World Health Organization

AUGUST FEATURE COUNTRIES

A monthly selection of case studies

9 September 2020

Contents

World Health Organization

COVID-19 COUNTRY CASE STUDIES

AUGUST FEATURE STORY

This is the 5th edition of the country case studies since the Country Strategy and Support (CSS) department started developing them in April 2020 with guidance from Director General and Executive Director of the WHE. To date a total of 49 COVID-19 country case studies have been published. All published WHO COVID-19 country case studies can be accessed on https://intranet.who.int/homes/ccu/countrycasestudies/ .

The objective of the WHO COVID-19 country case studies is to help get a better understanding of how WHO country offices have supported member states in addressing COVID-19, including opportunities and challenges encountered in countries. These case studies serve to increase global awareness of WHO's work at the country level, to analyze key aspects of WHO's work in support of its Member States, and in collaboration with our many partners in the country-level response to COVID-19.

The August compilation features 11 stories from all six WHO regions and present diverse topics. Themes addressed in the August stories include whole of government approach to response, preparedness and response strategies, health system resilience, provision of essential health services, risk communication strategies, government leadership and collaboration among ministries, communities, and other agencies in their response to the COVID-19 pandemic.

Additional WHO COVID-19 country case studies will be published in the coming months with a diverse focus on COVID -19 stories and to help further elaborate on how WHO supports countries in their response to COVID-19.

THE KINGDOM OF BHUTAN

A Country's Unique Approach to Limit COVID-19 Transmission

Living in the country that gave birth to National Gross Happiness, people in Bhutan take time to pursue happiness. Yet, when it comes to dealing with COVID-19, the Government and the people of Bhutan have harmoniously responded to the global pandemic in no time. As of 8 September 2020, six months after COVID-19 was declared by the World Health Organization (WHO) as a Public Health Emergency of International Concern, Bhutan is one of a few countries with zero COVID-19 fatality. The Government's proactive and fast action, as well as their willingness to take WHO's technical recommendations, lends a hand to an effective COVID-19 response.

WHO Representative to WHO Country Office for the Kingdom of Bhutan supports the implementation of WHO guidelines and support MOH in its fights against COVID-19. Photo: WHO Bhutan.

A unique country striving for Universal Health Coverage

Bhutan is the only country in the world that officially puts happiness first. In 1972, His Majesty the Fourth King of Bhutan, Jigme Singye Wangchuk, announced that any development in the Kingdom should be in line with the philosophy of Gross National Happiness (GNH), instead of the global indicator of Gross Domestic Product (GDP). Since then, the GNH guides the country's development, demanding the Government to strike a balance between the non-economic and the economic aspects of well-being. Their success is indicated by nine domains, with psychological well-being and health as the first two.

The constitution of Bhutan states that, *"the state shall provide free access to basic public health services in both modern and traditional medicines…and… shall endeavour to provide security in the event of sickness and disability or lack of adequate means of livelihood for reasons beyond one's control"*. Accordingly, the Government of Bhutan has been providing free health care at the point of

delivery since the early 1960s. Since 2008, Bhutan has committed to providing free and quality universal health care for the country population of 748,931.[1]

Health in Bhutan

Health services in Bhutan put more weight on primary health care and preventive services. Health care is accessed through three referral hospitals, 49 hospitals, a total of 186 primary health centres and 468 outreach clinics.[2] While the Government has been encouraging the establishment of private hospitals, so far, there have been only 14 private diagnostic health centres in a few major towns in the country.

As the country has been expanding its health infrastructure, human resources for health has also been built steadily. Nonetheless, the country still faces a shortage of medical personnel. According to the 2020 Annual Health Bulletin,[3] there are 114 medical specialists, 204 medical doctors and 1364 nurses, 620 health assistants, 205 medical technologists, 65 dental surgeons, 945 medical technicians and 170 traditional medicine professionals, providing medical care for the entire country.

Ready for Coronavirus

Bhutan is highly vulnerable to health and other hazards. Climate variability and change are linked to the emergence and re-emergence of infectious diseases, including disease incidence, transmission, and outbreaks. The National Health Policy 2012 mandates that all health facilities should institute appropriate systems of care to deal with emergencies, disasters, epidemics, and outbreaks.

The relationship between emergency planning in the health sector and the wider emergency management sector is detailed in Bhutan's Health Emergency and Disaster Contingency Plan (HEDCP, 2016). Recognizing that preparedness is a key for an effective response to unpredictable emergencies, over the years, the Government has made the health emergency preparedness and response a national priority.

Capacity development for pandemic preparedness

As a State Party to IHR (2005), Bhutan has been developing its surveillance and reporting mechanisms to comply with the Regulations. For years, the WHO Country Office for the Kingdom of Bhutan has been working with the MoH in strengthening the country's health system to be able to adequately respond to health emergencies. Utilizing the IHR self-assessment tool developed by WHO, the MoH monitored the progress of the IHR implementation, identified gaps and ways forward to strengthen Bhutan's IHR core capacity.

In 2017, Bhutan carried out Joint External Evaluation (JEE) to assess the country's capacity to implement IHR (2005). Looking at the country's capacity to detect, assess, and respond to public health emergencies, JEE identified several areas that require substantial development to fulfil Bhutan's IHR (2005) obligations. These include integration and analysis of surveillance data, emergency operations programme, and health personnel mobilization. Translating the JEE findings

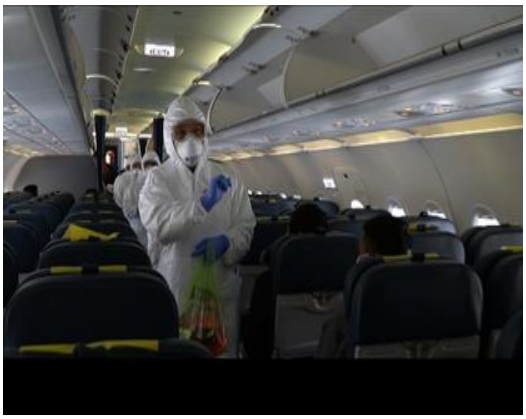
[1] 2020 Projection based on the Population and Housing and Census 2017.
[2] https://apps.who.int/iris/bitstream/handle/10665/255701/9789290225843-eng.pdf?sequence=1&isAllowed=y
[3] Ministry of Health, (2020). Annual Health Bulletin, Thimphu; PPD, MoH. Available at: http://www.moh.gov.bt/wp-content/uploads/ict-files/2017/06/health-bulletin-Website_Final.pdf

into actions, WHO has been providing technical and financial assistance to the Government of Bhutan to strengthen the surveillance capacity of the Royal Centre for Disease Control, to scale up the national laboratory biosafety from level II to III, to develop the national health emergency contingency plan, to facilitate trainings for the all-important sectors, and to preposition medical camp kits, now serving as flu clinics across the country. The development states of these aspects have become the starting blocks for the current development of the country's National Health Policy Plan.

During the COVID-19 pandemic, with WHO support, the MOH has improved the ability of the Royal Center for Disease Control to conduct real-time event-based surveillance, as a part of the country's Early Warning, Alert and Response System (EWARS). Bhutan has also strengthened the systems that are related to laboratory, Points of Entry (PoE), as well as the capacity to deal with zoonoses and to implement food safety. The Government has gone an extra mile by establishing a Centre for COVID-19 Integrated Influenza Surveillance.

Timely s**imulation**

Given the high frequency of global mobility and increasing travel from and to Bhutan, the Government recognized a strategic need to strengthen the capacity of the country's main PoE. Hence, two months before COVID-19 was declared as a global Public Health Emergency of International Concern, the Ministry of Health of Bhutan decided to conduct a simulation exercise at the country's main gateway: Paro International Airport. The purpose of the exercise was to assess the airport's capacity to detect and contain a potential disease outbreak. Responding to the Government's request, WHO coordinated across three levels of the Organization and provided comprehensive technical and financial support to plan, conduct, and evaluate the simulation.



POE simulation exercise at Paro International Airport November 2019

The exercise, held on 6 November 2019, simulated the country's response to a new strain of coronavirus that was emerging in Thailand. The simulation tested the coordination of efforts, preparedness and response of different national actors working at the airport such as custom, immigration, airport authority and personnel, airlines, Department of Road and Air Transport, and the Bhutan Agriculture and Food Regulatory Authority (BAFRA). Through the expertise of WHO experts, relevant Bhutanese health teams observed and learned about the procedures for assessing risks, defining appropriate algorithm for referral, and responding to an infectious outbreak based on a public health approach. The Airport Public Health Contingency Preparedness Plan was finalized, this then allowed for Bhutan to be better equipped to use the newly gained skills in a real situation when COVID-19 emerged.

Harmonious efforts in curtailing COVID-19

Rapid Response

The first cases of COVID-19 in Bhutan were announced on 6 March 2020 and on 20 March 2020, with a 76-year-old male tourist and his 59-year-old female partner respectively having arrived in Bhutan from the Indian state of Assam on 2 March 2020.

By the time Bhutan announced its first COVID-19 cases, WHO had assisted the Government in setting up of thermal scanners at the Paro International Airport that enabled the country to monitor Bhutanese returning from different countries. To contain the spread of COVID-19, Bhutan imposed a temporary restriction on entry of tourists, a bold move as tourism was the secondary driver of Bhutan's economy after hydropower.

COVID-19 sample collection team on the field.

Following WHO guidance, Bhutan implemented the National Preparedness and Response Plan for Outbreak of Novel Coronavirus, while all health facilities, including the Basic Health Units and other primary health care providers, activated their Public Health Emergency Contingency Plans. For better contact tracing the country has developed an app called "Druk trace". Anyone visiting shops, hotels, banks or taking taxis or public transport needs to scan a code placed in these facilities. This facilitates tracing in case of local transmission. As WHO was releasing more guidelines on COVID-19, the MoH established a multi-sector Technical Advisory Group to adopt WHO technical documents for COVID-19 responses to the local context. As a result, guidelines and standard operating procedures are in place, a national COVID-19 response team has been formed, and now is working 24/7 to monitor the situation across the country.

