li Ailan, WHO Representative in Cambodia

To strengthen health care delivery, WHO provided technical support to the MoH to create and adapt key documents and guidance covering clinical management and treatment, patient pathways, infection prevention and control (IPC), and monitoring. These were brought by WHO to over 120 hospitals and health care facilities by various means – workshops, webinars, clinical study sessions, onsite coaching and mentorship – resulting in an increased quality of care and surge capacity at the national and subnational levels. To avoid exceeding health care capacity, WHO and MoH collaborated to strengthen national and subnational patient pathways, including home-based recovery. This included conducting a survey on home-based care and recovery in five provinces and revising communication materials and guidance accordingly. Living guidelines on therapeutics were also developed, including conditional recommendations on the use of molnupiravir for non-severe patients at the highest risk of hospitalization.

WHO also provided technical advice, reagents and training to strengthen the capacity of the National Institute of Public Health (NIPH) to conduct whole-genome sequencing, better enabling the identification and characterization of new and emerging pathogens in the Western Pacific Region. The NIPH uploaded 173 sequences to the Global Initiative on Sharing Avian Influenza Data (GISAID) between January and June 2022.

Cambodia’s successful control of COVID-19 is attributable to a rapid and comprehensive response, effective implementation of restrictive measures and a highly successful vaccination programme. The partnership between the Cambodian government and WHO was instrumental in this achievement. To sustain these gains and strengthen health security in Cambodia and the wider region, continued partnership between the two entities will be crucial.

The RCCE strategy focused on nine priority provinces and promoted public health measures such as wearing masks, avoiding crowded places and getting vaccinated. Photo credit: WHO Cambodia.

Implementation of a SARS-CoV-2 sequencing platform in Chad through a South-South cooperation model in a context of very limited resources

Key WHO contributions

- Enabling genomic sequencing of SARS-CoV-2 samples through WHO’s genomic sequencing surveillance network
- Organizing a South-South exchange programme and financing a companionship mission for training and support
- Assessing infrastructural needs and providing direct financial support for the expansion of the laboratory site for sequencing
- Funding and procuring two sequencers (MinION and GridION) and related equipment, consumables and reagents for sequencing
- Conducting an expert mission to assess Chad’s genomic surveillance capacities and providing tailored support for further improvement.

Genomic sequencing plays a critical role in responding effectively to the COVID-19 pandemic as it enables an informed response to be made to COVID-19. However, during the initial phases of the outbreak in Chad, the country faced various resource-related challenges, including the absence of a microorganism sequencing platform and appropriate technical infrastructure for molecular diagnostics. This limited Chad’s capacity to detect and respond to the virus effectively. To identify virus variants during the first two waves of the pandemic, Chad relied on the World Health Organization’s (WHO’s) genomic surveillance network, which involved shipping SARS-CoV-2 samples to the National Institute of Biomedical Research (INRB) in Kinshasa, Democratic Republic of the Congo (DRC). This process was costly and resulted in delays in receiving results. To address these issues, WHO Chad collaborated with the government of Chad to invest in infrastructure and personnel. Consequently, in April 2022, Chad launched its local sequencing platform, enabling prompt detection and response to health emergencies, real-time tracking of the virus during epidemiological waves and enhancement of the country’s overall ability to respond to public health crises.

How did Chad, with the support of the WHO Secretariat, achieve this?

To enhance Chad’s human resource capacity to sequence microorganisms and carry out molecular diagnostics, WHO facilitated South-South cooperation between Chad and the DRC. In October 2021, WHO Chad organized an exchange programme with the DRC, whereby three lab technicians attended a three-week internship at the INRB in Kinshasa. During the programme, the technicians received training on using the MinION sequencer model, an Oxford Nanopore technology. In February 2022, WHO Chad financed a companionship mission, whereby two INRB experts, a microbiologist, and a bioinformatician, brought a MinION sequencer model to Chad and conducted training sessions at Ndjamena.
Cooperation between our two institutions on the SARS-CoV-2 sequencing platform initiative has been unprecedented, unique and highly successful. We look forward to exploring other laboratory areas where we could continue this particularly successful experiment together.”

- Dr Abdmadjid Abderahim Mahamat, Minister of Public Health and Prevention, Chad

Following the internship programme, in February 2022, the WHO Chad laboratory focal point and the sequencing focal point of the Ministry of Health (MoH), along with one of the three laboratory technicians who completed internship at the INRB, collaborated to evaluate the infrastructure at the Laboratory of Biosafety and Epidemics, designed for sequencing in Chad. Their assessment revealed that the available rooms for molecular biology were not suitable for sequencing, and they recommended an extension. In response to the findings, WHO provided direct financial support for expansion of the laboratory site in March 2022 by constructing a new room specifically dedicated to sequencing and compliant with the required standards.

In April 2022, Chad’s local sequencing platform was launched, utilizing the sequencer provided by the INRB team. The platform analysed 15 positive samples from the third wave of COVID-19 in the first quarter of 2022, detecting 12 sequences, of which 10 were of the highly transmissible Omicron variant, including subvariants B.1.1.529, BA.1, BA.2, and BA.3. The remaining two sequences were identified as B.1 and Recombinant XJ. Samples from the same wave of the epidemic were also sent to the INRB, which also found a high prevalence of the Omicron variant, providing additional evidence for its involvement in the occurrence of the third wave of COVID-19 in Chad.

In September 2023, WHO Chad funded and procured two sequencers (MinION and GridION) along with related equipment, consumables and reagents, for sequencing of at least 600 samples using Oxford Nanopore technology. The procurement process was carried out by the WHO headquarters’ procurement team, and the equipment delivered to Chad’s national sequencing laboratory by the WHO Country Office.
This laboratory technology is new to Chad, and is the result of successful South-South cooperation between the Biomedical Research Institute in Kinshasa in the Democratic Republic of Congo, and the Laboratory of Biosafety and Epidemics (LaBiEp) in Chad. Given its clear benefits, this South-South cooperation should be encouraged in other areas of public health.”

- Dr J.B. Ndihokubwayo, WHO Representative in Chad

Chad’s successful collaboration with the DRC, facilitated by WHO, highlights the critical role of international cooperation in strengthening global health systems and emphasizes the importance of investing in genomic surveillance capabilities to effectively address public health emergencies. While laboratory technicians in Chad now have the necessary training, infrastructure, equipment, materials, reagents and protocols to perform sequencing of SARS-CoV-2 and other pathogenic microorganisms, mastering genomic surveillance techniques will require more time. The next steps to build genomic surveillance capacity in Chad will include long-term training for one or two technicians and developing a national protocol for genomic surveillance to enable representative sampling. WHO is conducting an expert mission to assess Chad’s genomic surveillance capacities, with the goal of identifying areas that require further improvement and providing tailored support to strengthen the country’s overall capacity to respond to public health crises.

WHO provided financial support for the construction of a new room dedicated to sequencing in the LaBiEp laboratory site in March 2022.

Photo credit: WHO Chad/Zongo Frank Edgard.

GUINEA-BISSAU

Improving readiness to respond to health emergencies through an integrated ambulance network in Guinea-Bissau

Key WHO contributions

- Provision of technical support for Emergency Care Systems Assessment (ECSA)
- Facilitation and contextualizing of best practices from other countries
- Resource mobilization for procurement of ambulances
- Conduct of training sessions linked to emergency care.

Prior to the COVID-19 pandemic, Guinea-Bissau’s health system lacked an ambulance network for patient transportation and emergency assistance. Many of the ambulances that had been allocated to the various health regions had fallen into disrepair, rendering them unusable. Even those that were still in good working condition were expensive to maintain, with costs that far exceeded the national minimum wage. This meant that the most urgent cases were unable to seek health care quickly and efficiently. To improve access to health care for the estimated two million people in Guinea-Bissau, the government partnered with the World Health Organization (WHO) to establish the Integrated Network of Ambulances, Rede Integrada de Ambulâncias (RIA). This led to ambulances being fully equipped and staffed with highly trained and qualified medical personnel, with, on average, 15 interhospital transfers and 5 prehospital transfers completed every day. Services are now available to all two million citizens of Guinea-Bissau around the clock and can be accessed by calling the free emergency line 112. With the introduction of the RIA, individuals in affected regions have been able to access health care with greater ease.

How did Guinea-Bissau, with the support of the WHO Secretariat, achieve this?

During the COVID-19 pandemic, it became evident that Guinea-Bissau’s emergency care system needed to be strengthened to provide adequate treatment for severe cases. To identify specific areas for improvement, WHO Guinea-Bissau provided technical support to the Ministry of Health (MoH) to conduct a WHO Emergency Care System Assessment (ECSA). This assessment helped to identify key areas for improvement, including the need for a more robust ambulance network.

During the assessment, WHO experts, with the support of the WHO Secretariat, provided technical assistance, contextualizing best practices from other countries and mobilizing resources for the procurement of new ambulances. These new ambulances were fully equipped with the latest medical equipment and staffed with highly trained emergency responders.

Health professionals received additional training in basic life support and automatic external defibrillation. Photo credit: WHO Guinea Bissau.
Systems Assessment (ECSA). ECSA is a ministry-led process that brings together key stakeholders to assess different components of the emergency care system including injury care, using ECSA as a template to cover all elements of the system.

To ensure that everybody in Guinea-Bissau had access to emergency services, WHO enabled sharing of best practices from South Africa where a successful emergency network had already been established. To publicize the RIA service and activities, WHO provided technical and financial support to develop, produce and distribute 5000 posters to health centres, markets, places of worship and other public places. To raise awareness about the availability of these services, the nongovernmental organization (NGO) VIDA established a call-centre to monitor COVID-19 cases.

Furthermore, WHO Guinea-Bissau mobilized funds from the Islamic Development Bank (IsBD), the European Union and the World Bank to purchase 15 ambulances, each outfitted with monitors, respirators, oxygen cylinders, thermometers, sphygmomanometers, stethoscopes, nasogastric tubes, stretchers and cervical collars. These ambulances were then distributed throughout all the health regions, and mobile phones were provided to facilitate communication between health facilities and patients.

The capacity of the health workforce to manage and respond to health emergencies was bolstered through specialized training. Seven doctors were certified as national trainers in basic emergency care (BEC) by the African Federation of Emergency Medicine (AFEM). Through collaboration with the National Institute of Medical Emergency of Portugal (INEM), WHO provided financial and technical support to train 211 health professionals, including doctors, nurses and midwives, 40 of whom received additional training in basic life support (BLS) and automatic external defibrillation (AED). A total of 27 ambulance drivers were trained in infection prevention and control (IPC) and basic care for critically ill patients.

Ambulances were purchased by WHO and provided to the Government of Guinea Bissau to improve health care access.

Photo credit: WHO Guinea Bissau.
When we find a patient in a critical situation, we often forget the ‘ABCDE’ approach of primary assessment, so this training was very beneficial. I recently had a case of a severely burned child, and if the Regional Integrated Ambulance (RIA) had been around, the whole process of care could have been different. Going forward, RIA will drastically reduce the suffering of the population.”

- Dr Nadide Cali, training beneficiary

Guinea-Bissau’s ambulance network has been a major triumph for the country’s health system, particularly for its emergency medical services. These services provide all citizens with access to transportation for medical emergencies, ensuring that they can be safely transported to and between hospitals by trained personnel using established clinical criteria. As a result, all of Guinea-Bissau’s citizens can be assured that they will receive the necessary medical care in the event of an emergency.

HAITI

Haiti cholera outbreak: community health workers as pillars of the response on the ground

Key PAHO/WHO contributions

- Training agents de santé communautaire polyvalents (ASCPs)
- Providing funding to deploy ASCPs in the most affected regions
- Providing equipment and supplies to ASCPs for cholera prevention, risk communication and surveillance activities in the community.

Haiti is currently facing a resurgence of cholera, a highly infectious bacterial disease that causes severe diarrhoea, dehydration and death. The outbreak was detected in October 2022, after more than three years without reported cases, and quickly spread throughout the country. However, addressing the outbreak has been complicated by Haiti’s ongoing complex humanitarian crisis, which has been fuelled by gang violence, sociopolitical instability, insecurity, fuel shortages and economic decline. These challenges have severely affected access to health care, water, food and sanitation. To control the outbreak, PAHO/WHO Haiti provided technical, operational and financial support to train and mobilize 1200 community health workers known as agents de santé communautaire polyvalents (ASCPs) to contain the outbreak in Ouest, Centre and Artibonite departments. Cases peaked in November with 13,672 suspected cases and 283 deaths reported between October and December 2022, and have since plateaued in the Ouest department, the initial epicentre. As cholera continues to spread across the other nine departments of Haiti, the ASCP approach is now being promoted nationwide as a cornerstone of cholera control.

How did Haiti, with the support of the PAHO/WHO Secretariat, achieve this?