Bhutan has four PCR laboratories at different parts of the country to conduct testing to all COVID-19 suspected cases in the country, reaching the country's districts, and those who come from COVID-19 affected countries. The pandemic response also engages the animal health sectors. Both human and animal health sectors closely collaborate and exchange information and knowledge on RT-PCR testing and its results.

To minimize the risk of infection in the hospital setting and to ensure the continuum of care, the Government of Bhutan established flu clinics away from the main health care centres. This allowed patients with flu-like symptoms or COVID-19 sign and symptom to seek care in specially designated facilities and reduce the risk of exposure to other patients.

People with suspected or confirmed COVID-19 must undergo quarantine or self-isolation. Under the direct command of the King, the Royal Guest House in Mongar was transformed into a COVID-19 treatment centre, consisting of an isolation ward, intensive care units along with the ventilators, and operation theatre. The Government worked with the hotelier in using their hotel as quarantine facilities and paid certain amount for every room used by the Government.[4]

[4] https://web.archive.org/web/20200425144303/http://www.bbs.bt/news/?p=131285

Frontline workers being tested for COVID-19

Stopping transmission right on the door

A strong sense of national solidarity is shown by all sections and people in Bhutan. From farmers coming forward and donating their hard-earned cash crops, and people from all walk of life donating in both cash and kind to support government. Businesses and hoteliers have offered their hotels to be used as quarantine facilities. People are volunteering in many ways to support the government response, and volunteers providing meals to those working at the frontlines.

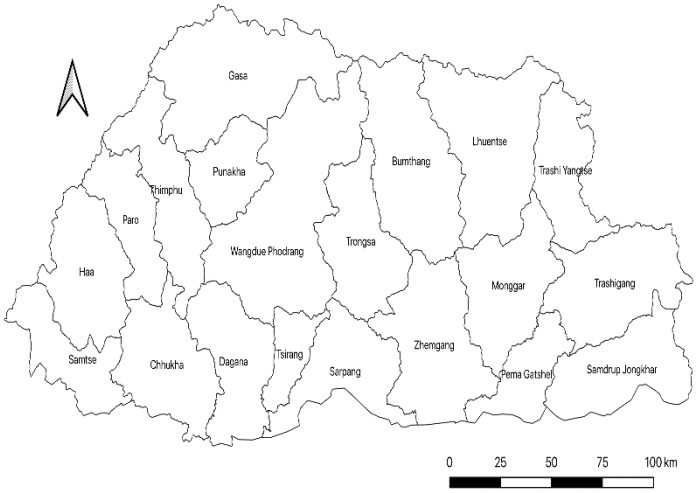
On 23 March, Bhutan closed all its borders while still allowing Bhutanese residing overseas to return to their home country.[5] On every border post, quarantine facilities equipped by isolation rooms and testing capacity were set up. Every incoming person was tested and quarantined for a minimum of 21 days. Volunteers of DESSSUP (Guardians of Peace and Harmony) became the managers of the quarantine facilities. They also support the police and army in patrolling the borders, specifically to monitor, report illegal crossing and trade.

The King of Bhutan himself visits the borders to monitor the all high-risk area along the borders and other districts. He personally supervises the COVID-19 preparedness and response in country . The members of the community take an active role in ensuring that any transmission of COVID-19 is stopped at the border by contributing their resources to the facilities. Villagers helped set up the quarantine zones in villages, with makeshift isolation huts built of bamboo, and some help the official guards to patrol the borders. Early in August, a person who had a history of coming in close contact with people in Thimphu and Paro was tested COVID-19 positive in Gelephu. The Government immediately announced a lockdown on 11 August. All of the case's contacts were traced and found negative. The next day, another person was tested COVID-19 positive in the dry port area in Phuntsholing, along the international boundaries. The government has had contact tracing in full swing. The first phase of a mass screening is now running, collecting and testing 17 000 samples from Phuntsholing's households. The Government plans for the second phase, to screen the entire population of Phuntsholing

[5] http://www.moh.gov.bt/border-gates-to-close-from-today/

Holistic Continuous Approach

The King of Bhutan is heavily involved in the country's response to COVID-19, monitoring every part of the measures, and ensuring that the country undertakes the best effort regardless of the limited resources. The King has been repurposing royal facilities, the gesture that motivates the citizens to make contributions to support the COVID-19 response. Government officials and members of the Parliament contribute a part of their salary to finance the country's response.



To mitigate the shortage of health workforce, around 600 back-up volunteers were trained to carry out health screening, while the Country plans to train 5000 more. MOH called back the doctors who went abroad and hired resigned doctors, all in the effort to support CVOID-19 response and provide essential health care services.

With health being a priority agenda for the Government, the country's leadership understand the principles of emergency preparedness and disease outbreak response and rely on technical advice from WHO in decision making. The Prime Minister, Foreign Minister, Finance Minister and Health Minister, all have public health background, and as a result have been able to gain the trust of the public and ensured the public's compliance with appropriate Government's advice for preventive measures.

The message of the King of Bhutan on the website's homepage of the Royal Government of Bhutan.

The coordinated response has been bolstered by the nation's traditional communal values, in which all levels of society, including the royal family, have acted in unison to observe social-distancing and support other response measures.

Dessup monitoring the compliance level of people During the lockdown in Thimphu district for buying essential household items

Risk communication activities are conducted consistently. Information and messages are easily found on the websites of the governmental ministries, paired with regular updates on social media and media. People are continuously reminded and encouraged to implement the preventive measures, with Police and DESSUP 24/7 monitoring the streets, health care centres, and different checkpoints to ensure that people follow government advisories to COVID-19 properly.

The extensive support of the World Health Organization

"In WHO Country Office for the Kingdom in Bhutan, we have all our hands on the deck, for COVID-19 preparedness and response, and practically on the ground. While I work closely with the Minister of Health, advising the Government on the different aspects of the public health emergency, our staff work long hours, joining surveillance team, facilitating trainings, managing logistics, helping with risk communication activities, and beyond. All during maintaining their main tasks for specific programmes." *Dr Rui Paulo De Jesus, WHO Representative to the Kingdom of Bhutan.*

Three Levels of WHO

All through the preparedness, the onset of the COVID-19 outbreak, and the current responses to minimise the impact of COVID-19 in Bhutan, WHO is supporting the country, with the Government on the driver's seat. The evidence-based approach taken by the WHO, as well as the Government trust in WHO, has put an instance reliance on the WHO's ability to provide evidence, references, and guidelines in fighting the new virus. The WHO Country Office for Bhutan has been intensely coordinating and collaborating with the Regional Office and Headquarters to provide the much-needed assistance.

WHO staff handed over logistics supply to the MoH. Photo: WHO Bhutan

Days after Bhutan announced its first case, WHO mobilized South-East Asia Regional Emergency Fund (SEAREF) from the WHO South East Asia Regional Office to support the Ministry of Health in responding to COVID-19. WHO shipped in consignments of reagents for COVID-19 test, provided Personal Protective Equipment, and procured medical equipment necessary for case management.

The Ministry of Health worked with WHO to establish the SOPs for minimising transmission in the Points of Entry and providing technical inputs into the development of the policy for travel restrictions. On the field, WHO set up thermo scanners and trained health workers to build a safe isolation centre. To develop the capacity at the provincial level, WHO supported a table top simulation exercise for COVID-19 outbreak at Lhamoizingkha Dungkhag.

WHO supported Ministry of Health to procure RNA viral extraction kit to strengthen testing capacity; strengthen risk communication; scale up the response capacity including case management, laboratory diagnosis, as well as the infection prevention and control (IPC); improve the capacity for quarantine, contact tracing, and surveillance at the Points of Entry (PoEs); and enhance multi-pronged approaches with stakeholders.

WHO Timely Support	
Before COVID-19 emerged	• A PoE simulation exercise at Paro airport (6 November 2019)
Before the first case of COVID-19 detected in Bhutan	• Procurement of seven sets of Medical Camp Kits (MCKs) before COVID-19 cases found in Bhutan • Provision of the first batch of medical logistics (PPEs, RT-PCT reagents, VTMS and extraction kits (Feb 2020)
During lockdown	• Provision of the second batch of medical logistics (PPEs; medical respirator, KN95, and surgical masks; goggles), arriving exactly on the day the Government announced the lockdown (11 August) • Provision of a microcentrifuge on the day the MoH planned to do a mass screening covering all persons in Phuntsholing, a COVID-19 high risk area (15 August).

The convening role of WHO in UNCT and Partnerships

UN Agencies and international development partners play valuable roles in assisting Bhutan to adequately respond to COVID-19. WR is member of Security Management Team (SMT) where he updates the members on COVID-19 situation within and globally. He also provides technical inputs in

supporting other UN partners in supporting the country in response to COVID-19. One of the technical officers is supply coordinator, where he coordinates with all the UN partners in supporting government in ensuring adequate PPE and critical equipment are provided on timely manner. As UN supply coordinator, he makes sure that there is no duplication in support provided by UN partners and so that limited resource is well utilised. WCO also coordinates meeting between MOH and UN partners. Technical officer in WCO works closely with UN colleagues in supporting Ministry of Health response for COVID-19.

The three-level coordination and collaboration within WHO gives the Country Office the confidence and the means to guide other UN agencies within the United Nations Country Team (UNCT), hand in hand with the UNRC and to work with partners in providing substantial supports to COVID-19 response in Bhutan. WHO leads the health agenda within the UNCT to provide the suitable medical and logistics support. WHO works with UNCT and Technical Advisory Group ((TAG) members to develop the UN Advisory Paper on Immediate Socio-Economic Response to Covid-19 in Bhutan. A comprehensive assessment is in progress and WHO contributed inputs on the NCDs and the Country's essential services.

Assuring the health of the people

As of 25 August, Bhutan has 156confirmed cases of COVID-19. There has been no death and 117 people confirmed as COVID-19 positive have recovered. In the health sector, the Royal Government of Bhutan (RGoB) is juggling protecting its people from the threat of COVID-19 by providing essential health services to the same population. In the broader context, Bhutan must cope with the socio-economic impact of the closing of its borders and the decreasing economic activities.

Psychosocial support

The country's situation puts people under pressure and in need of mental health support. As psychological well-being is one of the nine domains forming the Gross National Happiness (GNH), mental health services are vital in Bhutan. Under the technical guidance of WHO, health care and social workers are trained to provide mental health counselling down to the district level. During the COVID-19 pandemic, a Mental Health Task Force was formed, led by retired psychiatric and mental health counsellors, with WHO experts providing technical backstopping and advice, as needed.

The Task Force has trained over 15,000 volunteers and health workers on Psychological First Aid (PFA). The task force provides 24/7 counselling services especially to those in quarantine facilities and those who have mental distress due to the current COVID-19 pandemic. Five hotline numbers are available, and there are two other numbers provided specifically for elderlies. The effective utilization of the hotlines is yet to be assessed.

Sustaining provision of essential health services

Supporting Bhutan's preparedness for emergencies, in 2017, WHO handed over seven medical camp kits (MCKs) to the MOH. This year, responding to COVID-19, WHO handed over seven more MCKs. Unlike the common pattern of repurposing the existing health facilities for COVID-19, Bhutan makes use of the flu centres established for COVID-19 to intensify TB detection. In its effort to increase COVID-19 detection, the 54 walk-in flu clinics examine people with cough and fever symptoms. The Ministry of Health takes the opportunity to collect sputum samples of all TB suspects and plans to

continue using the clinics as TB screening facilities. The MoH also pairs the provision of the essential health services with risk communication activities, particularly in the areas where the risk of COVID-19 transmission is high. Supporting the MoH to ensure the continuity of essential services during the pandemic, WHO has recruited six retired specialists, 20 laboratory technicians, and 18 hotline staff to work in the MoH facilities.

Multipurpose flu and TB clinics. Photo credit: The MoH Bhutan.

WHO also donated noncommunicable diseases (NCD) kits, that could meet the needs of 10,000 people in three months. The kit containing essential oral medicines, basic diagnostic equipment, renewables, and additional products such as insulin, for people with hypertension, diabetes, cardiovascular diseases, chronic respiratory diseases, and cancer. WHO along with other UN partners started working on availing WASH facilities in all health care facilities.

The tasks ahead

Continuing the essential and inclusive health services is important for Bhutan. It should be able to maintain its 90% immunization coverage. Bhutan could also embark on a journey to make the most of current technologies to extend the reach of its health services. The country is now developing a web-based telemedicine system, operating in 24 telemedicine sites across the country. This type of service will be useful during a public health emergency like the COVID-19 pandemic. With support from the Asian Development Bank and the World Health Organization, Bhutan has completed phase 1 of its health digital development, establishing the necessary infrastructure and capacity. Phase 2 (2020 – 2023) will include transforming primary health care to enable the development of a public health system that consolidates human and animal health surveillance under the One Health framework[6] .

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[6] Gurung, Mongal. S, et al. Transforming health care through Bhutan's digital health strategy: progress to date. WHO South-East Asia Journal of Public Health, September 2019

COSTA RICA

PAHO/WHO Costa Rica works hand in hand with national authorities to overcome the challenges of the COVID-19 pandemic: protecting the health of the country

At the end of May, the President of Costa Rica and the Director General of the World Health Organization launched the "COVID-19 Technology Access Pool," a platform for sharing data, knowledge, intellectual property and facilitate equitable access to health products that will save lives in the context of COVID-19. This high-level political event was attended by the Prime Minister of Barbados, Mia Mottley, the Secretary of State of Norway, Aksel Jacobsen, leaders of the UN, academia, industry and civil society. Since May 2020, Costa Rica has positioned itself as an international leader towards equitable progress in the international response to COVID-19.

Located between Nicaragua and Panama in Central America, Costa Rica is composed of three types of territorial entities: 7 provinces, 81 cantons and 463 districts. Of the country's 5 million inhabitants, 77% live in urbanized areas. Registered migrants—of which 75% are of Nicaraguan origin—comprise 9% of the population, an important proportion of the country. This represents highest percentage of migrants in the Latin American and Caribbean region. Costa Rica's population has also been ageing in recent years. In 2018, adults over 65 made up 8% of the population, a proportion that is expected to grow to 13% and 18% by 2030 and 2045 respectively. Since the beginning of the pandemic, Costa Rica has been facing COVID-19 taking into consideration the diversity of its population.

PAHO/WHO Representative of Costa Rica, María Dolores Pérez-Rosales, delivers the first donation of diagnostic tests to the country during the 6 March 2020 press conference where Costa Rica's first confirmed case was announced. At the table, the President of the Republic, Carlos Alvarado, the Minister of Health, Daniel Salud (receiving the package) and the Executive President of the Costa Rican Social Security Fund, Román Macaya.

COVID-19 in Costa Rica

Spread of the pandemic

On 6 March 2020, the first confirmed COVID-19 case of Central America was reported in Costa Rica. Having activated the protocols for epidemiological health emergencies as early as January, the country had already started preparing for the arrival of the virus. By 8 March, the Ministry of Health (MoH) and the *National Commission for Risk Prevention and Emergency Preparedness (CNE)*[1] declared a

[1] Comisión Nacional de Prevención de Riesgos y Atención de Emergencias (CNE)

nation-wide yellow alert. In addition to having existing preparedness plans for potential pandemics—based on previous experiences with the avian flu, AH1N1 influenza and SARS—Costa Rica counts with a *National System for Risk Management*. The latter includes operational and technical structures that are deployed upon the declaration of alerts or states of emergency related to adverse events.

The Health, Water and Sanitation Operational Working Group and the Epidemiological Situation Room were located in the facilities of the PAHO / WHO Representation in Costa Rica during the first weeks of the emergency.

As such, three days after the appearance of the first COVID-19 case, the Government activated the Emergency Operations Center (EOC) as well as over a dozen technical sectoral working groups. Costa Rica's main actions in health initiated with the activation of the *Health, Water and Sanitation Operational Working Group* and the *Epidemiological Situation Room*, coordinated by the Ministry of Health and, during the first weeks of the emergency, located within the PAHO/WHO facilities. On 16 March, after the confirmation of 35 cases in 5 different provinces, and following recommendations by the CNE, the President of the Republic declared a state of National Emergency.

Although the spread of COVID-19 in Costa Rica was moderate between March and June, infections have accelerated significantly since June, resulting in the declaration of community transmission by early July. As of 27 August, Costa Rica had 37,272 COVID-19 cases and was in the fourth place by percentage weight of COVID-19 cases in the Central American subregion (12.4%) and fifth place by percentage weight of COVID-19 deaths (4.89%). Regarding the cumulative incidence rate, the country had a rate of 693.1 cases per 100,000 inhabitants, ranking second in Central America after Panama, according to the information reported by the countries to PAHO/WHO.

PAHO/WHO's support to the Ministry of Health to face COVID-19

Since initial information was shared by WHO, the MoH has been at the forefront of the response, coordinating actions to respond to the pandemic through the Directorate General of Health, the Directorate of Health Surveillance, and the Directorate of Health Services, with technical support from PAHO/WHO.

As part of the initial actions, PAHO/WHO coordinated a COVID-19 preparedness and response simulation exercise with the national authorities, which was held on 10 February. This exercise enabled the development of the inter-agency protocol to address cases, as well as the development of a risk communications strategy. As a result of the first scenarios and projections presented, a *Working Group on the Situation of Health Services (MSSS)*[2] was created, led by the MoH with the participation of PAHO/WHO. Its functions are to conduct impact analyses with respect to health services capacity in the face of COVID-19 and to develop an adequate national response to COVID-19.

[2] Mesa de Situación de Servicios de Salud (MSSS)

One of the strategic lines of PAHO/WHO technical cooperation has been the strengthening of laboratory diagnostic capacity for the detection of SARS-CoV-2.

From this working group, PAHO/WHO works with the *Research Center for Pure and Applied Mathematics (CIMPA)*[3] of the University of Costa Rica, the MoH, and the *Costa Rican Social Security Fund (CCSS)*[4] in the development of mathematical models that serve to analyze the transmission dynamics of SARS-CoV-2 to simulate the effect of public health measures, and to project the possible course of spread of the epidemic. Currently, this working group uses a network model that incorporates multiple layers of information, from nodes that represent and individual of a certain population, to their contacts, and their social relationships, and their implications. The projections generated have been the primary input for decision-making by the authorities in their response to the pandemic.

Moreover, in order to ensure diagnostic laboratory capacity specific to the detection of the SARS-CoV-2, PAHO/WHO led the first capacity-building training for the National Reference Center for Virology of the *Costa Rican Institute for Research and Teaching in Nutrition and Health (INCIENSA).*[5] This training focused on testing as well as on protocols to detect and diagnose COVID-19 through molecular technology. As a result, the Centre has been enabled to run diagnostic tests since 26 February.

Already, weeks before the first COVID-19 case was reported in the country, PAHO/WHO was part of Costa Rica's interagency team, which includes MoH, CCSS, CNE, and the *9-1-1 Emergency System* [6] and developed the national strategy and action plan for novel coronavirus risk communications. PAHO/WHO is also part of the *Information System for Prevention and Preparedness of Emergencies (SIPAE)*[7], a technical advisory committee focused on the management of public information and risk communications. SIPAE is made up of communicators from public institutions, autonomous institutions and academia. Through SIPAE, PAHO/WHO provides support in the development of communication actions to transparently inform the population about risks and to guide them in behaving adequately in different threat or multi- threat scenarios. PAHO/WHO also acts as a link between SIPAE and the United Nations Interagency Communication Group for the implementation of risk communication actions that follow the country's needs.

Some of PAHO/WHO's noteworthy contributions to Costa Rica also include the provision of Personal Protective Equipment (PPE), diagnostic supplies, medical equipment, computer and telecommunications equipment, as well as personal hygiene and cleaning supplies to face COVID-19.

[3] Centro de Investigación de Matemática Pura y Aplicada (CIMPA)
[4] Caja Costarricense de Seguro Social (CCSS)
[5] Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud (INCIENSA)
[6] Sistema de Emergencia 9-1-1 (SE9-1-1)
[7] Sistema de Información para la Prevención y Atención de Emergencias (SIPAE)

Furthermore, at the request of the MoH, the United Nations System activated the Health Cluster to respond to humanitarian crises in the context of the COVID- 19, with PAHO/WHO as the Technical Secretariat. This, in order to ensure that—in the context of the COVID-19 crisis—all UN cooperation agencies and organizations of the humanitarian aid network in the country work together to address needs that are prioritized by the national health authorities.