ASCPs are the backbone of Haiti’s health system, providing vital care, education and surveillance for their communities in the ongoing fight against cholera and other health threats. In collaboration with the Ministry of Public Health and Population (MSPP), PAHO/WHO Haiti supported health directorates in several departments by organizing training sessions for ASCPs. This involved adapting global guidelines to develop training materials, mobilizing facilitators and trainers, and providing funding to ensure that ASCPs were deployed in the most affected regions.

The ASCPs, embedded within their communities, carry out a multifaceted mission. They serve as the pillars of community response, particularly in areas of the Port-au-Prince metropolitan region where access has been impeded by recent urban violence. As community members themselves, ASCPs have fostered trust between health organizations and local populations, leading to more effective collaboration between health authorities and the general public in terms of cholera prevention and treatment efforts.
ASCPs go door-to-door, educating communities on the risks and prevention measures to curb the transmission of cholera. They promote proper hygiene practices, sanitation, and water treatment methods to minimize spread of the disease and are trained to identify cholera symptoms and refer patients to the nearest cholera treatment centres. PAHO/WHO Haiti has provided them with basic equipment, such as oral rehydration salts, water purification tablets, visibility gear and information leaflets.

“"The mobilization of the ASCP has resulted in outreach to more than 100,000 households, the detection of over 10,000 suspected cases of cholera and the referral of more than 5,000 patients to cholera treatment centres.”

- Dr Pedro Lopez Puig, Health Systems Strengthening Advisor, PAHO/WHO Haiti

A critical aspect of the ASCPs’ work is their involvement in surveillance and monitoring. They were trained by PAHO/WHO Haiti to register and report suspected cholera cases and deaths in the community using a paper registry and to share the data over WhatsApp with health authorities in order to influence response strategies. This ongoing work enables the ministry to rapidly detect and respond to cholera, preventing further spread. ASCPs have also supported cholera vaccination campaigns, assisting with logistics, mobilizing communities and administering vaccines to control disease transmission.
I communicate about the importance of using treated water for drinking and cooking at home and encourage hand washing and food washing. When I find a person suffering from diarrhoea, regardless of the severity of their symptoms, I refer him or her to a treatment point in the community in order to provide them with the necessary care.”

- Esterline Dumézil, Agent de Santé Communautaire (ASCP) in Cité Soleil, Haiti

The dedication and hard work of ASCPs have been instrumental in mitigating the impact of cholera in Haiti’s Ouest department, leading to a decline in cases and deaths associated with the disease. However, with most new cases now concentrated in other regions, particularly the Centre, Nord-Ouest and Artibonite Departments, the dedication of ASCPs remains crucial.

Training and mobilizing these vital health workers have not only enabled a more effective response to the cholera outbreak but also demonstrated the importance of investing in community-based health systems. By building trust and fostering collaboration between health authorities and local communities, ASCPs have become an essential component in the fight against cholera and other public health challenges in Haiti. The lessons learned from their work can serve as a blueprint for future initiatives aimed at combating infectious diseases and promoting public health in complex humanitarian crises.

Niger faces recurrent epidemics including meningitis, cholera, measles and other emerging diseases. Response to epidemics must be fast to curtail their spread. To improve response time, WHO’s Strengthening and Utilizing Response Groups for Emergencies (SURGE) flagship initiative was implemented in Niger in 2022. In August 2022, the country experienced a cholera outbreak in Zinder and Maradi regions. A multidisciplinary SURGE team of 18 national experts was deployed within 48 hours to coordinate the response, helping to quickly curb infections. A drop in cases was observed in the Maradi region within 72 hours. This prompt response resulted in low case and mortality numbers relative to the population at risk. In 2022, only four health districts were affected by cholera and a total of 68 cases and two deaths were reported. This is much lower than the 2021 cholera epidemic prior to SURGE when 35 health districts were affected leading to 5596 cases and 166 deaths 1.

How did Niger, with the support of the WHO Secretariat, achieve this?

WHO Niger created SURGE teams in the capital city Niamey, then developed their capacity by providing eight training sessions in laboratory surveillance and infection prevention and control (IPC). Eleven doctors, 14 epidemiologists, seven laboratory technicians, eight communicators, two anthropologists and nine IPC specialists were trained to ready them for deployment in emergencies across the country. In addition to funding and technical expertise for the trainings, WHO Niger provided supplies and equipment which, to increase preparedness, were prepositioned in advance. This included three cholera drug kits, protective equipment and six treatment tents.

“With logistics prepared and equipment prepositioned in advance, the trained SURGE team and medical and paramedical supplies were deployed in less than 48 hours, making it possible to quickly confine the epidemic.”

- Dr Kourouma, SURGE Niger Coordinator

SURGE teams were deployed to coordinate the response in two districts with the support of 10 technical experts from WHO Niger. The Ministry of Health coordinated the response with WHO through the Public Health Emergency Operations Centre (COUSP). WHO Niger experts provided technical expertise to develop a response plan, hold daily coordination meetings, oversee implementation, develop and disseminate the daily situation report and train local field teams in cholera diagnosis, infection control and integrated

NIGER

First deployment of the SURGE team in Niger in response to the cholera epidemic

Key WHO contributions

- Establishing the SURGE teams
- Training SURGE and laboratory teams and providing them with equipment
- Developing a response plan
- Establishing a cholera treatment unit
- Evaluating health facilities and implementing WASH interventions
- Guiding risk communication and community engagement activities.
disease surveillance and response. Field teams then searched for and investigated cases, and collected and delivered specimens.

When the first cases of cholera were registered in 2022, confirmation of the samples was carried out in the field by the mobile laboratory. Mobile laboratory teams also mentored local teams to build their capacity, including Maradi Regional Hospital’s laboratory team that now confirms cholera outbreaks in the region and neighbouring areas. To improve the quality of cholera case management, WHO developed the capacity of local teams and financed the opening of cholera treatment units to provide free care.

“It took us three months to deploy the mobile laboratory team during the large cholera outbreak in 2021. This time, thanks to the SURGE project, the mobile laboratory team was deployed in just 48 hours. It’s a first! We could rapidly confirm suspected cases on site in Maradi while simultaneously strengthening the regional hospital’s laboratory’s capacity. Now the laboratory can culture Vibrio cholerae we have a new regional centre for biological confirmation.”

- Dr Sani, Member of SURGE team, CERMES centre for medical and health research

One of the six treatment tents that WHO procured for emergency deployment in Niger. Photo credit. WHO Niger.
Water, Sanitation and Hygiene (WASH) Experts from WHO Niger and WHO Regional Office for Africa worked directly with communities in the field to evaluate health facilities in the region and then reduce disease transmission through WASH interventions including implementation of the ring strategy to limit transmission between close contacts, distribution of soaps and water purification tablets and installation of handwashing facilities at key assembly points.

WHO Niger adapted WHO’s global guidance on risk communications and community engagement and provided key messages for use in the local context. SURGE teams then engaged the community to improve risk awareness and participation in disease prevention activities. They visited religious leaders to encourage them to raise awareness during sermons in mosques and community health focal points to mobilize them to conduct sensitization sessions in and around homes.

Strong coordination was crucial to operationalize the response. A WhatsApp group was used to share information between districts, while communications with districts in neighbouring Nigeria facilitated contract tracing and health information exchange across borders.

WHO’s work was only possible due to close One Health collaboration with the Federal Ministries of Health, Agriculture and Rural Development, and Environment as well as their agencies, which co-led support and response efforts. Through the efforts of WHO Niger and the SURGE team and their endeavours to boost local capacity, Niger is now in a much stronger position to rapidly detect and respond to health emergencies when they emerge in the future. WHO continues to work in Niger to build and sustain preparedness capacity.

1 Niger Ministry of Health. Weekly Integrated Disease Surveillance and Response data on notifiable diseases reported to WHO. 2021 and 2022.
In 2022, conflict in Ukraine led to a large influx of refugees seeking safety in the European Union (EU). By January 2023, over 2.36 million Ukrainians had sought refuge in Romania, with more than 100,000 receiving EU temporary protection status. The Romanian people and government responded with solidarity, providing refugees with the same access to health care as citizens with health insurance. Despite this, communication and language barriers, unfamiliarity with the health care system, and a lack of knowledge and information created obstacles for refugees when accessing health care services. In response, the World Health Organization (WHO) established two new health clinics in areas of large refugee populations, supported seven general practitioner (GP) clinics, hired cultural mediators, and collaborated with civil society organizations (CSOs) to provide primary health care (PHC) services to refugees. WHO also disseminated information about health care access, vaccinations, medication availability, and proper antibiotic use. Since June 2022, WHO clinics and WHO-supported GP clinics have respectively served 1600 and 600 refugee patients nationwide.

How did Romania, with the support of the WHO Secretariat, achieve this?

To expand access to health services early in the emergency, WHO Romania funded the refurbishment and repurposing of two temporary spaces in counties with large refugee populations: a United Nations Refugee Agency (UNHCR) centre in Bucharest and a United Nations Children’s Fund (UNICEF)-UNHCR Blue Dots Hub in Galați. These spaces were rapidly transformed into specialized refugee clinics, providing essential, free-of-charge, primary health care services, such as sexual and reproductive health services and mental health and psychosocial support (MHPSS). WHO Romania also provided financial and technical support to seven GPs to enable refugee-inclusive practices. To gain a better understanding of the needs of GPs, WHO Romania conducted a survey in partnership with the Romanian National Society of Family Medicine and held in-depth interviews. WHO Romania then procured and delivered medical equipment, office furniture, translation devices and medical supplies to the GPs according to their individual needs. To strengthen access to specialized health services in Bucharest, which has a particularly large refugee population, WHO collaborated with CSOs: CSO Estuar provided four psychologists to boost MHPSS while international CSO Actions Santé Femmes and the
local Independent Midwives Association provided additional obstetrics and midwifery services.

“We thank the Romanian people, the Government, the health care staff and the volunteers and for their incredible solidarity and continued support in the past year for the people fleeing the war in Ukraine. Many of the refugees in Romania are highly vulnerable elderly people, women, and children. Everyone has the right to health. We are committed to supporting the Ministry of Health to improve the access for refugees to medical care.”

- Dr Caroline Clarinval, WHO Representative and Head of the Romania Country Office

To facilitate communication between health care providers and refugees and provide further MHPSS services, WHO Romania contracted seven cultural mediators through United Nations Volunteers (UNV). Cultural mediators were deployed to work in WHO Romania and GP clinics and the wider community in five cities with a high concentration of refugees: Bucharest, Galați, Cluj, Târgu Mureș and Brașov.

To increase refugees’ knowledge of health care access, vaccination, medication availability and proper antibiotic use, WHO Romania engaged a consultant from its Global Outbreak Alert and Response Network (GOARN). Leaflets were developed in Ukrainian, Russian and English, with input from Romania’s Ministry of Health (MoH), National Institute for Public Health (NIPH) and National Health Insurance House (NHIH), along with other partners, and made accessible online. This access to reliable information enabled refugees to feel more settled and assured in accessing health services. One mother remarked, “At first it was a disaster. The children got sick and I didn't know where to go. But now it's easier and I know what to do”. WHO Romania responded to refugees’ requests for a call centre and provided financial assistance to hire a call-centre coordinator, as well as to requests to develop standard operating procedures (SOPs) and a call-centre script, including predefined answers to common questions. The call centre was established in January 2023 in partnership with United Nations (UN) agencies and the MoH.

WHO Romania supports health services being offered to those fleeing war in Ukraine at the Blue Dot Refugee Centre in Galați. Photo credit: WHO Romania/Mihai von Eremia.
When we have people with health problems, we call a local family doctor who offered to help us. For example, a 73-year-old woman arrived here and, after measuring her blood pressure, I noticed it was very high, so I immediately called the family doctor. He prescribed medication, and I went to the pharmacy to buy it, using local authority funds. We've also received donations of medicines from local pharmacies."

- Maria, community health nurse at a refugee centre in Dărăbani near the border with Ukraine

Through its evidence-based approach, WHO Romania has been assisting the country in its efforts to meet the health needs of refugees. Data from multiple sources have been used to tailor service provision, including primary qualitative research with refugees and surveys conducted by other stakeholders. The Romanian government, in collaboration with its health partners, has set out a clear vision for 2023: to create an inclusive health care and social protection system that provides universal, sustained access to services, responds quickly and effectively to emergencies and ensures healthy lives for all. WHO Romania is committed to providing support to Romania in order to achieve this goal.