Emergency calls in the pandemic: a mental health crisis

The health, social and economic impacts of COVID-19 have exacerbated socioeconomic conditions that existed in Costa Rica before the pandemic, such as the precarious public health conditions and the state of mental health in the country. Among other actions, PAHO/WHO has provided support to the sectoral *Mental Health and Psychological Support Working Group* for the incorporation of community-based communications. The PAHO/WHO Country Office has also supported the development of communication campaigns and materials related to self-care (aimed both at the general population and people at the front-lines of the pandemic); domestic violence in the context of Costa Rica's voluntary confinement; bonding emotionally with loved ones despite physical distancing; a telephone line for psychological support; xenophobia; and discrimination and violence against people who have tested positive for COVID-19.

Changes in the daily life of Costa Ricans

Costa Rica's response to COVID-19 has affected the daily life of all Costa Ricans, given the restrictions imposed since the beginning of March. Less than a week after the first confirmed case, mass events in Costa Rica were banned, teleworking for the public sector was instructed, and some schools with high risk of contagion were closed. By the end of the same month, lessons had been suspended throughout the country, closure of borders had been announced, the operation of bars, restaurants and casinos had been prohibited, beaches and national parks had been closed, and a great part of commercial activity was suspended (with some exceptions for the provision of food and essential services), automobile restrictions for health had been established, and a large

The protocol of the Psychological Support Office (DAP) of the Technical Secretariat of Mental Health of the Ministry of Health is based on PAHO/WHO

proportion of citizens were complying with the government's call for voluntary confinement at home. As the pandemic progressed, the *9-1-1 Emergency System (SE9-1-1)* started receiving inquiries about COVID-19 and requests for humanitarian support and emotional situations, which were outside the SE 9-1-1's scope of work. As a response to these requests, on 13 March the MoH created a free hotline for citizens (LAC-1322), which provides information on COVID-19 as well as measures taken by the Government, clarifying general queries regarding the pandemic. Noticing the need for psychological care in calls to LAC-1322, the MoH *Technical Secretariat of Mental Health (STSM)*[8] proposed the creation of a *Psychological Support Office (DAP)*[9] to attend to queries related to emotional situations that require specialized psychological support. To this end, the MoH reached out to the *College of Professionals in Psychology of Costa Rica (CPPCR)*[10], which immediately offered its support.

Psychological Support Office (DAP): protecting mental health during the pandemic

PAHO/WHO has provided support to the Psychological Support Office (DAP) of the MoH Technical Secretariat of Mental Health the training of its operators on issues related to psychological first aid, bereavement, psychopharmaceuticals, addressing suicidal behaviour, and managing anxiety; among others.

The CPPCR Board asked for members to express their willingness to provide volunteer telephone counselling services and in so-doing provide psychological first aid and crisis interventions in the context of the COVID-19 pandemic. While the CPPCR prepared a volunteer profile outlining required competencies and skill, the MoH *Technical Secretariat of Mental Health* simultaneously developed specific protocols of mental health care to this regard, based on PAHO/WHO guidelines.

Selected volunteer psychologists received training on the functions of the national emergency system, capacity-building of psychological care in the context of COVID-19 and strengthening of skills to address specific issues. Among other topics, PAHO/ WHO provided support to the DAP in capacity-building on matters such as psychological first aid, grief counselling, psychopharmaceuticals, addressing suicidal behaviour, managing anxiety, and providing care for migrants and refugees. The DAP operates 24 hours per day all week and permanently counts with two professionals and supervision groups that can provide support with monitoring of the services, depending on the specific case. The supervision team is composed of four psychologists who have clinical experience and a recognized track record in Costa Rica; they also work voluntarily for the DAP. For their contributions to the Costa Rican population, DAP volunteer psychologists are among the heroes of the response to COVID-19 in Costa Rica.

[8] Secretaría Técnica de Salud Mental (STSM)
[9] Despacho de Apoyo Psicológico (DAP)
[10] Colegio de Profesionales en Psicología de Costa Rica (CPPCR)

Since March, calls to the SE 9-1-1 or 1322 LAC that were classified as requiring mental health support are forwarded to the DAP. Upon receiving these calls at the DAP, they are filtered again, and a secondary classification is made by sex, age group (minors, adults and older adults), depressive or anxious symptoms and the main reason for the call. Issues by callers are so varied that almost 100 categories have been established. The DAP attends all calls classified as needing psychological support, including those related to suicidal ideation, behavior alteration, mental emergencies and intoxication, among others. All calls made to these numbers are totally free of cost for the callers.

A support team of specialized psychologists is also made available through the DAP. After the first call, this team follows up on specific cases that warrant additional monitoring, for up to three additional calls. To ensure effectiveness and efficiency of the DAP, service audits are planned in the short term by the MoH *Technical Secretariat of Mental Health*. Through this process, some cases that require subsequent interinstitutional support have been detected so they can also be transferred for follow-up.

The reach of the Psychological Support Office (DAP)

Although the DAP's scope of care is national, requests have been received to serve Costa Ricans who have not been able to return to the country, such as some who remain in Brazil due to the closure of borders. In addition, as time has passed, the DAP has expanded its scope, now providing support for police personnel of the penitentiary and for operators of the SE 9-1-1 and LAC 1322. Further, through lessons learned from the DAP, support has been provided to Nicaraguan professionals in terms of guidelines to generate intersectoral and institutional alliances to establish similar voluntary services.

Cross-border areas and maintenance of essential health services

In addition to actively responding to the pandemic and caring for population mental health, MoH and PAHO/WHO have demonstrated the ability to respond to varied needs during the emergency. Addressing health at border areas and maintaining efforts against malaria are some examples of these capabilities.

PAHO/WHO has led the development of a health cooperation plan in the context of COVID-19: "Care for Populations in Conditions of Vulnerability in Cross-border Areas during the COVID-19 pandemic, including the North and South areas."

For example, following a request from the Government through the Foreign Ministry, PAHO/WHO— together with IOM and UNHCR—has led the preparation of a health cooperation plan in the context of COVID-19: "*Care for Populations in Conditions of Vulnerability in Cross-border Areas during the COVID-19 pandemic, including the North and South areas*." This proposal seeks to collaborate with the national, regional and local authorities in a comprehensive health response to COVID-19 at the borders of the Costa Rican territory, with

emphasis on the vulnerable cross-border population, including people in need of international protection. In the Northern and Southern borders of Costa Rica, PAHO/WHO is supporting the overall design of facilities based on standards of Emergency Medical Teams (EMT), taking into consideration three areas designated for handling migrants on both borders: Zone A for Triage , Zone B for asymptomatic persons and Zone C for those pending laboratory results, confirmed COVID-19 patients, and people with respiratory symptoms resulting from infectious causes different from COVID-19 and who require medical follow-up. In this regard, PAHO/WHO has been supporting the country on issues related to risk communication aimed at the populations that are in these camps.

Integrating the response to malaria with the response to COVID-19

The fight against malaria continues within the context of the COVID-19 pandemic, following specific guidelines given by PAHO/WHO experts for various scenarios.

Aware of the imminent impact COVID-19 could generate in the fight against malaria in the country, the Country Office shared PAHO/WHO's recommendations from the Regional document "Measures to ensure the continuity of the response to malaria in the Americas during the COVID-19 pandemic" with the national technical malaria team. As part of the measures, PAHO/WHO has prioritized its support by ensuring and optimizing the management of malaria supplies (medicines, rapid diagnostic tests (RDT), long-lasting insecticidal nets (LLIN), and insecticides for indoor residual spraying) and protecting the health of workers and of everyone involved in the fight against malaria. To this end, PAHO/WHO has assisted with the estimation of needs and with donations of PPE for health officers who carry out detection, diagnosis, treatment administration, case investigation and response to malaria, including vector control (in total 71,315 units of masks, gloves and face shields).

Additionally, considering the limitations in the global supply chain due to circulation restrictions in most countries, airport closures, cancellation of commercial flights, and government restrictions for the export of some products, PAHO/WHO has provided technical support in the preparation of specifications for strategic purchases. These purchases included 8,000 malaria RDTs and 6,000 LLINs, providing support for the management of purchases and their prompt delivery to the country. In order to avoid shortages, PAHO/WHO has also assisted with obtaining chloroquine through the procurement processes of the PAHO/WHO Strategic Fund, as part of the joint procurement actions for antimalarials in the 2020-2021 period.

Other technical cooperation actions during the pandemic

In addition to the aforementioned, the PAHO/WHO Costa Rica country office has continued supporting other priority issues of the national agenda, especially: tuberculosis, HIV, arboviruses, influenza, cancer, tobacco consumption, alcoholism, human resources for health, and care of vulnerable populations such as Indigenous peoples, persons deprived of liberty, persons experiencing homelessness, and older adults in long-term care facilities, among others. Through this support,

PAHO/WHO is contributing to the maintenance of regular services and of a comprehensive approach to health in the country.

Vision towards the future

Considering the sharp increase of COVID-19 cases in the last two months, PAHO/WHO Costa Rica is committed to continue supporting the MoH in expanding the capacities of health personnel in all service networks and in deepening health surveillance with strong participation of the first level of care and with community-based actions. Support will also continue being provided to the country on other public health matters of interest that are being neglected due to the COVID-19 pandemic. Examples include some communicable and noncommunicable diseases, the expansion of comprehensive health services, and elective surgeries. Lastly, PAHO/WHO seeks to support the State in the in preparation for the introduction of a new COVID-19 vaccine, for which it will be challenged to design a plan within which Costa Rica can have equitable access to a safe and effective vaccine.

As time passes and as the context of the pandemic changes, PAHO/WHO Costa Rica will continue working hand in hand with national authorities to protect the health of the Costa Rican people, responding to rising needs and priorities, determined to overcome the COVID-19. In addition to the technical cooperation provided to national authorities in matters of planning, laboratories, case management, reorganization of health services, risk communications, and care of vulnerable populations, in-kind donations to different institutions continue being part of PAHO/WHO's response to the COVID-19 emergency.

PAHO/WHO Representative, María Dolores Pérez-Rosales, with Vice Minister of Health, Alejandra Acuña Navarro and donations from PAHO/WHO for different institutions.

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LEBANON

A story of WHO support for health system resilience in complex multiple crisis setting

Lebanon a complex multiple crisis setting

Lebanon has been facing a growing number of political and economic challenges for several years. Over the last 3 decades, Lebanon experienced repeated instabilities, starting with a sluggish recovery after a devastating 15-year civil war that ended in 1990, the country witnessed security incidents (assassinations, military attacks), as well as highly volatile and agitated political context.

The Syrian crisis, since 2011, added to the country's continued political cleavage; Lebanon is currently home to almost 2 million refugees, including 1.5 million from Syria and more than 200,000 from Palestine[1]. Lebanon has the highest per capita concentration of refugees in the world accounting for almost a third of the total Lebanese population. With the support of UN and NGOs, Lebanon was committed to offer shelter and health services without discrimination to all refugees and migrant workers; the Syrian refugees added a significant burden on the health system, increasing demand on PHC by around 40 % and on hospitals by around 35%, over a short period of time.

The recent 2019 financial and economic deterioration, caused by a rapid devaluation of the national currency against the US Dollar, pushed around 30% of the Lebanese middle class into poverty. This has caused repeated riots and manifestations since 17 October 2019. The impact of this unprecedented financial crisis and the security instability had serious repercussions on the health system, reflecting in inability to purchase medications and medical equipment and supplies by the hospital sector, and a reduced purchasing capacity for ambulatory care. Hence, a sharp decrease in health services utilization was observed, necessitating cutting down on number of hospital beds, laying off a significant number of nurses, migration of experienced human resources for health, and progressive shortages of critical and chronic medications and medical supplies, jeopardizing accessibility, availability and quality of health care

The situation was further aggravated by the current COVID-19 crisis. While Lebanon was initially capable of controlling the epidemic spread, it witnessed a sharp acceleration of the outbreak, and has moved into community transmission. This presents a challenge in terms of access to COVID-19 care, as the public health system does not have the capacity to absorb all cases expected, and the private system is suffering from extremely strained financial capacity. The lockdown measures further reduced utilization of the health services, further reducing the financial sustainability of the health facilities.

With the mounting number of COVID- 19 cases came on 4 August 2020 the massive explosion that occurred at the Beirut port causing over 178 reported deaths, more than 6,500 injured, and approximately 300,000 people displaced. Over 30 people are still reported missing. Approximately 120 patients were in critical condition as a result of the blast. Ongoing political unrest resulted in additional protests throughout the capital city, and clashes led to over 200 people needing medical treatment

[1] https://reporting.unhcr.org/sites/default/files/UNHCR%20Lebanon%20COVID-19%20Update%20-%2010JUL20_0.pdf

on site or in hospital in the days following the blast. The blast caused significant damage to an already fragile healthcare system. Three major hospitals in Beirut were totally incapacitated, and three others were partially damaged, causing a partial disruption in their services resulting in the loss of 500 hospital beds. According to a WHO-led rapid assessment, 23 primary health care centres were damaged, four of which were destroyed, affecting access to healthcare for 160,000 patients in their catchment areas. Medical equipment, supplies, medications, and personal protective equipment inside the affected health facilities were also destroyed, lost or damaged.

Syrian refugees and host communities receiving medication at pharmacy in Beqaa

Public health sector facing financial burden due to private sector constraints

The health system in the country has traditionally relied heavily on the private-public partnership with more than 80% of the health services provided by the private sector. The Ministry of Public Health (MOPH) is the regulator and purchaser of services from the private system and the insurer of last resort for around 50% of the population that is uninsured. This creates a heavy burden on the public health financing with the advent of the triple crisis, the public as well as private health sector is facing barriers in importing medicines and equipment, as well as much needed human resources. Private hospitals have already been downsized and reduced capacity due to the financial crisis; following the government-imposed lockdown, public health resources are even more constrained.

WHO's work in Lebanon in its emergency preparedness over the past few years has helped the country's response to the multiple crisis

Since 2007, and with the ratification of Government of Lebanon of the IHR, WHO CO in Lebanon engaged in supporting the national capacity for emergency preparedness and response. In 2016, Lebanon underwent a joint evaluation of the IHR core capacities to identify the most urgent needs within the country's health security system, to prioritize opportunities for enhanced preparedness, detection and response capacity-building, and to set national priorities and allocate resources based on the findings.[2]

Following the evaluation, the government of Lebanon, with the support of WHO, worked on the proposed recommendations to enhance emergency preparedness of the country. Specifically, WCO worked with the government and the public health sector to strengthen hospital capacity including that of the Rafik Hariri University Hospital (RHUH), which included upgrading the laboratory facilities with PCR machines, building a negative pressure room and capacity building with staff training. In 2019, the country also bought, as part of establishing the HazMat teams, a large supply of PPEs which came into immediate use at the beginning of the COVID-19 outbreak. This process was a success and actively prepared the country for the COVID-19 pandemic. At the start of the outbreak in Lebanon, at least one main national referral hospital was ready for testing and providing care for COVID-19 patients

WHO team providing PPE to RHUH

Healthcare worker wearing PPE at RHUH

[2] https://apps.who.int/iris/bitstream/handle/10665/254511/WHO-WHE-CPI-2017.2-eng.pdf;jsessionid=3AEB0E8399F13FE92878536992463AB7?sequence=1

Reaffirming WHO leadership

From very early on in the response to COVID-19, WHO was working closely with the government and included in the national emergency crisis team, led by the prime minister. This recognition by the government allowed WCO to move forward efficiently with mobilizing resources and strengthening the health system. WHO was the lead agency in the response to COVID-19, as designated by the resident and humanitarian coordinator. As part as the emergency response team, WCO was included in multiple parliamentary sessions, including education and social affairs ministries, and within the decision-making process. Similarly, WHO leads the health sector response to the Beirut port explosion.

Timely participatory response planning

The government of Lebanon took a proactive position in developing a national response plan to COVID-19. The UN agencies developed the Lebanon Emergency Appeal (LEA), in line with the national response plan. Both plans have placed a focus on treating and offering the same care and humanitarian support to all residents of Lebanon, with one strategy for all, regardless of status; thereby reinforcing a key objective of the LEA which is to ensure protection for women and girls, refugees and migrants, people with disabilities, older people and other vulnerable groups.

Box 1: The LEA for COVID-19 is articulated around 4 priorities, led by different UN agencies

- Support the preparedness and response capacity of the Lebanese health system in coping with the COVID-19 emergency; led by WHO.
- Strengthening the engagement of and communication with communities, supporting good hygiene practices and ensuring COVID-19 specific support services; led by UNICEF
- Ensure uninterrupted delivery of critical assistance and services to the most vulnerable communities affected by the Syria crisis, including refugees and host communities, as foreseen in the LCRP Business Continuity Plan; co-led by UNHCR and UNDP
- Expand support to vulnerable population groups not included in the LCRP, in need of humanitarian assistance due to the combined socio-economic impact of the economic and banking crisis and COVID-19; co-led by WFP and UNRWA

Similarly, WHO, in close coordination with the OCHA and RCO office, lead the development of the health sector flash appeal for the Beirut port explosion humanitarian support. Estimates for health support in the flash appeal were based on a rapid damage and needs assessment targeting the affected hospitals and PHCs conducted by WHO 4 days after the blast.

Readiness for patient diagnosis and care

WHO has been supporting the Rafik Hariri University Hospital, to receive severe cases of COVID-19. Furthermore, eleven other hospitals – at least one per governorate – are being upgraded to establish so-called "flu clinics" for testing and inpatient care of moderate cases, with adequate laboratory testing as well as specific training of staff. This has increased the overall inpatient capacity and alleviated the pressure on hospitals. Moreover, before the first case of COVID-19 was identified in the country, WHO, through our Dubai Hub, had secured diagnostic tests. When the first cases of COVID-

19 were detected, the public health sector was prepared and able to react immediately. On 21 February 2020, upon suspicion of the first case of COVID-19, Lebanon was able to test and confirm infection with the SARS-Cov-2 virus within a few hours. In addition to providing equipment and reagents, WHO supported improvement in laboratory quality; in fact, the RHUH and five university hospitals became also certified by the WHO external Quality Control (EQA) system, an important step in COVID-19 response. Similarly, WHO was the first agency to procure medical supplies and trauma kits to assist hospitals in providing trauma care for casualties of the Beirut port explosion; in fact, less than 48 hours after the explosion, WHO delivered to the 10 hospitals that absorbed the majority of the casualties, 10 sets of medical supplies, surgical supplies and trauma kits; a timely highly needed urgent support. Within the first 10 days after the blast, WHO immediately responded by providing seven shipments of 64 tonnes of health supplies (surgical kits, trauma kits and PPEs) some through kind donations by the UK government, UAE, Irish government and Russian government and the rest from WHO hub in Dubai (45 tonnes). These supplies were immediately dispatched to 12 public and 15 private hospitals around the country. WHO response to the blast is ongoing with a shift towards utilizing more public and private healthcare facilities to accommodate COVID-19 cases as the numbers are increasing exponentially in recent weeks. WHO is further strengthening the public health sector by supporting a total of 10 out of the 27 public hospitals for upgrading their medical laboratories and blood banks, creating isolation wards, increasing ICUs bed capacity, filling gaps in critical human resources for health, and building capacity further to respond to health emergencies

Photo 4: Meds pharmacy to Syrian refuges and host community in Beqaa

Addressing the most vulnerable populations

Migrant workers in Lebanon are at increased risk of COVID-19 due to cramped living conditions. Many have not been able to return to their home countries and have not received support from their embassies. The International Organization for Migration (IOM) had been supporting migrant workers in Lebanon prior to the outbreak but was lacking resources on the ground during the pandemic. Therefore, UN agencies and NGOs worked together, on government request, to handle positive and suspected COVID-19 cases among the migrant population. WHO ensured adequate human resources, and the supervision and monitoring of suspected cases. WHO also collaborated with Doctors Without Borders for testing and tracing. Language was a major barrier with most migrants speaking neither English nor Arabic. Therefore, all materials, including brochures about the disease, protection measures, referral mechanisms, available services, etc, were translated into different native languages of the largest communities of the migrant workers, which were extremely well received.