1. Behavioural insights on health service needs and access. Results of a qualitative study among refugees from Ukraine in Romania, July - September 2022 (in publication).
Stopping a cVDPV2 outbreak amid COVID-19 and multiple emergencies in Sudan 2020–2022

Key WHO contributions

- Providing technical, financial and operational support for acute flaccid paralysis and environmental surveillance networks to detect polioviruses
- Developing a risk assessment with virological, contextual, and transmission-risk and proposed response options
- Implementing outbreak response plans to respond to the polio outbreak for vaccination against type-2 poliovirus and surveillance enhancement
- Mobilizing domestic funds to appropriately respond to this cVDPV2 outbreak
- Financial and technical support to operationalize the response plan
- Supporting budget preparation for the outbreak response and facilitating funding from GPEI for the response
- Building capacities of campaign workers through training on adverse events following immunization (AEFI and risk communication)
- Conducting post-campaign monitoring and support for a post-campaign review of the outbreak
- Reviewing data and evidence through outbreak response assessments and confirming that transmission of poliovirus type 2 had been successfully interrupted.

In August 2020, Sudan’s Federal Ministry of Health (FMoH) declared an outbreak of circulating vaccine-derived poliovirus type 2 (cVDPV2) following importation of the virus from a neighbouring country and subsequent paralysis of a child. The virus quickly spread to 58 children in 15 states in Sudan. In response, the FMoH, with financial and technical support from the World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF), implemented two nationwide monovalent oral polio vaccine type-2 (mOPV2) vaccination campaigns. The first round was launched in November 2020 and the second in January 2021, reaching over 8 million children under five years of age nationwide, with a coverage of over 95% of the target population. Additionally, the second vaccination round distributed vitamin A supplements to approximately 7.6 million children. After 18 December 2020, no further cVDPV2 isolates were obtained either from acute flaccid paralysis cases or samples collected by environmental surveillance (ES), which was expanded as part of the outbreak response. The outbreak was formally declared successfully stopped in August 2022.

How did Sudan, with the support of the WHO Secretariat, achieve this?

The FMoH in Sudan identified the initial cVDPV2 case through its acute flaccid paralysis (AFP) surveillance network. This network meets the requirements for polio certification and is supported by a WHO team of 15 medical officers and 13 drivers. Physicians, traditional healers, community leaders and members of civil society are engaged to ensure that AFP surveillance reaches the wider population. WHO Sudan finances and provides technical assistance for an ES programme, which was first launched in Khartoum state in 2018 and has since expanded to six additional states to further enhance surveillance as part of the outbreak response. WHO Sudan helped to develop the ES expansion plan, and assisted in supporting states to identify sites and in training sample collectors and
supervisors. WHO Sudan also provides ongoing assistance to the government for transport of samples to Sudan’s national polio laboratory in Khartoum.

Once the polio case was identified, WHO Sudan worked with the FMoH to rapidly develop an outbreak response plan using WHO standard operating procedures: responding to a poliovirus event or outbreak. WHO Sudan requested additional funds from the Global Polio Eradication Initiative (GPEI) and the FMoH provided significant domestic resources to boost the response. WHO Sudan also connected to the health cluster coordination platform and requested aid from in-country donors, resulting in the receipt of US$1 million from the Sudan Humanitarian Fund.

“Sudan remains at high risk of importation of poliovirus because of large numbers of people moving throughout the country. There are around 3.7 million internally displaced persons moving from areas of conflict in a number of states in addition to frequent movement between neighboring countries. The polio programme has worked to map nomadic populations, who are also considered at risk, to ensure that they can be reached with the vaccine during the campaign.”

- Dr Mohammad Taufiq Mashal, WHO Team Leader for Polio and Immunization in Sudan

To operationalize the plan, WHO Sudan provided financial and technical support to build the capacity of campaign workers in all of Sudan’s 18 states. This included training national and subnational supervisors, team supervisors and vaccinators. WHO Sudan also supported microplanning and post-campaign monitoring, final data analysis and report writing, as well as providing indelible marker pens for marking children’s fingers after they had received the vaccine. To ensure safety in the context of the COVID-19 pandemic, infection prevention and control measures such as using hand sanitizer, and wearing masks and gloves were implemented.

WHO Sudan trained state and locality officers on adverse events following immunization (AEFI) and risk communication. Following their training, locality (district) supervisors collected data on AEFI from vaccination teams and team supervisors and presented it daily to state and federal ministries of health. Additionally, the Health Promotion Department of the FMoH and UNICEF ramped up community engagement and social mobilization efforts to ensure all households were aware of the dangers of the disease and the need to immunize every eligible child.

During the campaign, the vaccination teams diligently recorded data for each child under five years of age and submitted it to their team supervisor for compilation. The supervisor then sent the data to the district coordinator and provincial focal point, with the National Emergency Operation Centre receiving aggregate data from across the country at the end of each day of the campaign.

To assess the cVDPV2 outbreak response, two exercises took place. In October and November 2021, and again between 24 July and 1 August 2022, Outbreak Response Assessment (OBRA) teams comprising representatives from WHO, UNICEF and the United States Centers for Disease Control and Prevention (CDC) reviewed and evaluated the outbreak response. The OBRA team conducted key informant interviews and site visits, interviewing and reviewing reports and records with surveillance and immunization staff at the
state, locality and health facility levels. They then analysed the data, and developed reports which were used to verify reported coverage at the country level. As an outcome of the second OBRA, the OBRA team concluded that transmission of poliovirus type 2 had been successfully interrupted and declared the outbreak closed in August 2022.

“Despite the fact this outbreak is over it is important to maintain sensitive acute flaccid paralysis surveillance, ensure better preparedness and response, enhance coverage of essential immunization, and strengthen cross-border coordination.”
- Dr Ni’ma Saeed Abid, WHO Representative in Sudan

In 2020, Sudan faced a range of challenges, including political transition and financial crisis, while also confronting the COVID-19 pandemic and other public health emergencies. Despite this, the FMoH, WHO Sudan and partners worked together on careful planning, effective surveillance, strong governmental commitment and successful vaccination campaigns to quickly boost immunity to poliovirus type 2.

Nevertheless, Sudan’s risk profile remains high due to political instability and population movement to and from countries with active circulating vaccine-derived poliovirus type 2 (cVDPV2). This increases the risk of importation and makes it difficult to ensure that every last child is vaccinated. WHO continues to support Sudan in reinforcing the country’s surveillance systems, preparedness and response to polio outbreaks, as well as in strengthening essential immunization. In December 2022, a new cVDPV2 emergence was confirmed in Sudan and the country has mounted a response in applying the lessons learnt from the 2020 cVDPV2 outbreak.

A child’s finger is marked after receiving the polio vaccine in Sudan. Photo credit: WHO Sudan.
In Costa Rica, more than 16% of the population is over 60 years of age and the country is experiencing a rapid demographic transition. The country is therefore seeking opportunities to develop public policies regarding healthy ageing, including the creation of environments that support older adults’ capacities. Between 2015 and 2018, only two municipalities were part of the WHO Global Network for Age-Friendly Cities and Communities (GNAFCC). In 2019, several municipalities started to recognize the need to create coordinated actions and mechanisms to adapt their cities for ageing adults, in part thanks to the promotion of the Age-Friendly Cities and Communities (AFCC) Framework by the PAHO/WHO Country Office and counterparts from the Ministry of Health (MoH). Ten municipalities entered the programme in 2019 and by 2022, 23 municipalities were part of the network. They all benefited from guidance provided by available materials and strategies when holistically considering the well-being and participation of older people. Costa Rica’s goal is to have 100% of municipalities in the country in the GNAFCC by 2026.

How did Costa Rica, with the support of the PAHO/WHO Secretariat, achieve this?

With an ageing population and the demographic transition, Costa Rica identified the need to target the population over 60 years of age to maintain and improve overall well-being. The government requested PAHO/WHO Costa Rica’s support to develop programmes for its senior citizens in communities. Through this request, the country became aware of the GNAFCC which was established in 2010 to connect cities, communities and organizations worldwide, with the common vision of making their community a great place to grow old in. It focuses on action at the local level that fosters full participation of older people in community life and promotes healthy ageing. The AFCC Framework outlines eight interconnected areas that can help identify and address barriers to their well-being and participation. Through the technical and financial support of PAHO/WHO Costa Rica, 23 municipalities, covering 30% of the municipalities in the country, have enrolled in the GNAFCC.

Key PAHO/WHO contributions

- Facilitation to enroll communities into the GNAFCC
- Establishment and coordination of the intersectoral group
- Provision of technical guidance on capacity-building for trainers and older adults
- Advocacy towards local and national authorities for greater investment.
To coordinate this work, an intersectoral group at the local level was established in 2019 through the national programme on AFCC. PAHO/WHO Costa Rica provided technical assistance for its formation in recognition of the intersectoral nature of the programme. The group recognized the need to promote actions that go beyond disease management while considering the social determinants of health and role of environments for healthy ageing. Intersectoral networks are crucial when addressing both the social and physical aspects of community life: these are essential when responding appropriately to the needs and preferences of older adults and promoting their health and wellbeing. A manual and toolkit for age-friendly practices were developed with PAHO/WHO technical support for the use of all communities which also received support through constant capacity-building promoted by the intersectoral group. PAHO/WHO Costa Rica, the MoH, the Institute of Development and Municipal Advisory (IFAM), ANAI (the national association of municipalities), and the Yamuni Tabush Foundation constituted the intersectoral group.

“Definitely this ambitious initiative is of high public value. Older people take essential part of the initiative and can make their needs being heard, which makes them feel part of their communities. They can contribute with solutions for active and healthy ageing themselves.”

- Ms Yuliana Cordero, Municipality of Orotina
“When cities join the Network of Age-Friendly Cities and Communities, older people start to be seen as citizens with rights. Both the community and local institutions are encouraged to include them in community planning, with a focus on inclusiveness and well-being.”

- Ms Cristina Cépedes, Municipality of Grecia

The municipalities that are part of the national programme in Costa Rica are also enrolled in the GNAFCC, and their work is monitored and presented on the GNAFCC platform. Indicators for completion of friendliness adaptation as well as continuous age-friendly practices are presented to showcase advances in the municipalities on improving actions for healthy ageing. For example, the municipality of Cartago developed a strategy on training for cognitive and physical abilities in day centres. This initiative focused on healthy ageing and social integration with family members who followed the development of the activities. A series of five virtual workshops was also conducted during COVID-19 to support functional activities and sensory stimulation at home.

PAHO/WHO, with the goal of improving and protecting people’s health, promotes efforts to ensure that people live longer and healthier lives. PAHO/WHO manages the GNAFCC in the Region of the Americas and through concerted actions with countries. Currently, the Americas are the leader in the number of cities and communities that are part of the network. PAHO/WHO Costa Rica actively supports the initiative through technical cooperation and coordination of the intersectoral network at the national level.

The need for support from cities is increasing, which also means a challenge for institutions whose resources are limited. In addition, during the pandemic, implementation of the initiative was a challenge when trying to adapt processes which, by their nature, are aimed at older people and in-person rather than virtual. Nonetheless, PAHO/WHO Costa Rica, together with its partners, will continue programme implementation and expansion.

ARGENTINA

Legislative agenda setting, development and approval of national legislation to require front-of-package warning labels to regulate the marketing of processed and ultraprocessed food and drink products

Key PAHO/WHO contributions

- Advocacy for setting parliamentary and government agenda on healthy diets
- Collating and presenting evidence and international best practices to legislators
- Support for safeguarding policy space against conflicts of interest and industry interference
- Engaging Argentine legislators and parliamentarians from other countries to build a supportive network for the legislative process
- Developing social communication campaigns and a media presence on the importance of adopting PAHO/WHO best practices to optimize policy effectiveness
- Providing technical cooperation with the Ministry of Health to establish the regulations that set out technical specifications implementation of the law.

Argentina has a growing prevalence of overweight and obesity associated with unhealthy diet-related diseases affecting all age groups. This has led to increased morbidity and mortality. The nutritional transition is largely driven by the increased demand and supply of processed and ultraprocessed foods which are easily available in the country. To address this situation, PAHO/WHO Argentina, together with the Regional Office, supported the national authorities in Argentina to develop, adopt and implement healthy eating legislation (Law 27 642), incorporating best practices on front-of-package warning labels and adopting the food classification tools agreed by PAHO/WHO Member States. This legislation also safeguards the policy space from conflicts of interest and interference from industry, ensuring practical sustainability and maintaining vigilance with regard to front-of-package labelling standards. After the law’s adoption in December 2021 and with support from PAHO/WHO to ensure its implementation, as of September 2022 octagonal front-of-package labels are now visible which cite excess levels of sugars, sodium, fats and additives so that consumers have the information they require before making their choices.

Parliamentary and Ministry of Health meeting on developing the bill. Photo credit: PAHO/WHO Argentina.
How did Argentina, with the support of the PAHO/WHO Secretariat, achieve this?

In Argentina, the body weight of more than 65% of the population over 18 years of age is excessive according to the latest National Survey of Risk Factors in 2018, with more than 25% of the population being obese: this represents a 75% increase since 2005. Similarly, 13% of children aged under five years and 40% of adolescents aged between 13–15 are overweight, according to the World School Health Survey conducted in Argentina in 2018. Such expressions of malnutrition are mostly driven by the rising demand for and offer of processed and ultraprocessed products of excessively high sugar, sodium and fat content, and containing additives such as sweeteners that disrupt healthy diets and cannot be easily identified by people at the time of purchase.