Migrants, predominantly Bangladeshi nationals, were among the first group in Lebanon to utilize public quarantine cites. Two community-based quarantine sites were rapidly established in Hamra, Beirut in response to an outbreak of COVID-19 at the end of May. At the end of the quarantine, WHO rolled out a rapid protection assessment to understand any protection issues related to their care and overall stay within the facilities and related concerns, as well as provide information to migrants on protection services on available to them. The results showed that the operation had been very successful and that migrants had felt supported. 93% responded that they felt comfortable and safe during their stay at the quarantine facility, and that nor themselves or anyone they know experienced any threats, harassment or abuse during their stay. Reported discrimination remained low - with 2% (1 person) reporting that they themselves, or someone they knew felt uncomfortable because of their nationality or skin colour during their stay in the quarantine facility, and 5% (2 people) responded that either they or someone they knew were unable to access the quarantine site due to their legal status.

Transparent and regular credible communication

WCO placed an additional focus on information and misinformation, sharing daily briefings and a monthly newsletter as well as biweekly situation reports to the government, UN and HQ. By ensuring that information about numbers of cases, deaths, infection among health-care workers among others, was widely shared, WCO supported the government in taking a transparent approach. WCO also issues a donor briefing every two weeks with infographics and statistics from different areas of the country. These briefings provide a picture of the progress that is being made and have been well received by the donors and the UN community. WCO is now undertaking new rounds of fundraising to prepare for the second wave of the pandemic, expected around September. To fight misinformation, WCO launched "How to fight the COVID-19 infodemic" in July 2020, to raise awareness of the rise in misinformation and its consequences and provide advice on how and where to look for reliable information.

Similarly, immediately after the Beirut port explosion, WHO issued, jointly with AUB air pollution research centre, an awareness brochure regarding individual mitigation measures related to nitrous oxide exposure; one week later, an awareness brochure on asbestos exposure was issued by WHO jointly with the Beirut Blast group hosted at AUB- faculty of health sciences.

Collaboration with the MOI on misinformation with UNICEF and UNDP

Local procurement, and rapid and cost-effective solution for PPEs and diagnostics

The COVID-19 outbreak landed as the country was experiencing political and economic instability and changes in the government cabinet, thus complicating the decision-making processes. However, WHO needed to act fast, particularly as Lebanon is not a self-sustained country in the manufacture of medical equipment or products, relying on imports for 97% of its healthcare needs. The closure of main importers therefore added an additional toll. interestingly, Lebanon's health care system operates mainly through private health care (80%), which means that private hospitals usually hold about 4 months of stock. With the closure of borders and importers due to COVID-19, WCO worked together with HQ to implement local procurement and access kits, reagents, and critical equipment from private local compagnies, including 18 ventilators and 4 X-ray machines. This approach was successful and helped to secure critical material while saving time and money from transport. This led to the rapid capacity building of the public health system, and major public hospitals were able to build independent COVID-19 emergency units and wards to prevent transmission to non-COVID-19 patients.

Delivery of swabs to the MOPH

Maintaining Continuity of care

Before the advent of the COVID-19 outbreak in the country, and as the riots intensified starting October 2019 resulting in repeated road blocks, WHO initiated very early in November 2019 a monthly monitoring of critical health indicators, including utilization of general PHC services, vaccination, hospital admissions, mortality among women and children and neonates, and mental health; with the pool of vulnerable populations increasing, and the country resources decreasing WHO ensured through active fund raising , that critical services such as access to chronic diseases medications and acute medications are not interrupted to around 92,000 most vulnerable patients with Non communicable diseases and some 350,000 beneficiaries, respectively; the first phase of the national Measles campaign, supported by WHO jointly with UNICEF, was successfully implemented as planned despite the riots and the COVID-19 movement restrictions, reaching more than 300,000 children less than 10 years of age in the most deprived regions of the country.

The resilience of the health system: pre, during and post crisis

The quasi simultaneous multiple crises in Lebanon would have caused a total collapse of the health system, if the country had a rigid governance system. In fact, the health system has demonstrated a remarkable flexibility and capacity to withstand pressure. Among the multitude of factors affecting this resilience, the following factors need to be highlighted:

- a pre-crisis emergency preparedness and capacity building, heavily supported by WHO, and documented lessons learned from previous emergencies,
- the private public partnership, built on a long-standing collaborative governance adopted by the MOPH; a flagrant NGOs role in service provision and health promotion, a high technology high quality private system readily available, and an affordable access at the public system for the most vulnerable populations,
- the prompt donor commitment to respond to urgent and critical health needs,
- the immediate restoration of health facilities and ensuring continuity of care, with focus on PHC, to decrease morbidity and mortality, and ultimately reduce the health bill,
- leveraging humanitarian support with development intervention to build long term capacity of health system with special focus on upgrading public sector for better sustainability of health services.

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MALAYSIA

Strong Preparedness and Leadership for a successful COVID-19 Response

Emergency preparedness combined with rapid and robust health security measures facilitated a systematic and informed response to COVID-19 in Malaysia.

In Sungai Buloh Infectious Disease Hospital, Selangor, self-designated plastic sheet barriers were installed at patient treatment cubicles in Red Zone Emergency Department creating a makeshift isolated and safe treatment space. The hospital had enrolled the highest number of patients in Malaysia **Photo credit: Abdul Razak Aziz**

Proven preparedness

Malaysia is an upper-middle-income country with strong capacity and self-sufficiency in outbreak preparedness and response, as evidenced by its previous experiences to a range of infectious disease outbreaks. The Country's response to epidemics like the severe acute respiratory syndrome (SARS) 2002-2003 and the Middle East Respiratory Syndrome Coronavirus (MERS-CoV) in the last few years, coupled with the implementation of the Malaysia Strategy for Emerging Diseases and Public Health Emergencies (MySED), has shaped and strengthened the Country's robust structure to prevent, prepare, ensure rapid response to public health emergencies and recover. Malaysia has complied with International Health Regulations (2005) (IHR) core capacity requirements since it entered into force and has established monitoring and surveillance activities for detection of influenza and Emerging Infectious Diseases (EIDs). Further to this, Malaysia spent a year preparing for and participated in a Joint External Evaluation (JEE), facilitated by WHO in October 2019. The JEE is a voluntary, collaborative, multisectoral process to assess country capacities to prevent, detect and rapidly respond to public health risks whether occurring naturally or due to deliberate or accidental

events. The JEE helps countries identify the most critical gaps within their human and animal health systems in order to prioritize opportunities for enhanced preparedness and response[1]. The findings of the JEE ultimately reinforced the country's strong existing health security system, prepared for multi-sectoral health emergencies with surveillance capacity to detect and respond to emergencies promptly.

Prior to the pandemic, the government and health authorities took great steps to bolster Malaysia's capacity for health emergency and disaster preparedness, all of which played a crucial role in responding to COVID-19. Among these steps was implementation of the MySED II and establishment of the Crisis Preparedness and Response Centre (CPRC). The national CPRC is the Public Health Emergency Operation Centre for the MOH, is located within the Disease Control Centre, and is the lead agency for disasters involving health. The standard operating procedures (SoP) for CPRC guides MOH staff in the management of all potential crises and disasters and is a key part of the overall strategy to prepare for effective management of disasters, outbreaks, crises and emergencies.[2] Its role is as the functional centre that closely monitors reports of emergencies nationwide via a robust early warning system, and subsequently coordinates preparedness planning, resource management and the health sector response. When Malaysia received the information about the transmission of an unknown respiratory infection in December 2019, the Government anticipated the spread of the disease and enhanced its surveillance accordingly. The CPRC coordinated the National Plan for COVID-19, receiving strong support on the implementation of the non-pharmaceutical interventions from the National Security Council (NSC).

Assessing health system capacity

Malaysia's health system has been acknowledged for its strong infrastructure and well-trained workforce providing high-quality care. Publicly funded and run by the government, in conjunction with a strong private-sector, Malaysia is one of the nations that has achieved Universal Health Coverage (UHC) for its population of 32 million. This strong system provided a stable foundation for scale-up when COVID-19 was reported in country. Health capacity was swiftly enhanced to meet both anticipated and emerging demands, as the government operationalised the CPRC at the national and state-levels, mobilized for recruitment and re-distribution of healthcare personnel according to high workload areas and more. The WHO Representative Office for Malaysia, Brunei Darussalam, and Singapore (WHO) provided any requested support to the MoH in its effort to visualise and determine a longer-term goal for the response.

An assessment of the existing health systems capacity was done on the current number of cases and for anticipated peak periods using a model developed for Malaysia by the WHO Regional Office for Western Pacific (WPRO). The findings of the assessment, reinforced by additional data and advanced modelling, served as a basis for the Government's decision on allocation of facilities as treatment, quarantine, and isolation centres as well as evaluating the effects of NPIs to reduce the infection reproduction numbers. The assessment also allowed Malaysia to estimate needs for additional laboratory supplies and PPE, bolster health system capacities and further prepare for pandemic response.

[1] WHO, Joint External Evaluations (https://www.who.int/ihr/procedures/joint-external-evaluations/en/)
[2] Director General of Health Malaysia, "What is CPRC?" (https://kpkesihatan.com/2014/08/04/crisis-preparedness-and-response-centre-cprc/)

Initial Response

The COVID-19 outbreak in Malaysia has occurred in two waves. The first wave started with three cases imported from China via Singapore on 24 January 2020, resulting in just 22 cases by mid-February. This was then followed by a second wave, which began on 27 February 2020. This second wave was greatly reinforced by transmission at a religious mass gathering in Sri Petaling, Kuala Lumpur, attended by approximately 14 500 Malaysians and 2000 non-Malaysians. The first death from COVID-19 in Malaysia was reported on 17 March.

In February, Malaysia ramped up its COVID-19 response capacity, including an 86% increase in diagnostics laboratory capacity, 89% increase in critical care bed capacity, and a 49% increase in the number of available ventilators.

At the start of the outbreak, WHO instituted an Incident Management System (IMS) to provide critical support in the areas of partner coordination, information and planning, technical expertise, and operational support and logistics. In collaboration with the MoH, the Organization provided a strategic platform for all COVID-19 response related activities. WHO Country Office has participated in strategic discussions with national and state health authorities, partners and stakeholders, provided evidence-based information and policy advice, and supported other key activities, including non-pharmaceutical interventions (NPIs), emergency communications and community engagement.

Case detection and quarantine

Microbiology Unit in the Pathology Deparment Sungai Buloh works hard to process samples from COVID-19 patients in timely manner. Photo credit: Dr Tuan Suhaila Binti Tuan Soh

In an immediate attempt to curtail transmission, Malaysia closed borders and allowed only Malaysians to enter the country, followed by a mandatory 14-day quarantine. In addition to strong contact tracing activities, a COVID-19 testing strategy was developed to focus on testing the contacts of known clusters of cases, irrespective of whether they show symptoms or are asymptomatic. Malaysia enforced the "Search, Test, Isolate, Treat and Quarantine" (STITQ) strategy to uncover suspected cases of COVID-19 in the community. The Government determined that all individuals who test positive of COVID-19 would be hospitalized for the minimum of 14 days, even those who were asymptomatic. Since the onset of the outbreak, Malaysia has established 140 quarantine centres in different parts of the country, with the National Disaster Management Agency (NADMA) monitoring the facilities.

In addition to the traditional testing of a Person Under Investigation (PUI) and close contacts, Malaysia employs more comprehensive testing strategies with a targeted approach towards high risk groups. WHO supported the initial provision of rt-PCR test kits and testing protocols. Ramping up laboratory

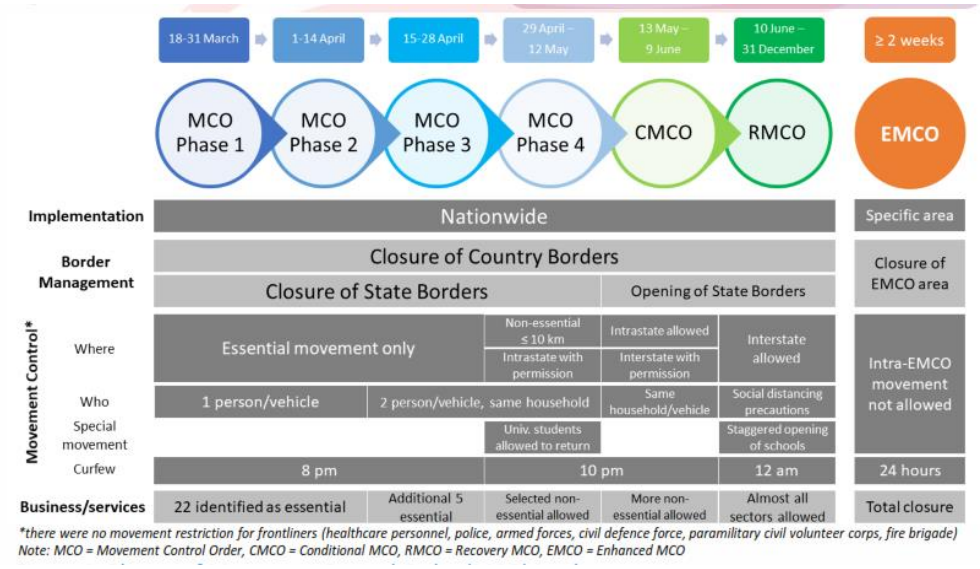
capacities is ongoing. During the COVID-19 pandemic, Malaysia has conducted more than half a million tests. The MOH's COVID-19 laboratory network led by Institute of Medical Research (IMR) and the National Public Health Laboratory (NPHL) has expanded testing capacity for COVID-19 to over 50 laboratories in both public and private sectors.

WHO has also supported the monitoring and interpretation of epidemiological information for outbreak trends including analysing COVID-19 trends among influenza-like illness (ILI) and severe acute respiratory infections (SARI) samples as part of multisource surveillance. These data were used as supporting evidence to assess effectiveness of interventions such as the Movement Control Order (MCO).

Movement Control Order (MCO)

Acting against the rapid transmission of COVID-19 virus among participants of February's religious mass gathering in Sri Petaling, the Government of Malaysia issued a Movement Control Order (MCO) on 18 March. The MCO was a multi-phase response which consisted of six distinct phases and six critical measures. There were four individual and gradual transitions of the MCO, a Conditional MCO (CMCO) and the Recovery MCO (RMCO) all of which applied nationwide and considered restrictions to overseas and domestic travel, large gatherings, closures of government and private premises, as well as educational institutions. An extended movement control order (EMCO) was also developed for application to specific areas experiencing clusters of cases or any significant outbreak.

Table 1. Phases of MCO and corresponding restrictions



In the initial phase, MCO measures included complete prohibition of people from moving outside their houses or attending mass gatherings and restricted all domestic and international travels. Academic institutions, public and private premises were all closed. During this phase, the Royal Malaysian Police was mobilized to support the enforcement of the restrictions. As the outbreak progressed, the various phases of the MCO allowed for a flexible response to the national situation, adapting restrictions to reflect the current epidemiological situation. The MCO succeeded in helping reduce the number of

COVID-19 cases from an average of ***170*** new cases per day in the first week of April to ***74*** in the last week of April.[3] Due to the continuous transmission within specific areas of the country, particularly in high risk parts, enhanced MCO (EMCO) were implemented for more targeted and restricted short-term (14 days) response measures that did not apply nationally. [4]

Complementing the MCO, the MoH received full support from WHO on the implementation of NPIs, through frequent development of informational, educational and communication (IEC) materials, and technical guidance for planning, implementation, and evaluation of activities. WHO also supported surveillance and data collection, processing and analysis. The data, for example, enables WHO to provide evidence-based recommendations regarding the risk of resurgence if the MCO is loosened too soon. In addition to tailored support from the WHO country office, regional and global strategies were shared to help the MoH identify and calculate the key variables in making decisions regarding lifting movement restriction.

Risk communication and community engagement at the heart of NPIs

The Malaysian government went to great lengths to ensure a comprehensive approach to risk communications and community engagement (RCCE), working to establish trust with the population and provide transparency regarding the COVID-19 situation, with the full support of WHO for a whole of government and whole of society approach. Malaysian authorities established and promoted trusted sources of information very early in the response to ensure the public had access to timely and accurate information on recent COVID-19 developments and to offset the risk of an infodemic. At the height of the epidemic, two daily media briefings convened by top officials were held to update the public on the COVID-19 situation in country, and this later was condensed into briefings that occurred three times a week.

In addition to providing trusted sources for information, the government focused efforts on developing mass media campaigns, conducted media monitoring and research on public insights and opinion, strengthened coordination with UN agencies and partners, and gave continuous briefings to diplomatic missions. They also developed SOPs for communication and community engagement campaigns and focused on strategic communication planning.

Social media platforms and mobile applications became a powerful channel for RCCE outreach when paired with creative content and strategic messaging to reach the culturally diverse community using as many channels of communication as possible. The NSC sent mass text messages via SMS to all numbers registered in Malaysia daily to provide updates on policies and regulations as well as reminders on current precautions and NPIs and health advice and recommendations. The NSC also developed a social media application, Telegram, to allow for rapid access to breaking news and information on COVID-19 related regulations.

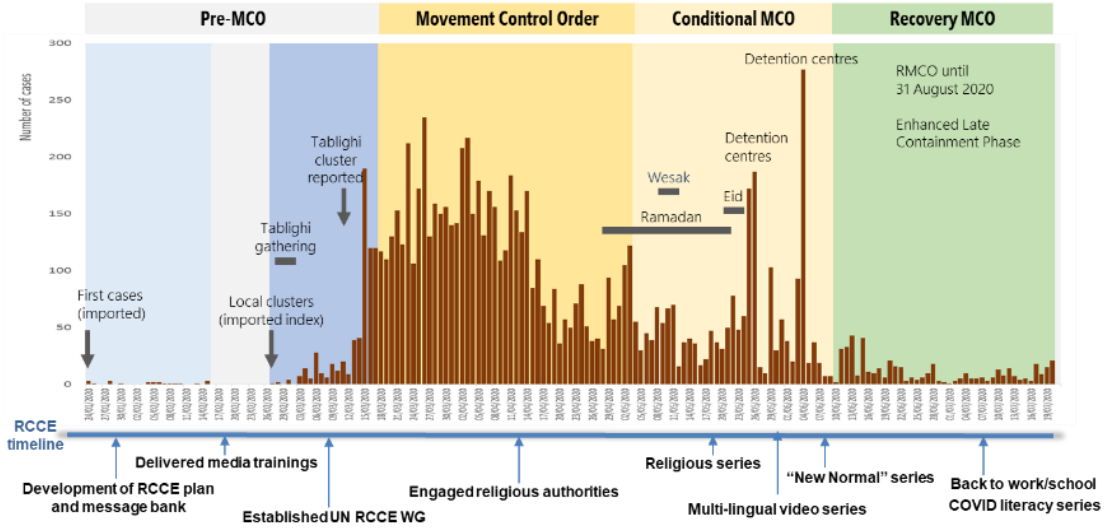
Malaysia is a country rich in culture originating from its four major ethnic groups (the descendants of Malay, South Asian, Arab, and Chinese) and indigenous communities. Islam is the faith largely practiced by the majority (61.3%) of the population, followed by Buddhism (19.8%), Christianity (9.2%) and Hinduism (6.3%).[5] The outbreak coincided with a number of important religious observances

[3] WHO's Technical Cooperation for Covid-19 Preparedness and Response in Malaysia (04), WHO Representative Office for Malaysia, Brunei Darussalam and Singapore. 14 May 2020
[4] UHC and COVID-19 preparedness and response report on Malaysia, 2020
[5] Department of Statistics, Malaysia: Population Distribution and Basic Demographic Characteristic Report 2010

across the country, and WHO recognized that religious and spiritual leaders are a key source of support, comfort and advice for the communities they serve, and can play a life-saving role in encouraging healthy practices and offering guidance in a time of uncertainty. Therefore, WHO with its partners developed RCCE strategy aimed to consider and address these cultural and faith-based norms and practices. This further supported the governments' efforts to deploy an inclusive and tailored approach to better protect communities throughout the pandemic.