Front-of-package warning labels can facilitate change in consumption patterns, allowing consumers to identify the risks present in certain foods. They can also assist national authorities to apply other regulatory measures such as marketing restrictions and regulations around the school food environment and public food procurement.

To advocate for change, PAHO/WHO Argentina established a strategic alliance with the Directorate of International Affairs of the Chamber of Deputies of Argentina in 2017 to convene several forums with legislators and parliamentary advisors to share evidence and international experience on front-of-package labelling. These topics also included taxation on sugary drinks and regulations for the marketing of unhealthy food commodities, along with other regulatory policies that are part of PAHO/WHO’s Plan of Action for the Prevention of Obesity in Children and Adolescents. PAHO/WHO Argentina also partnered with the Ministry of Health (MoH) and UNICEF, and facilitated experience sharing from Chile during the parliamentary gatherings. Such meetings were repeated annually, adding further experiences from other countries, and sharing additional evidence.

These actions enhanced the recognition of PAHO/WHO Argentina as a reference for legislators and parliamentary advisors drafting bills to advance such policy tools. Several bills emerged from the process, including opposing ones. Ultimately, however, the support provided by PAHO/WHO Argentina through evidentiary and practical experiences was instrumental in gathering parliamentary consensus across political groups.

“This law plays a fundamental role in informing and warning consumers of the excess presence of critical nutrients in products, and thus prevent malnutrition and reduce the development of chronic noncommunicable diseases.”

- Senator Fernández Sagasti

As the bill advanced through the legislative process, several hearings were held by parliament in the presence of legislators and members of academia, civil society and industry. Both the Argentina Country Office and the PAHO/WHO Regional Office participated in all these hearings, providing advice and clarification. PAHO/WHO also joined efforts with UNICEF and FAO in Argentina to launch a campaign on social media in support of a policy that could help consumers easily identify products – through the use of octagonal warning labels – that could harm their health.
Thanks to targeted advocacy, strategic partnerships with national legislators, public health authorities and UN agencies, and the citation of reliable evidence, the legislative process culminated in legal adoption of the bill in December 2021. PAHO/WHO Argentina further contributed to the development of regulations to set out technical specifications to implement the law and continues to advise national authorities on implementation, monitoring and enforcement.

“The maximum values of sugars, saturated fats, total fats and sodium established must comply with the limits of the Nutrient Profile of the Pan American Health Organization.”

-Law 27 642

PAHO/WHO’s support throughout this journey has enabled Argentina to adopt a law with effective policy instruments (No 27642) which meets PAHO/WHO best practices and in which the time between policy adoption and implementation was shortened. As of September 2022, the population of Argentina can now easily identify products that are harmful to health and, once implementation of marketing and school food environment regulations is completed in the coming years, children will also be protected from such commercial practices. Based on the experiences of other countries in the region, we expect to see consumers making healthier choices, with long-lasting effects on healthy diets, improved nutrition and health outcomes.
Multisectoral approach to NCDs based on the management model of healthy cities, environments and ruralities (Ciudades, Entornos, Ruralidades, Saludables y Sostenibles (CERSS))

Key PAHO/WHO contributions

- Conceptualization of the NCD approach with a focus on determinants and equity
- Delivery of training programmes to local officials and leaders
- Functional network of communicators working on NCDs and their risk factors
- Development of innovative strategic and operational lines for NCDs and their risk factors, based on evidence and aligned with the SDGs.

Noncommunicable diseases (NCDs) are a growing public health problem globally, accounting for 76% of premature mortality in Colombia and 80% in the Region of the Americas. Cardiovascular diseases (CVD) are the main cause of mortality and morbidity, generating negative social and economic impacts. Economic and social inequalities exacerbate risk factors for people in vulnerable conditions, leading to a higher prevalence of these diseases. In addressing NCDs, it is essential to strengthen and promote the implementation of multisectoral actions for environments and conditions that favour population health. Through Pan American/World Health Organization (PAHO/WHO) cooperation, the management capacities of health teams were strengthened, strategic planning actions developed and tools implemented to reduce risk factors and improve the approach to NCDs at the multisectoral level in prioritized territories.

How did Colombia, with the support of the PAHO/WHO Secretariat, achieve this?

PAHO/WHO Colombia played an instrumental role in the development and implementation of Colombia’s Ten-Year Public Health Plan (PDSP, 2022–2031), which prioritized noncommunicable diseases (NCDs) and established operational lines to address the social determinants of health and
achieve the Sustainable Development Goals. The 2022–2031 PDSP incorporated globally recognized strategies such as the comprehensive care model for chronic conditions and social determinants of health based on the CERSS model. PAHO/WHO Colombia also provided technical expertise to develop the “strategic and operational plan for addressing chronic noncommunicable diseases 2020–2030” in Bogota along with guidelines and tools for its implementation. This established strategic orientations and criteria for action, both for sectors beyond health such as education, environment and economic development, as well as for all operational levels of the health sector. In addition, PAHO/WHO Colombia collaborated with local government to implement NCD plans in local policy, such as in Bogotá, where goals to address NCDs were incorporated into the city’s development plan.

To further advance their efforts in addressing NCDs, PAHO/WHO Colombia implemented training activities for professionals in different sectors. For instance, a pilot workshop on NCDs and their risk factors was set up to allow communicators and journalists to improve NCD media coverage and information quality. A leadership course for tobacco control was also developed, where 60 professionals and key actors at the national level received practical training on implementing aspects of the WHO Framework Convention on Tobacco Control. Furthermore, a functional network with more than 33 communicators trained in noncommunicable diseases and addressing the four main risk factors for NCDs was formed. More than 10 000 professionals in the country were trained by PAHO/WHO’s Virtual Campus on implementing the HEARTS technical package for NCD care. Moreover, complementary training was delivered to more than 117 health managers from 26 territories at the national level in developing implementation plans for strategies to improve NCD care in the primary care setting based on the social determinants of health.

“As journalists, we are left with the responsibility to be meticulous with the information, to verify, to try to translate the scientific information. We had experts who can translate many issues from these public policies. Our responsibility is to bring them information.”

- Maicol Buitrago, Journalist of Red Más Noticias
To promote awareness and understanding of the impact of social determinants on NCDs, management tools were disseminated through implementation guides and workshops in two prioritized territories, Huila and Cauca. These actions also included identifying how living conditions limit access to health services and interventions in the country, particularly among vulnerable populations. Additionally, the WHO’s NCD and Mental Health call for multisectoral action included the presentation of 19 cases describing significant experiences of how territories have addressed NCDs at the multisectoral level.

Colombia has also concluded the three-year exercise of the Framework Agreement for Tobacco Control (FCTC) and continues with its implementation. Specific achievements include tax increases, smoke-free spaces and the development of campaigns. Applying a smoking cessation campaign in care centres has had an impact on the reduction of tobacco consumption at the national level, dropping from a prevalence of 8.3% to 7.3%.

“Informing the population about NCDs in a clear and timely manner helps to protect lives and prevent disease. We want to achieve an optimal level of health for the entire Colombian population, and we know that working with journalists and communicators will enable us to promote preventative actions.”

- Dr Gina Tambini Gomez, PAHO/WHO Representative in Colombia

One of the key elements of Colombia’s success in addressing NCDs lies in its approach to coordination across sectors. The government recognized the need for cross-sectoral collaboration to address all the determinants of NCDs, and this was reflected in the PDSP. PAHO/WHO Colombia provided technical expertise and resources to strengthen intersectoral action, including training for professionals in different sectors, and develop strategic and operational plans that incorporated globally recognized strategies whilst catering for local needs. PAHO/WHO will continue to support the Colombian authorities in promoting healthy environments.

ECUADOR

Improving cardiovascular health from the local community to the national level with a participative approach

Key PAHO/WHO contributions

- Provision of technical expertise by leveraging PAHO/WHO global goods
- More than 45 000 health workers trained in HEARTS implementation through the PAHO Virtual Campus
- Donation of equipment for blood pressure measurement
- Provision of technical expertise on education and communication plan on cardiovascular health
- Coordination, technical support and evaluation of the national strategy through the management working group.

The STEPS survey, undertaken in 2018, showed that cardiovascular disease (CVD) represents the main cause of mortality in Ecuador. This survey was planned and carried out by the Ministry of Public Health (MoPH) and the National Institute of Statistics and Census (INEC) with the technical cooperation of PAHO/WHO Ecuador, in order to contribute to the surveillance of noncommunicable diseases (NCDs) and their risk factors. The STEPS survey showed that 19.8% of the population had hypertension. Of these, at least 17% had uncontrolled hypertension and 56.3% did not take any medication for high blood pressure. With this alarming reality, and following advocacy from PAHO/WHO Ecuador, the MoPH made implementation of the HEARTS initiative a priority in 2019 – tackling the prevention and control of arterial hypertension to reduce CVD. In cooperation with the MoPH, PAHO/WHO Ecuador led training sessions with health care workers and procured appropriate equipment. By 2022, according to MoPH data, 130 591 patients were recruited through the HEARTS programme, of whom 75% are now controlled.

How did Ecuador, with the support of the PAHO/WHO Secretariat, achieve this?

The STEPS survey conducted in 2018 was a real turning point: it showed that 50.1% of people between the ages of 18 and 69 had never had their blood glucose measured. It also determined that 37.9% were overweight while 25.7% suffered from obesity. Based on the blood pressure data obtained, it was found that 45.2% of subjects had raised blood pressure which had not been previously diagnosed, 12.6% raised blood pressure which had been diagnosed but not treated, 16.2% raised blood pressure which had been diagnosed but not treated, 16.2% raised blood pressure which had been diagnosed but not treated.
been diagnosed and treated but was uncontrolled, and 26.0% raised blood pressure which had been diagnosed, treated and controlled.

In view of the alarming results of the STEPS survey, the MoPH formed a management group dedicated to implementing HEARTS in October 2019. Ecuador Country Office advised the MoPH during the process of pre-implementation and implementation of the HEARTS initiative. Support was provided during the pre-implementation phase to develop an action plan based on a situation analysis and set up different management groups.

Once the members of the management group in charge of implementation and evaluation were identified, PAHO/WHO Ecuador facilitated the workshops with advisers from the regional office and Chile, as well as from the University of Calgary, whose task was to train members of the committee on the various components of the HEARTS initiative and its technical package. The latter comprises six modules: healthy-lifestyle counselling, evidence-based protocols, access to essential medicines and technology, risk-based CVD management, team-based care and monitoring systems. Training also included standardization of pharmacological and nonpharmacological interventions. PAHO/WHO Ecuador advised the MoPH on development of the communication materials which were used during training. Subsequently, with support from PAHO/WHO Ecuador and funding from the global public health initiative Resolve to Save Lives, the MoPH rolled out training across 184 first-level health care facilities nationwide, out of a total of 1940. These facilities were located in districts and zones with the highest prevalence of high blood pressure.

Once training was completed, a dedicated station was set up in the 184 health care facilities for measuring the blood pressure of all patients and visitors aged 18 and above. Clear clinical criteria, presented and agreed during training, were used to refer patients to specialists at higher-level health care facilities. PAHO/WHO Ecuador supported these screening activities by procuring blood pressure measuring equipment for all health care facilities and arranging supportive supervision to monitor data collection and referral numbers. A supportive supervision approach was adopted in collaboration with the local health committees which also encouraged people not to miss their referral appointments. If high blood pressure or CVD was diagnosed, health care workers followed predefined pharmacological and nonpharmacological protocols, which included regular visits to patients every three months, delivery of medicines, and counselling on healthy eating and physical activity.

“I suffered from grade 2 obesity and was about to have diabetes. My blood pressure was altered. They helped me with consultations and nutritional diets to improve my health and even change lifestyle habits. Now I keep a healthy lifestyle, which I share with my family. I have lost weight, am no longer obese and my blood pressure is stable. The monitoring by the health personnel, and medication and counseling provided have been important to improve my health.”

- Sandra Bautista, beneficiary of HEARTS programme

As a result of these actions and positive feedback from the communities, the HEARTS initiative was included within the Ten-Year Health Plan 2022–
2031, thus promoting the initiative as a health policy. The cooperation and technical advice from PAHO/WHO Ecuador were critical to the development of this plan, which has transformed the vision of health in the country.

With more than 45,000 Ecuadorian health care workers being trained on HEARTS implementation through the PAHO Virtual Campus, the initiative has been successfully expanded and implemented in 483 health facilities nationwide. Accordingly, in 2022, the World Hypertension League bestowed on Ecuador – from among all the countries implementing the HEARTS initiative – its Award for Organizational Excellence in Prevention and Control of Arterial Hypertension.

An expansion plan for the HEARTS initiative continues with the support of PAHO/WHO Ecuador through health team training, donation of medical supplies and education and communication materials for health care professionals. Ecuador’s goal is that, by 2025, 100% of first-level establishments in the country will be implementing this strategy.

“The approach of public health workers teams to the community has made it possible to identify, diagnose and offer the appropriate treatment to patients. PAHO/WHO, as the country’s main ally in the field of public health, supports Ecuador in the implementation and expansion of HEARTS and commits its technical assistance to all programmes that face the challenge of cardiovascular diseases, which continue to be the main cause of death in the region.”

- Óscar M. Barreneche, PAHO/WHO Representative in Ecuador

Members of the PAHO/WHO team in Ecuador participate in a health fair at which the HEARTS initiative was promoted. Photo credit: Ministry of Public Health of Ecuador.

IRAQ

Investing in risk communication and community engagement activities to combat Crimean-Congo haemorrhagic fever in Iraq

Key WHO contributions

- Initiation of multidisciplinary response teams for greater contextual understanding
- Development of bespoke communication material for different audiences
- Organization of training workshops for different groups to ensure tailored outreach
- Supportive supervision to ensure adherence to training practices
- Monitoring activities to evaluate populations reached.

Crimean-Congo haemorrhagic fever (CCHF) is a viral haemorrhagic fever caused by a tick-borne virus, mainly spread to people from livestock. It has a high fatality rate of between 10% and 40%. The first outbreak was reported in Iraq in 1979, after which a few cases have been reported every year. In 2020–2021, due to the COVID-19 pandemic and climate change, the largest CCHF outbreak ever occurred in Iraq, with over 300 confirmed cases by early 2022. As there is no vaccine, the only way to reduce infections is to raise awareness of the risks and educate people on preventive measures. To combat the outbreak, WHO Iraq and the Iraqi Ministry of Health (MoH) and Ministry of Agriculture launched Risk Communication and Community Engagement (RCCE) activities, reaching 15 million people through social media and one million high-risk individuals through other outreach mechanisms. This was associated with a decrease in cases, and in morbidity and mortality, with the epidemic curve plateauing 22 weeks after the first case was reported.

How did Iraq, with the support of the WHO Secretariat, achieve this?

As soon as WHO knew about the CCHF outbreak, WHO Iraq and the MoH worked together to develop a multifaceted RCCE programme. Response teams from WHO Iraq, the MoH, the Ministry of Agriculture and the Iraqi Red Crescent Society (IRCS) visited affected areas in the southern governates to encounter and better understand the situation of various groups and stakeholders. Individuals at highest risk were those working with livestock and pilgrims: Arbaeen, the world’s largest annual pilgrimage, was taking place in the very governates which were most affected by CCHF. Interviews with farmers and livestock traders and focus group discussions with women were conducted so that...
messages could be addressed to those at the highest risk. Dozens of high-quality videos, motion graphics, animations, cartoons, infographics and radio dramas were then created from scratch by RCCE and communication teams in the WHO Iraq office, with content tailored to different audiences in different languages (e.g. Arabic and Kurdish) and Iraqi dialects, and at different comprehension levels.

The RCCE strategy aimed to reach communities by meeting them and transmitting messages to enable people to act in the interests of their own health. WHO Iraq, the MoH and the IRCS collaborated to disseminate information about preventive measures, with WHO training 252 volunteers who then held about 18 500 individual and small-group sessions in 572 high-risk areas in 11 governates. These efforts, despite the challenging weather conditions, reached a total of 139 000 people at high risk, often in remote areas, to help prevent spread of the disease.

Roughly 40 000 hours were dedicated to lowering the health risks of mass gathering events. To maximize impact, messages were also spread through social media platforms such as Instagram, YouTube and TikTok. People in positions of social and cultural authority were recruited and celebrities and community influencers involved to increase awareness. To ensure the messages were effective in reaching and motivating people, training workshops were held by WHO Iraq, extending to around 4500 faith and tribal leaders and more than 9000 frontline responders, including health workers, health educators and community volunteers. These training workshops boosted capacity in these groups to transmit health messages on effective preventive measures against different diseases.

WHO Iraq also supported the efforts of the MoH to combat and control the disease by conducting supervisory visits, holding dialogues, providing coordination across various departments and procuring supplies.

“RCCE hasn’t only helped in building trust among communities across Iraq, but also in increasing their sense of ownership and accountability to take action to address health hazards.”

- Dr Ahmed Zouiten, WHO Representative in Iraq

The COVID-19 pandemic highlighted the importance of RCCE for the emergency response in Iraq. People were empowered and communities were mobilized in both rural and urban areas and gender balance was ensured, with 46% of RCCE recipients being female. This new approach to RCCE, which harnesses current communications channels such as social media as well as more traditional in-person methods, enabled WHO to reach many more Iraqis with accurate health messages about outbreaks and diseases. The success of the RCCE over the past two years is a significant achievement, and its scope will be extended to cover other noncommunicable diseases (NCDs) and to help control communicable diseases in Iraq in the future.
Information about preventive measures being disseminated to people at highest risk through individual and small-group encounters. Photo credit: WHO Iraq.

2 World Health Organization. CCHF Campaign in Iraq 2022 [mobile application] (https://app.powerbi.com/view?r=eyJrIjoiMTZmZjEzYTEtYTY4Mi00MmEzLWFiYkJmNzc3YTM2OGFliwidCi6imY2MTBjMGJiLWJmQ1NgiOSO4MTBiLTNkYzI4MgFmYjU5MCIsImMiOjh9, accessed 22 February 2023).
Freedom from tobacco production in Kenya for healthier lives

Key WHO contributions

- Aiding the government to adopt the terms of the WHO Framework Convention on Tobacco Control and the Kenya Control Act
- Joint conceptualization to support farmers’ transition away from tobacco production
- Identification and training of community health workers
- Sensitizing communities about the direct health effects of tobacco production and the benefits of alternative sustainable crops.

Kenya was one of the first countries to ratify the legally binding WHO Framework Convention on Tobacco Control (FCTC) and subsequently adopted the Kenya Tobacco Control Act 2007. Both documents stipulate a need for an alternative to tobacco production that protects those whose livelihoods depend on growing it.

As part of its ongoing collaboration with other partners and the Kenyan Government, WHO Kenya trained 80 community health workers in Migori county to conduct outreach among the
many tobacco farmers in the country about the dangers of tobacco farming and inform them about the available alternatives. Using WHO Kenya’s network, these community health workers were recruited from within the county so that they could better relate to the community members, increasing their acceptability and trust. Once identified, they were trained about GTS and other diseases related to tobacco growing and how to identify tobacco industry interference in the community in order to better sensitize the community regarding the dangers of tobacco farming on their health.

In a complementary move, using local procurement initiatives WFP and partners provided a long-term market for high-iron beans in the county, allowing farmers a steady, reliable source of income, as well as providing seeds and other materials for cultivation. County-based agricultural officers with technical support from FAO were instrumental in training farmers on good agricultural practices, and post-harvest handling of harvested crops.

“This market gives Migori’s tobacco farmers a new way to earn a living with none of the negative health effects that come from growing the high-labour intensive and toxic tobacco plant. This is a new way to fight the tobacco epidemic that has stolen so many lives.”

- Dr Abdourahmane Diallo, WHO Representative in Kenya

More and more farmers are now making the switch after realizing the benefits of ceasing to grow tobacco and the alternatives available. Personal experiences shared from farmers have highlighted the positive changes on their health and well-being, as well as those of their families.
While the Tobacco-Free Farms project is relatively new, the switch to farming alternatives has reaped the anticipated benefits for health and well-being. The initiative is laying a basis for healthy living and eliminating risks associated with tobacco products. Some challenges have however been identified. Due to the high demand for iron-bean seeds, seed insecurity has been observed in certain areas. To combat this, WHO Kenya together with partners is engaging with seed providers to ensure a steady supply. Equally, WFP is working with the government to train farmers on quality grain production and seed selection for subsequent seasons. Furthermore, champion farmers are being identified: they will be trained on the production of high-quality grain which can be used as seeds by other farmers, thereby limiting any effects due to climate change.

Despite the challenges, WHO Kenya, together with partners, aims to expand the initiative to other counties in Kenya. From January 2023, Meru, Bungoma and Busia counties are next in line for rollout of this initiative, targeting a total of 2800 farmers in the coming seasons. WHO Kenya continues to reinforce the stipulations of WHO FCTC and the Kenya Tobacco Control Act (2007).

“There are many diseases associated with tobacco farming that affect the environment and people. There were sudden deaths. When we stopped tobacco farming in this region, we saw development in children. The rate of students joining secondary schools has gone up.”

- Reginald Omulo, a farmer in Migori County, Kenya

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LAO PEOPLE’S DEMOCRATIC REPUBLIC

Moving towards the elimination of *Plasmodium falciparum* malaria in Lao People’s Democratic Republic by 2024

The incidence of malaria in Lao People’s Democratic Republic was estimated at 462,000 in 1997. Malaria caused loss of life, and disrupted employment and education, with significant economic impact. Since then, immense progress has been made: between 2000 and 2010, cases were reduced by 92%. Lao People’s Democratic Republic now aims to eliminate the deadliest malaria parasite, *Plasmodium falciparum*, from the country by 2023. WHO supports the national malaria programme to maintain and improve the quality of routine interventions along with deploying innovative, accelerator strategies aimed at proactive disease elimination. Impressive progress has been made in 2022, only 2,305 cases were reported from 10% of the country’s health facility catchments, a fraction of the 46,141 cases reported in 2012.

How did Lao People’s Democratic Republic, with the support of the WHO Secretariat, achieve this?

WHO Lao People’s Democratic Republic and WHO’s Mekong Malaria Elimination (MME) Programme provide technical assistance to Lao People’s Democratic Republic’s national malaria programme. With financial support from the Global Fund, WHO technical experts have been posted at the national level and in seven districts in two high-risk provinces.

Lao People’s Democratic Republic’s strategy has evolved over time. As the country nears elimination, the target disease is being concentrated in more remote, harder-to-reach places. While WHO continues to support the government to implement quality improvements for routine interventions to ensure rapid, early diagnosis and effective treatment at all levels of the health system, more innovative, accelerator strategies are also being deployed that focus on proactive disease elimination. “Accelerator” strategies have included targeted drug administration (TDA), preventative treatment, active fever screening and distribution of long-lasting insecticidal hammock nets (LLIHN) by community health workers. Preventative treatments and TDA treat people with malaria who do not have symptoms, eliminating the reservoir of malaria infection and interrupting transmission.

Most recently, cadres of mobile malaria workers have been going beyond the village level and into informal cultivation settlements where preventative treatment to prevent reinfection of the community is targeted at people who sleep overnight in forests or fields. The government conducts training and sensitization for the mobile teams and community, while WHO’s many teams permanently based at the subnational level support ongoing activities. WHO profiles and maps

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**Key WHO contributions**

- Harmonization of surveillance programmes for malaria reporting
- Mapping of geographic areas prone to malaria
- Elimination of reservoirs of endemic malaria in remote populations
- Technical advice on adaptation of malaria elimination certification processes.
high-risk, difficult-to-reach populations in order to identify specific forest- and field-going behaviour patterns, then tailors strategies and responses, analyses data to monitor impact and corrects the course of interventions when necessary.

“...
I want to protect the community, and I can do this by testing the people around me and explaining how they can be protected from malaria. This makes me very proud of myself. My dream is to not have any cases in the village. I will keep working until it is eliminated.”

- Khounmy, voluntary malaria worker, Lao People’s Democratic Republic

A sensitive surveillance system is crucial for enabling rapid case detection and monitoring the efficacy of frontline anti-malaria drugs, timely outbreak response and early interruption of the transmission cycle. Malaria reporting in Lao People’s Democratic Republic is conducted using digital tools and a web-based information system.

The WHO Country Office provided technical assistance to the malaria programme to integrate the malaria surveillance system into the national health information system, which uses the District Health Information System 2 (DHIS2), an open-source health management data platform.

WHO’s country level malaria elimination certification process provides official recognition by WHO of a country’s malaria-free status. As the government wanted to introduce subnational level verification, WHO provided technical assistance from 2021 to Lao People’s Democratic Republic’s National and Provincial Malaria Elimination Committees. This enabled a standardized subnational “malaria-free” verification process to be established which, while based on the global process, is adapted to Lao People’s Democratic Republic’s local and subnational context. It will play a vital strategic role in monitoring and preventing disease incursion between neighbouring provinces.

Due to the success of Lao People’s Democratic Republic’s malaria elimination programme,
P. falciparum malaria cases have drastically decreased in Lao People’s Democratic Republic. The focus of Lao People’s Democratic Republic’s elimination efforts is increasingly on finding the cases that remain in ethnic-minority communities in remote, forested, hard-to-reach places. WHO continues to support Lao People’s Democratic Republic’s government, alongside other partners – The Global Fund, United States Agency for International Development (USAID), Bill & Melinda Gates Foundation and the United Nations Office for Project Services (UNOPS) – to implement the ongoing intensive efforts that are needed to maintain gains and move towards elimination.

As a voluntary malaria worker in Lao People’s Democratic Republic, Kunmin tests members of the community for malaria and provides advice about prevention. Photo credit: WHO Lao People’s Democratic Republic/Enric Catala.
Hypertension affects over one third of adults in Malaysia, making it a primary risk factor for mortality and disability\(^1\). Excessive salt consumption is a significant risk factor for high blood pressure and heart disease, with the average Malaysian consuming 7.9 g of salt per day\(^2\), more than 50% higher than the World Health Organization’s (WHO) recommended daily intake of 5.0 g of salt or 2.0 g of sodium\(^3\). To combat this issue, WHO has recommended salt reduction interventions as best buys and set a global target to reduce mean population salt intake by 30% by 2025 for the prevention and control of noncommunicable diseases (NCDs). To promote salt reduction in Malaysia, the Ministry of Health (MoH) together with WHO, initiated a social behavioural change communication (SBCC) programme. By the end of December 2022, over five million people had been sensitized to salt reduction information, education and communication (IEC) materials, which had been shown to result in a measurable increase in knowledge, attitude and intention to practice salt reduction.

How did Malaysia, with the support of the WHO Secretariat, achieve this?

Since 2015, Malaysia has been implementing a salt reduction strategy in alignment with the WHO SHAKE technical package for salt reduction\(^4\). The aim of this strategy is to reduce the population’s salt intake to 6.0 g per day by 2025 by means of various interventions. A midterm evaluation commissioned by the WHO in 2018 found that the strategy had made strong progress in Malaysia and recommended targeted interventions, including strategic communication towards the general population\(^5\). As a result, a social behavioural communication campaign (SBCC) plan was developed and implemented by the WHO in collaboration with the MoH to encourage behaviour change through salt reduction messages.

To better understand the main sources of salt intake in the general population, WHO commissioned a study to survey 10 520 street foods from all the states of Malaysia, and analysed the nutritional content of the 210 most popular street foods in the country\(^6\). The data collected...
The memorable slogan “cukup sedikit, elak penyakit” (“just a little, avoid disease”) was incorporated into all communication materials and social media campaigns, including this animated video. Photo credit: WHO Malaysia.

The memorable slogan “cukup sedikit, elak penyakit” (“just a little, avoid disease”) was incorporated into all communication materials and social media campaigns, including this animated video. Photo credit: WHO Malaysia.

The SBCC programme used social media platforms such as TikTok and YouTube to reach a wider audience. TikTok was selected for its ability to create engaging content and reach a younger audience. Fifteen TikTok influencers were engaged by WHO to create unique videos on salt reduction, which were carefully reviewed and approved by WHO officers. In addition, WHO worked with a creative consultant to produce two videos shared on social media. YouTube was used to share informative and animated videos and advertisements for Malaysian audiences.

"We have decided to focus on two main target populations, namely adults and children. We know that establishing healthy behaviours is more effective during childhood and adolescence. By working with the WHO, we were able to use these innovative distribution channels, allowing us to reach a wider audience. This campaign showed promising results and it is an important element of our overall salt reduction strategy."

- Dr Hamdan bin Mohamad, Dietitian at the Disease Control Division, MoH

WHO provided technical and financial support for an interim evaluation of the SBCC campaign in September 2022, which included a knowledge,....
Outcome 3.2  Supportive and empowering societies through addressing health risk factors

attitude and practice (KAP) survey and social media reach analysis. The SBCC programme’s influencers reached a total of 5.1 million followers, with 661,000 views, 34,500 likes, 1,800 shares and 683 comments. The KAP survey showed that the IEC materials were of high quality and reach, and increased respondents’ knowledge, attitude and intention to practice salt reduction. The evaluation found that the programme can maintain its visibility and upscale its communication campaign by going beyond mass transmission of messages to provide practical solutions that can positively impact salt reduction practices, such as interventions involving community and school engagements. To do this, WHO Malaysia also developed a health promotion toolkit focused on salt reduction for use in schools and a training module which can be used by the MoH. The training for school educators is under way.

Despite facing challenges, including COVID-19 restrictions, the SBCC programme in Malaysia has made progress towards reducing the population’s salt intake. Local data, varied communication channels and social influencers were important for the programme’s success, particularly with the younger generation. Continual monitoring and targeted interventions are needed to maintain the momentum, and a coordinated effort between community, industry and other stakeholders is necessary for a long-term health impact.

NIGERIA

Building capacity and managing information to save lives: an infodemic management impact story from Nigeria

Key WHO contributions

- Providing technical expertise on infodemic management
- Convening federal and local stakeholders for a coordinated approach to infodemics
- Conducting capacity building for diverse stakeholders about infodemics
- Providing technical support for development of contextualized guidance and tools.

With the COVID-19 pandemic, the amount of information in Nigeria, both accurate and inaccurate, increased exponentially: the impact of this infodemic was heavily felt. Information which is inaccurate, misleading and wholly false is potentially able to severely disrupt engagement with communities and populations as well as to create confusion and mistrust. WHO Nigeria supported national authorities and partners to tackle the infodemic in Nigeria by providing bespoke technical support and capacity-building for human resources and systems. This enabled false and misleading information to be identified, managed and counteracted in order to ensure the accuracy and reliability of the information being shared. Specific infodemic trend reports have been developed through robust monitoring, and mechanisms set up to capture and funnel inputs from monitoring platforms. These measures have been further supported by the African Infodemic Response Alliance (AIRA), a WHO hosted-network to fight infodemics at the WHO African Region level.

How did Nigeria, with the support of the WHO Secretariat, achieve this?

WHO defines an infodemic as the overabundance of information, both online and offline, that spreads false and misleading information, rumours and facts rapidly, making it difficult to glean essential information that can save lives. Global interconnectivity and digitization allow these types of information to travel farther and faster than ever before. This can cause confusion, mistrust in health authorities and harm to health. Infodemic management uses tools and techniques to reduce and mitigate harm from health misinformation and facilitate the dissemination of accurate health information.

Early in the COVID-19 response, WHO Nigeria colleagues identified the infodemic threat in the country and the limited capacity for dynamic listening and rumour management. This led WHO and AIRA to provide support by recruiting, mentoring and deploying an infodemic manager to support the Federal Government of Nigeria through the Federal and State Ministries, Departments and Agencies (MDAs). By so doing, it allowed WHO Nigeria to leverage available tools and guidance to tackle the infodemic. First steps included conducting a stakeholder mapping and developing an information ecosystem, which included mapping key tools used along with online and offline sources of information collection in line with data protection policies. It also included setting up the Nigeria Infodemic Management Team (NIMT) with technical support from WHO Nigeria and AIRA. The team consists of between 30–40 representatives from MDAs,
supportive and empowering societies through addressing health risk factors

Development partners and non-state actors such as the Mercy Corps, Nigeria Red Cross Society, Nigeria Centres for Disease Control and Prevention (NCDC), National Orientation Agency, Federal Ministries of Health and Information, and others. Furthermore, a capacity needs assessment was carried out by WHO Nigeria to apprise the development of training curriculum and materials.

Following this, WHO Nigeria convened workshops on risk communication with representatives from federal and local governments, development partners and the relevant listed stakeholders in order to leverage the newly developed guidance. WHO Nigeria further provided technical guidance by reviewing the National Risk Communication Multi-Hazard Strategy (NRCMHS) which was used for training. Additional capacity building at the federal level was conducted with over 150 health care personnel, health promotion officers, journalists and media, and fact-checkers for infodemic management practices.

These actions were followed by a WHO Nigeria-facilitated co-design workshop on infodemic content creation, which brought together 17 Nigerian health communication practitioners from diverse backgrounds including journalists, fact checkers and researchers, civil society representatives, pandemic preparedness experts and Ministry of Health representatives. This workshop focused on use of the co-design method to counter the infodemic and devise engaging and shareable information products in Nigeria. Participants learned how to map audience segments and create appropriate content adapted to each audience.

In line with the several levels of support provided by WHO Nigeria, NIMT now meets bimonthly via a coordination platform to review data on social listening in online and offline sources using NewsWhip Analytics, media toolkits, NCDC media monitoring platforms, community polling and feedback surveys, and other open-source tools. This has led to the development of more than 30 national public health infodemic trend reports which have subsequently been used to update recommendations to the national COVID-19 Emergency Operations Centre (EOC) and the presidential response coordination platforms. Further products include the development of frequent public health advisories, information, education and communication (IEC) materials,
organization of media series and roundtables to engage with media and journalists on epidemiological and infodemic trends in the country, and the production of local “viral facts” videos for dissemination across social media platforms.

Given the constant effort to build capacities and strengthen national systems to manage information and save lives, the national authorities supported by WHO Nigeria are now able to rapidly identify rumours, misleading and false information and counteract with accurate, reliable and verifiable information which enables communities and populations to be more accurately apprised about contexts. Interministerial, multidisciplinary, multisectoral partnership and collaboration among MDA, partners and donor organization have led to a coordinated, multi-hazard approach, which will remain in place to address the infodemic for future health emergencies. WHO Nigeria will continue to convene and act as technical lead for these collaborative initiatives and aims to further support the national authorities to set up a national infodemic intelligence hub for bespoke support at local levels.

Participants during one of the group exercises in a co-design workshop. Photo credit: WHO Nigeria.

OMAN

Multistakeholder action to improve health and wellbeing by reducing health inequity through the first Healthy Island initiative in the Eastern Mediterranean Region

Key WHO contributions

- Providing technical support to plan for and implement Healthy Island initiative building on the criteria and approaches for healthy cities
- Conducting capacity-building exercises for political and administrative leaders
- Placement of WHO tools for monitoring and evaluation
- Conceptualizing initiatives to address the social determinants of health.

In Oman, noncommunicable diseases (NCDs) are responsible for 72% of all deaths with nearly one in five adults dying from NCDs before the age of 70. To combat risk factors for NCDs including tobacco use, physical inactivity and unhealthy diets, the government of Oman launched the Healthy Island initiative on Masirah Island in 2022 in collaboration with the World Health Organization (WHO). This initiative is the first of its kind in the WHO Eastern Mediterranean Region and aims to address social determinants of health through multisectoral action and community empowerment aiming to create an enabling environment for adopting healthier lifestyles. Despite challenges posed by the COVID-19 pandemic, the Healthy Island Initiative has had a positive impact through activities such as co-funding and constructing a harbour for local fishermen, developing a small market area productive families and economically disadvantaged women and constructing walkways and playgrounds to promote physical activity among island dwellers including children and adolescents. It is anticipated that the comprehensive systems approach adopted will lead to a decrease in NCDs across the island, particularly in underserved and disadvantaged populations.

How did Oman, with the support of the WHO Secretariat, achieve this?

The Ministry of Health (MoH) in Oman has taken a proactive stance to address the social determinants of health with a policy statement that paved the way for health and non-health measures. Its community-based initiative (CBI) enabled a department to be established with WHO’s financial and technical support in the early 1980s. Over the past two decades, the CBI has endeavoured to equitably improve health and socioeconomic development via Healthy Lifestyles, Healthy City, and Healthy Village projects across Oman.

WHO’s Healthy Island initiative seeks to create healthier environments for people to live, work and play through evidence-based advocacy, policy development, leadership, multisectoral planning, partnerships and community participation. While the vision has served as a unifying theme for health protection and health promotion in the Pacific, it had not previously been implemented in the Eastern Mediterranean Region. In 2022, WHO Oman collaborated with Oman’s MoH to launch the Healthy Island initiative on the largest and...
most populous island of the Gulf Cooperation Council (GCC) states, Masirah Island. Early in 2022, WHO Oman catalysed the approach through advocacy at the subnational level. WHO Oman organized meetings with Masirah Island’s local governor and health committee and, in September 2022, held a national workshop that was attended by more than 40 local governors and supported by the regional office. The workshop was an opportunity for learning key principles of the Healthy City approach and share knowledge from their practical experience.

To develop governance and leadership capacity to deploy a comprehensive and integrated approach at the subnational level, WHO Oman and the WHO Regional Office for the Eastern Mediterranean provided financial, logistical and technical support to design and deliver training sessions that were delivered to health committees, the MoH and local community leaders. The trainings focused on problem identification, solution development, fundraising, implementation and evaluation of health outcomes. WHO Oman provided technical expertise to the MoH’s CBI on how to apply a specific 80 criteria and indicators developed by WHO for monitoring and evaluation. WHO Oman also provided practical recommendations to improve documentation of achievements and ensure inclusion of key success factors for implementation.

To further promote data-driven decision-making, WHO support included developing an electronic survey platform to improve baseline assessment of villages, cities and islands, and to enhance analysis and interpretation of results. This platform will ensure long-term accountability through monitoring and evaluation and enable data dissemination through a centralized database and dashboard for data visualization.

Partnerships between community organizations and the government enable continuous identification and resolution of priority issues. By providing technical advice to the MoH, WHO

Fitness equipment has been installed in public spaces on Masirah Island to encourage physical activity. Photo credit: WHO Oman.
Oman facilitates the selection, development and implementation of initiatives that address the social determinants of health. WHO Oman also provides ongoing technical expertise and guidance to steer projects at the subnational level through an executive board and health committee. This enables an evidence-informed approach that is guided by global guidelines and standards, such as the Eastern Mediterranean Region’s guide to implementing the Healthy City programme. For example, WHO Oman advocated for the importance of achieving the related indicators under community emergency preparedness activities in Healthy Island activities, given Oman’s vulnerability to cyclones.

“Health interventions are most effective when they are tailored to meet local needs. In Oman, the World Health Organization has been working alongside local communities so that, together, we can ensure that all people have the opportunity to lead healthier lives.”

- Dr Jean Jabbour, WHO Representative in Oman

Communities now participate in the planning, financing and implementation of activities, with community leaders playing a key role in communication: this was demonstrated in 2021 when local communities collaborated with the local government and civil society organizations to successfully generate demand for COVID-19 vaccination.

The involvement of multiple stakeholders has made the Healthy Island Initiative a powerful tool for addressing NCDs in Oman through multisectoral action and addressing social determinants of health. This is of utmost importance given the country’s large area and dispersed population, which has posed a challenge to effective coordination in the past.

Empowering Rwandan communities to reduce chronic malnutrition through a multisectoral approach

Key WHO contributions

- Provision of technical assistance and guidance to influence nutrition policy at the national level
- Development and implementation of training to boost the capacity of new community health workers and teachers
- Development of in-service training to enable better nutritional care in health facilities
- Provision of sensitization tools to positively influence community nutritional behaviour.

In 2010, 44% of children under five years of age in Rwanda were stunted due to chronic malnutrition, with severe consequences for their cognitive and physical development, health and productive capacity. This situation was due to a myriad of factors, including household food insecurity, inappropriate nutrition and care practices, food and water safety, and the number of infants and young children living in the same household. In response, the United Nations (UN) in Rwanda adopted a multisectoral, multi-stakeholder approach, uniting four UN agencies: the Food and Agriculture Organization of the UN (FAO), UN Children’s Fund (UNICEF), UN World Food Programme (WFP), and the UN Joint Program on HIV/AIDS (UNAIDS).

To drive meaningful and lasting nutritional change, Rwanda’s comprehensive nutrition interventions span the entire system, starting at the household level. Photo credit: WHO Rwanda.
Programme (WFP) and World Health Organization (WHO). This unified effort, funded by the Swiss Agency for Development and Cooperation (SDC), is known as the One UN project. The One UN project has contributed to the Government of Rwanda’s (GOR) success in reducing the prevalence of stunting in children under five years old, from 44% in 2010 to 33% in 2020 with each agency providing support to the GOR based on its comparative advantage 2, 3.

How did Rwanda, with the support of the WHO Secretariat, achieve this?

In an effort to improve maternal, infant, and child nutrition, a three-stage programme was put into effect. The first stage, from 2014 to 2016, was implemented in two districts and saw success in reducing anaemia and stunting in children under two years of age, as well as anaemia in pregnant and lactating women 4. The second phase, from 2017 to 2021, saw WHO Rwanda providing technical assistance and guidance to the Ministry of Health and other stakeholders at the national level to influence nutrition policy. This included collecting evidence on nutritional care practices and health outcomes, advocating for increased government investment in nutrition, and reviewing and supporting the adoption of policies, strategies and guidelines in different sectors (health, nutrition, gender and family promotion) to strengthen national nutrition plans and interventions, coordinate activities and monitor progress 5. WHO Rwanda’s provision of technical expertise at the subnational level included developing and implementing training to boost the capacity of new community health workers (CHWs) and teachers, providing in-service training to health facilities to enable better nutritional care and providing sensitization tools designed to change nutritional behaviour in communities.

In partnership with the World Health Organization (WHO), we set an ambitious goal of reducing malnutrition in the Rutsiro District to 19 percent prevalence by 2025. To achieve this, we will implement a ‘godparent’ system, in which village heads, council leaders, religious leaders, and women-led committees will be appointed to monitor a designated number of children and report weekly on their health and nutritional status.”

- Triphose Murakatete, Mayor of Rutsiro District

Rwanda has an extensive and well-developed CHW network, with three CHWs selected and trained in every village of approximately 50 to 150 households. To bolster the prevention and management of malnutrition, materials were developed for a competency-based training package, and new CHWs trained on maternal, infant and young child feeding (MIYCF), growth monitoring and the identification, prevention, surveillance and management of malnutrition. Between 2018 and 2020, WHO Rwanda provided technical expertise and financial support to train trainers in 15 districts, whose expertise was then cascaded down to train 4244 CHWs on MIYCF counselling in 30 districts.

Training of health care providers at the facility level was conducted to boost their skills and bolster nutritional care for the prevention and management of NCDs. One NCD officer in every health facility and two officers in every public hospital were trained in all districts.

To ensure that teachers had the necessary knowledge, resources and tools to provide
quality nutrition education, WHO Rwanda and the Rwanda Education Board (REB) developed national health and nutrition teacher training materials which were incorporated into the school curriculum. Teacher training was then provided to one teacher in every primary and secondary school in four districts.

To empower children and households throughout the country, WHO Rwanda collaborated with the GOR and partners to develop information education communication (IEC) materials. All 500 health centres and 42 public hospitals nationwide were provided with videos to be displayed in waiting rooms that conveyed messages about MIYCF. Nutrition comic books were produced and distributed to teachers in districts with a high prevalence of stunting in children under five to engage children as agents of change.

Almost 12 thousand copies of a recipe book containing information on cooking, hygiene and feeding practices for infants and young children were distributed in health centres and villages, facilitating cooking demonstrations using locally available foods.

“WHO is on the ground, going directly into communities to gain an understanding of how people are managing their nutrition on a daily basis. We can identify how to best reach those who are vulnerable and create lasting change that will continue after our involvement. This is the only way to guarantee that no one is left behind.”

- Dr Brian Chirombo, WHO Representative in Rwanda

A mother receives nutrition counselling services at a health facility. Photo credit: WHO Rwanda.
To ensure local ownership, success and sustainability, aligning programmes with GOR priorities and coordinating complementary activities across sectors has been crucial. Although Rwanda has made considerable progress in reducing childhood stunting, its prevalence of 33% in children under five years of age is still considered very high according to WHO’s public health thresholds of severity, and much higher than the country’s national target of 19 percent by 2024. To address this, the One UN nutrition project’s third phase, which is currently under way, focuses on strengthening GOR’s capacity to implement and coordinate multisectoral nutrition interventions as well as to enhance the monitoring and evaluation system.
SIERRA LEONE

Passage of the Tobacco and Nicotine Control Act to protect the Sierra Leone population from the harmful effects of tobacco and nicotine products

Key WHO contributions

- Negotiating the global WHO Framework Convention on Tobacco Control (FCTC) treaty
- Developing an investment case for Sierra Leone’s tobacco control efforts
- Drafting of Sierra Leone’s 2022 Tobacco and Nicotine Control Act
- Holding stakeholder consultation workshops, and orientation and validation meetings for review and finalization of the bill
- Mobilizing resources for effective implementation and enforcement of the bill’s provisions
- Developing implementation strategies and guidelines, public education initiatives and developing capacities of essential institutions.

Tobacco consumption is a major public health concern in Sierra Leone, with 18% of men and 3% of women aged between 15 and 49 years estimated to be tobacco users. Despite awareness of the negative health impacts of tobacco, smoking remains prevalent and causes over 3300 deaths in the country annually. To mitigate the harm caused by tobacco use, the Government of Sierra Leone collaborated with the World Health Organization (WHO) and partners to enact the Tobacco and Nicotine Control Act in August 2022. The new legislation seeks to regulate all aspects of tobacco production and usage within the country, with the aim of reducing the health, social, environmental and economic burdens associated with tobacco exposure. According to estimates, investing in the six interventions laid out in the WHO Framework Convention on Tobacco Control (WHO FCTC) could save almost 20,000 lives and prevent a total economic loss of SLL 1.9 trillion. Once the Act is signed into law by the President, Sierra Leone will be better equipped to protect its citizens from the devastating impacts of tobacco consumption.

How did Sierra Leone, with the support of the WHO Secretariat, achieve this?

WHO FCTC is an international treaty that was negotiated under the auspices of WHO and adopted by the World Health Assembly in 2003, with Sierra Leone becoming a signatory in 2009. The WHO FCTC 2030 Project was launched in March 2017 with financial support from the United Kingdom, Australia and Norway, with the aim of implementing evidence-based tobacco control measures in low- and middle-income countries, including Sierra Leone.

To this end, in 2018, the WHO FCTC Secretariat and the United Nations Development Programme collaborated with the Ministry of Health and Sanitation (MoHS) and other government agencies and development partners to develop an investment case for Sierra Leone’s tobacco control efforts in the coming years. With funding from FCTC 2030, the WHO provided technical assistance to the MoHS, including access to relevant documents and data sources, data analysis and report writing, and stakeholder consultations to validate the findings.
The investment case revealed that tobacco-related illnesses cost the country economy an estimated SLL 404 billion, equivalent to 1.5 percent of the 2017 gross domestic product (GDP), and Sierra Leone citizens a total of SLL 45 in out-of-pocket expenditures on medical treatment for illnesses caused by smoking. However, investing in tobacco control could potentially bring economic returns of SLL 23 by 2030 and SLL 26 by 2033 for every SLL 1 invested, underscoring the value to scale up the implementation of WHO FCTC provisions in the country.

With funding from the Bill and Melinda Gates Foundation, WHO provided technical and financial assistance to the MoHS to coordinate the drafting of the Tobacco and Nicotine Control Act 2022 in close collaboration with the Ministry of Justice and international experts in tobacco control law, ensuring compliance with WHO FCTC guidelines. Government law drafters from the Ministry of Justice were trained for three weeks on tobacco control legislation and compliance with the WHO FCTC at the McCabe Centre for Law and Cancer in Australia. They were able to contribute to review and finalization of the law, through stakeholder consultation workshops, orientation and validation meetings.

"This is a remarkable success for public health in Sierra Leone and WHO is proud to have worked very closely with the government, the civil society and the different partners that have supported the process over the years for the development of such comprehensive tobacco control regulation."

- Dr Steven Velabo Shongwe, WHO Representative in Sierra Leone

Once stakeholders’ inputs were taken into account, WHO advocated for approval of the bill, which was passed in August 2022. To enable its implementation WHO also supported capacity-building training for staff from the MoHS, the Ministry of Finance and the National Revenue Authority at the Knowledge Hub, University of Cape Town, on tobacco dangers, tax modelling and illicit trade elimination.

Adoption of the Tobacco and Nicotine Control Act in Sierra Leone faced significant challenges which threatened its passage into law. Firstly, the tobacco industry actively interfered by lobbying lawmakers to reject the bill. Secondly, resources were inadequate to support civil society...
involvement in tobacco control advocacy. These challenges emphasize the importance of continued technical and financial support from WHO.

“I want to assure WHO and the Ministry of Health, that we are going to be champions in the well of parliament in ensuring that we pass this bill into law. The beauty about us here is that we are carefully selected, we have all the committee chairmen that are relevant to this bill, and we also have all political parties represented.”

- Hon. Sallieu Osman Sesay, Member of Parliament, Sierra Leone

WHO continues to provide essential support for the development of implementation strategies and guidelines, public education initiatives to increase awareness of the law and ensure compliance, and strategic technical assistance to develop capacities in essential institutions. Moreover, WHO is assisting to mobilize resources for effective implementation and enforcement of the law’s provisions. To maximize impact, the priority FCTC measures defined in the investment case will form the focus of WHO’s efforts. These include improving community awareness about the dangers of tobacco (FCTC Article 12), advocating for an increase in excise tax from the current 30% to a minimum 50% set by the 2017 Economic Community of West African States (ECOWAS) directive on tobacco tax to reduce tobacco demand (FCTC Article 6), a ban on smoking in all public places to reduce smoke exposure (FCTC Article 8), tobacco products bearing health warnings and in plain packaging (FCTC Article 11) and a ban on tobacco advertising, promotion and sponsorship (FCTC Article 13).

A multistakeholder workshop was held by WHO and the Ministry of Health and Sanitation in 2018 to mobilize public and political support, and accelerate implementation of the Framework Convention on Tobacco Control (FCTC). Photo credit: WHO Sierra Leone.

2 Sierra Leone becomes 38th country with tobacco control laws in WHO African Region. (https://www.afro.who.int/countries/sierra-leone/news/sierra-leone-becomes-38th-country-tobacco-control-laws-who-african-region#:~:text=The%20Project%20also%20facilitated%20an,were%20from%20economic%20productivity%20loss, accessed 15 August 2023).
VANUATU

Improving oral health and well-being in Vanuatu through the community promotion of toothbrushing with fluoride toothpaste and healthier food choices

Key WHO contributions

- Provision of technical expertise for the development of Vanuatu’s National Oral Health Survey and National Oral Health Policy
- Bringing global evidence and technical expertise to the design, implementation and evaluation of the Healthy Tooth School programme
- Funding through successful advocacy with international donors
- Deploying a coordinator to scale up the programme at the national level.

Vanuatu’s 2017 National Oral Health Survey revealed that five- to seven-year-old children had a high prevalence of tooth decay (70%), bleeding gums (77%) and toothache (10%) in their primary teeth which had a negative impact on their physical, mental and social well-being. Forty percent of the children rarely or never brushed their teeth. In response to excessive sugar consumption and inadequate tooth brushing habits, WHO Vanuatu supported the Government to implement the “Healthy Tooth School” programme, known as the Gudfala Tut Skul Program (GTSP). The 20-week trial of this supervised tooth brushing programme in selected kindergartens and primary schools resulted in significantly reduced plaque scores and improved oral habits in students and their families. The success of the programme has seen it expand to 51 kindergartens and primary schools in three provinces, benefiting over 5000 children and an estimated 25 000 family members. GTSP aims to target rural areas to reach all five- to seven-year-old children in Vanuatu by 2023.

Preschool teacher Emily of Mele Maat, Vanuatu, teaches children how to properly brush teeth with fluoride toothpaste, enabling them to develop life-long healthy habits. Photo credit: WHO/Ginny Stein.
How did Vanuatu, with the support of the WHO Secretariat, achieve this?

Vanuatu took an important step towards improving the oral health of its citizens with the National Oral Health Survey, conducted using WHO methodology, and its first National Oral Health Policy (2019–2023). The survey provided information on the oral health status of the population, while the policy outlined strategies to reduce the burden of oral diseases with a focus on prevention through community participation and multisectoral collaboration.

In 2019, the Vanuatu Government designed and launched GTSP in collaboration with WHO and other local partners. This community-based programme aimed to ensure equitable improvements in oral hygiene via school-based activities and community outreach. WHO Vanuatu coordinated with the WHO Regional Office and WHO headquarters to bring global evidence and technical and financial support to the programme.

GTSP is designed to improve the oral hygiene of children attending kindergarten and primary schools. With the support from WHO Vanuatu, GTSP offers toothbrushing kits, which include two toothbrushes, storage containers for the classroom and for home, and fluoride toothpaste produced locally by a women’s association. The toothpaste is made with coconut oil and calcium carbonate, has an appropriate fluoride concentration and is stored in reusable containers. Teachers are trained to dispense a small amount of toothpaste, supervise brushing and store the toothbrushes safely, and children’s daily brushing at school and at home is monitored.
The Gudfala Tut Skul Program takes advantage of the fact that young children are more open to learning and adapting new behaviours. By educating them on proper brushing and good nutrition, we can help ensure a healthier future for generations to come.”

- Dr Jenny Stephens, Acting Director, Department of Public Health, Ministry of Health

The programme emphasizes the importance of brushing with fluoride toothpaste for two minutes, and encourages good nutrition and hydration habits. Given the increasing prevalence of NCDs in the Pacific, the programme was designed to also teach children to make healthier food choices, limiting their intake of free sugars such as sweets and biscuits, and encouraging them to drink more water and reduce their consumption of sugar-sweetened beverages.

Healthy Tooth School is part of the concept of healthy promoting schools. It is an investment for the future to reduce the disease burden of people across the life course by introducing healthy behaviours at an early stage of life.”

- Dr Eunyoung Ko, Country Liaison Officer for WHO Vanuatu

WHO provided technical support to collect data at baseline and after the pilot. The data showed an improvement in dental hygiene and oral hygiene habits. Due to its success GTSP is being integrated into the Government of Vanuatu’s Health Promoting Schools initiative, which includes a school health policy that includes oral health and teeth brushing. WHO funded a programme coordinator to scale up the project at the national level while supporting the Ministry of Health to successfully raise funds from other international donors. The project is expanding as awareness of it increases. To further increase its impact, the Government of Vanuatu’s Integrated Health Unit has incorporated eye, ear, nose and throat screenings.

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PAPUA NEW GUINEA

Defining competency profiles for monitoring and evaluation and health information roles

Key WHO contributions

- Development of a data management competency framework adapted to Papua New Guinea
- Drafting competency profiles for health information roles and facilitating their adoption by the Government
- Formulating capacity-building plans with the Government based on the identified competency profiles.

In Papua New Guinea, there is a shortage of adequate and skilled health information workers at both the national and sub-national levels. This hampers the timely production, processing, analysis, and use of quality data, which is essential for improving health outcomes. To address this challenge, the Monitoring and Evaluation (M&E) Strategic Plan for the 2021 to 2030 National Health Plan incorporated capacity building in M&E and health information. The aim is to equip Papua New Guinea’s health workforce with the necessary skills to undertake data management, analysis, and data quality assessments. WHO Papua New Guinea supported the government to create and implement competency profiles for data-related roles which contribute to systematic and sustainable capacity building. Future capacity-building activities will be implemented according to the defined competencies required for specific roles, rather than ad-hoc or donor-driven approaches. These efforts are expected to contribute to increasing Universal Health Coverage (UHC) in Papua New Guinea.

How did Papua New Guinea, with the support of the WHO Secretariat, achieve this?

A competency-based approach, which is oriented around the ability of health workers to effectively combine their knowledge, skills and attitudes in practice, is regarded as an effective way of systematically building capacity. To support countries in their quest for UHC, WHO has issued a global competency framework while the WHO Regional Office for the Western Pacific’s Data, Strategy and Innovation (DSI) team has developed a data management competency framework which defines competency profiles tailored to roles for the health information workforce including decision-makers, managers and implementors.

A standard set of competencies needed for data-related roles was developed for both the national and provincial levels. Photo credit: WHO/Yoshi Shimizu.
To ensure that the framework was adapted to the context of Papua New Guinea, WHO Papua New Guinea collaborated with the NDoH in August 2022 to define competencies for three different health information roles at national and provincial levels, including in hospitals. This involved mapping health information roles, analysing the job descriptions of provincial health information officers, medical records officers and M&E officers at the NDoH. It also involved consultations with stakeholders and interviews with officers in order to gain a comprehensive understanding of their roles and responsibilities. The initiative facilitated strategic dialogue on capacity-building plans, career pathways and the significance of health information roles in provincial health authorities.

“Discussions on data management competencies were necessary and long overdue. The guidance will be helpful for provincial health authorities, as strengthening our human resource capacity is critical for improving data quality. With these profiles, capacity building plans can now be developed, and trainings or other activities designed to ensure they are building the required competencies in the health information workforce.”

- Dr Dokup, Director of Clinical Health Services, Provincial Health Authority of the National Capital District

In October 2022, WHO Papua New Guinea collaborated with the NDoH to host a national health information workshop to review and adopt the draft competency profiles developed for health information roles at the provincial level. The NDoH, with technical assistance from WHO Papua New Guinea, continues to formulate capacity-building plans based on the identified competency profiles to enable targeted action such as development of training needs assessment tools.

“I was excited to see clearly the competencies required in the three health information role types, when my team presented the analysis which had been undertaken with support of WHO. This is something we have never had before, and it felt ground-breaking. We now have a clear basis by which to develop capacity building plans.”

- Ms Manah Dindi, Manager of the Performance, Monitoring and Research Branch, NDoH

Understanding the context of health system integration and focusing on building and preserving capacity in the long-term was essential to successfully develop the competency profiles. To ensure this was done effectively, a backcasting approach was needed. This involved looking ahead and analysing future health information needs and competencies with all health information stakeholders in the country to ensure that all needs were identified. WHO Papua New Guinea continues to provide technical support to the country to ensure that health information systems are fit for purpose and that capacity building remains at the heart of health information management.

PRISTINA

Evidence-informed investment in health systems governance for healthier life and well-being in Kosovo

Key WHO contributions

- Adopting a comprehensive approach to address the root causes of health challenges
- Providing technical support to conduct needs assessments
- Improving data and information collection, and analysis for evidence-based decision-making
- Providing guidance and contextual expertise on institutional stewardship and management capacities
- Implementing measures to improve health care waste management practices.

Kosovo’s health system has undergone transformation, but until recently it lacked a long-term planning and monitoring mechanism. To address this issue, the World Health Organization (WHO) has collaborated with public health authorities and other stakeholders to adopt a whole-system approach that strengthens governance and ensures affordable, accessible, equitable and sustainable health care that is responsive to people’s needs. Initiatives have involved strengthening multiple system-building blocks, fostering intersectoral collaboration, raising awareness about health determinants and addressing health care quality challenges. The authorities’ decision for a ten-fold increase in funding to the health sector in 2023 than the previous year’s allocation underscores the importance of these interventions. This investment will play a critical role in developing a more resilient and responsive health care system in Kosovo and advance progress towards closing the health gap with the EU. Furthermore, strengthening primary health care (PHC) is expected to contribute to gradual improvement of health and well-being in Kosovo.

How did Pristina, with the support of the WHO Secretariat, achieve this?

WHO recognizes that good health and sustainable well-being result from a complex interplay of various factors including individual behaviour, social determinants and environmental conditions. The WHO Office in Pristina therefore adopted a comprehensive approach that went beyond the traditional realm of medical care to address the root causes of health challenges in Kosovo.

To better understand the needs of the population, WHO provided an array of tailored technical support on PHC strengthening, catching up with vaccination coverage, infection prevention and control – to mention only a few. WHO-led needs assessments revealed critical gaps in hospital safety and an unmet capacity to detect high-threat pathogens in regional public health laboratories and at points of entry. In addition, WHO and health authorities conducted a SWOT analysis that identified strengths, weaknesses, opportunities and threats in managing immunization services. A first-ever survey on household energy use in Kosovo provided estimates of health effects from indoor air pollution and valuable data for decision-making.

1 All references to Kosovo should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).
To enhance evidence-based decision-making in health policy development in Kosovo, the WHO office in Pristina improved data and information collection and analysis. This included preparing a data visualization dashboard to monitor and assess real-time vaccination coverage rates. Furthermore, WHO technical experts utilized local data and global guidelines when advising committees, for example the advisory committee on COVID-19 measures and committee for COVID-19 vaccine assessment needs. WHO also organized workshops to foster intersectoral collaboration on critical health issues. These workshops addressed a variety of topics: developing action plans for routine and COVID-19 immunization, updating standard operating procedures (SOPs) for vaccination services, formulating a generic framework for zoonotic diseases to prepare for and respond to zoonotic disease outbreaks, and creating an emergency operation plan to enhance emergency response and preparedness.

WHO collaborated with public health authorities and partners on strengthening primary health care, providing technical advice on various areas including mental health, and the prevention and management of noncommunicable diseases (NCDs). WHO invested in strengthening institutional stewardship and management capacities by setting up training programmes for health system managers and health workers. These capacity-building initiatives were extended to PHC institution staff who enhanced their knowledge and skills regarding health care performance monitoring, child obesity and antimicrobial resistance.

\[1\] All references to Kosovo should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).
WHO's efforts to improve access to quality health services extended to working closely with the community, and included conducting catch-up immunization activities and immunization caravans to reach marginalized populations. These activities brought life-saving vaccines closer to people and provided easy-to-understand immunization promotion materials that raised awareness in the population about the significance of COVID-19 and influenza vaccines and, more generally, routine vaccines.

In order to mitigate the adverse health effects of health care waste and minimize environmental contamination, WHO advised public health authorities on measures to improve health care waste management practices at all levels of health care facilities, with a focus on secondary and tertiary levels. These measures included developing updated guidelines and protocols, providing health care and sanitary workers with necessary training and technical assistance, implementing better monitoring and reporting systems, piloting protocol implementation at selected health care facilities, designing and distributing posters in all facilities, and ensuring safe waste collection and segregation.

WHO monitoring activities in Kosovo have included conducting an Intra-Action Review for COVID-19, identifying and prioritizing hazards through ‘all-hazard’ risk assessment, and appointing a technical group of experts to oversee implementation of the immunization programme. Additionally, the Organization has supported authorities to develop risk-based action and contingency plans. Despite the progress made, challenges persist.

WHO and its partners are committed to keeping health and well-being as a top priority on the development agenda in Kosovo and to addressing challenges by advancing long-term solutions and strengthening partnerships. The holistic approach to health system strengthening will support the delivery of essential and quality health services.

“Working with WHO means that we always had access to reliable and scientific information that helps us delivering better care.”

- Attending doctor at a PHC facility in Pristina

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1 All references to Kosovo should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).
Outcome 4.2  Strengthened leadership, governance and advocacy for health