Additionally, tailored IEC materials and messages were developed to meet the evolution of the outbreak and address emerging priorities. This includes advice and guidance for caregivers and guardians, businesses seeking to reopen safely as the MCO transitioned, senior citizens and those groups at highest risk of infection, parents and children preparing for the return to school, and health care workers. These materials were often translated into multiple languages, covering Malay, Burmese, Rohingya, Somali, Tamil, Tedim and Urdu.

Figure 1. Timeline of major WHO and UN Partner RCCE activities during COVID-19



Looking ahead: use of mathematical models in planning for healthcare capacity preparedness

In April 2020, with the support of the Western Pacific Regional Office, the Country Office coordinated a collaboration between the Ministry of Health's Malaysian Health Technologies Assessment Section (MaHTAS) and a consortium of mathematical modellers from Australia's Kirby Institute, University of New South Wales and Monash University. The aim – to apply the use of mathematical models not only to simulate the transmission dynamics of COVID-19 to reflect the situation in Malaysia using data on notified cases and deaths as well as non-pharmaceutical interventions (NPIs); but also, to project future transmission scenarios and trajectories based on expected changes in the implementation of the NPIs.

These projections, in turn, allow the modellers to extend the projections to health systems requirements, such as hospital beds and ICU capacity, under different future scenarios. This includes, most importantly, quantifying the requirements on the healthcare system in the event of a resurgence of infections. The projections are updated on a weekly basis, and the knowledge helps to inform

decision makers on the likelihood of a resurgence and the preparedness of the healthcare system to cope, along with factors and information sources that need to be taken into consideration.

Essential health services – managing concurrent outbreaks

In addition to dealing with COVID-19, Malaysia was also responding to a polio outbreak that was declared in December 2019 after the virus was absent in the country since 1992. Immunization campaigns had to be halted or delayed to handle the burden brought on to the health system by COVID-19. WHO, UNICEF and the other partners are working in collaboration with the MoH to control the outbreak, through enhanced surveillance, case detection, risk communication and the resumption of the immunization response. Due to this joint-effort and Malaysia's adaptable and resilient health system structure, the country is one of the first to resume its immunization campaigns

Malaysia conducted risk assessments based the national dynamics of COVID-19 transmission, the health system capacities, and the public health benefit of proceeding with a polio vaccination campaign, and as of June 2020, polio response activities have resumed in Sabah State and the Federal Territory of Labuan. Currently polio immunization campaigns are underway in every district to reach all children under 13 years of age regardless of their previous immunization status.

Ongoing steps

The overstretched health care system is a challenge that countries face as the COVID-19 pandemic continues. Although Malaysia has an adequate health care workforce with 1 doctor for every 530 people and 1 nurse for every 304 people,[6] the Country will work to develop a contingency plan so that the health systems are in position to cope with case resurgence and long-term effects of the outbreak.

Now that movement restrictions have been eased, health authorities are working to resume essential health services, particularly vaccination. The government and partners seek to ensure all children, including citizens and non-citizens, will have access to multiple doses of polio vaccine. They have also reinforced surveillance systems to detect the presence and circulation of poliovirus in the environment as poliovirus can be spread through the contaminated water or food. Health centres have implemented robust infection, prevention and control measures at health care clinics as well as ensured preventive measures are in place such as physical distancing, use of masks and hand hygiene to encourage parents and caregivers to get routine immunizations for children.

WHO works with UNCT in supporting UN agencies' response to COVID-19 and developing a proposal to the UN headquarters to attain support for the UN Socio-economic COVID-19 Response in Malaysia. WHO also facilitated Malaysia in joining the WHO coordinated Solidarity Trial. Nine sites in eight states have been identified to participate in the Solidarity Trial, involving the testing of remdesivir, a combination of two drugs, lopinavir and ritonavir; the two drugs plus interferon beta; and chloroquine, as a potential treatment for COVID-19. The protocol was approved and regulatory approval for importation of study drugs for nine participating COVID-19 Government hospitals has been obtained. Malaysia was the first country in Asia to start enrolling patients to the Solidarity Trial.

Although the current numbers are low, the risk of COVID-19 spread is still high, yet the lifting of the MCO and the introduction of the "new normal" may result in people being less vigilant about adhering

[6] Health Facts 2019, the Ministry of Health, Malaysia.

to NPI's. RCCE efforts encourage people to maintain their precautionary practices as recommended and community perceptions surveys are being conducted to evaluate and re-strategize RCCE activities and the country continues to be vigilant in its response, extending the RMCO until 31 December 2020. Additionally, WHO and partners will continue to support the government to adapt and develop messaging to reinforce the adoption of any forthcoming measures, as well as continuing outreach to risk groups and expanding to the general population as the outbreak evolves.

Treatment in negative pressure tent in Sungai Buloh Hospital, a major Infectious Disease Hospital with top Malaysian experts. The hospital is among the enrolling sites of the Solidarity trial. Photo credit: Dr Jasmine Anthonysamy

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MOROCCO

Well prepared for an early response and a whole-of-government approach to combat COVID-19

The COVID-19 outbreak in Morocco

The first case of COVID-19 in Morocco was detected on March 2, 2020 in a Moroccan national traveling back from Italy. By March 13, the first case of local transmission was reported in a close contact of an imported case. By the end March, the total number of laboratory-confirmed cases had reached 638 – with 37 deaths,[1] and by the end of May, there were nearly 7,800 cases and 204 deaths in the country of 36 million people.[2]

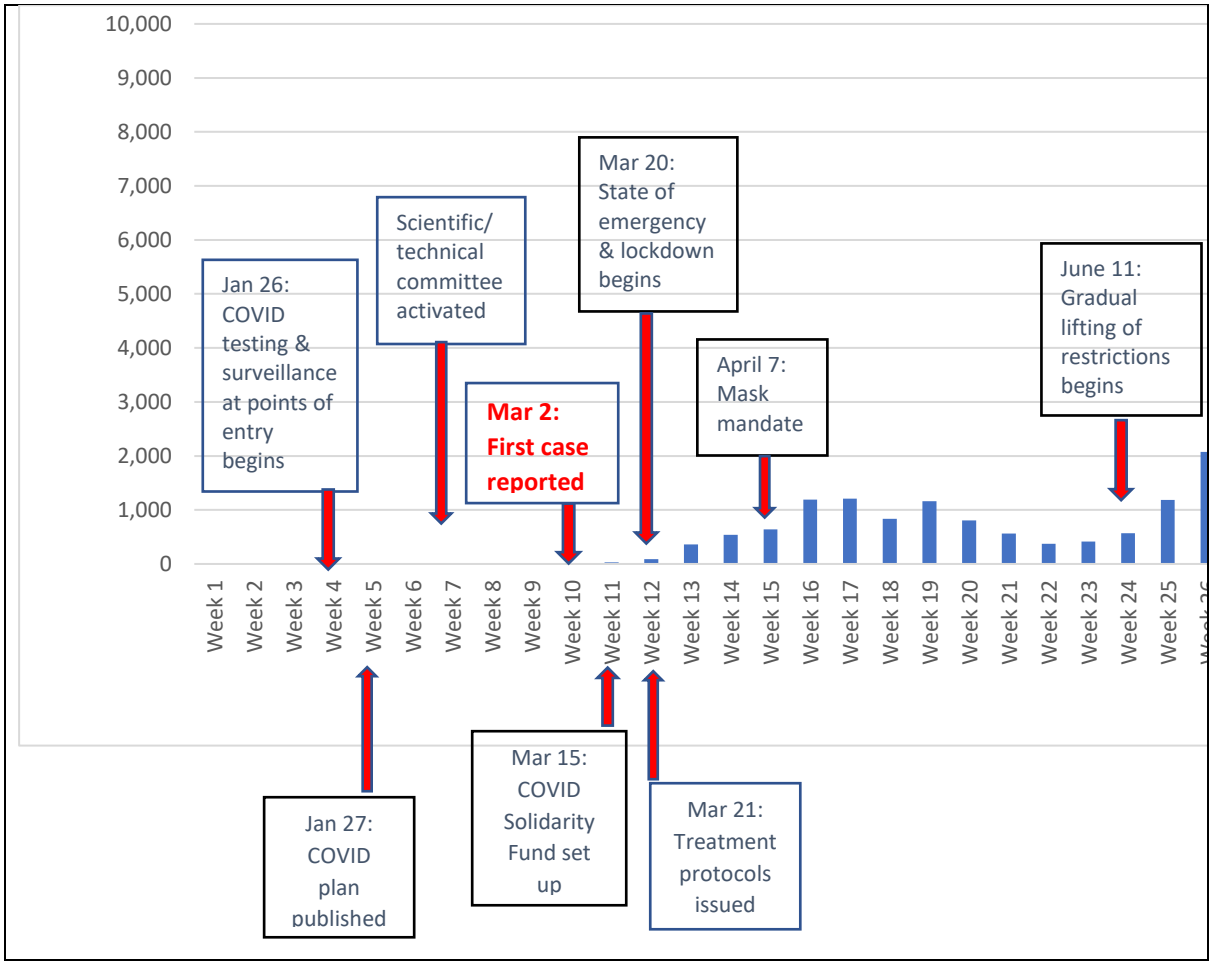
As detailed below, the country's health sector moved swiftly to prevent and then contain transmission of the virus in Morocco – even before the first case was detected – by quickly ramping up COVID surveillance and testing capacity and by preparing or building hospitals to handle large numbers of cases (Fig. 1). At the same time, the Government enacted a series of measures restricting people's movement and actions. These included the closure of air, sea and land borders on March 15, and – following the declaration of a state of medical emergency on March 19 when only 63 cases had been reported – the closure of most businesses and public spaces, a travel ban within the country, and a lockdown confining people to their homes except to obtain food or other essentials, upon approval by a neighborhood authority. A national mask mandate was also put in effect in early April.

The relatively flat epidemic curve (Fig. 1) until mid-June when lockdown measures started to be relaxed, the sharp decline in the weekly COVID-19 death rate per population from 0.15/100,000 in early April to 0.01/100,000 by the end of June, and the reduction in the case fatality rate during this period (Fig. 2), all indicate a successful approach to controlling the outbreak during the first several months. According to one analysis, Morocco's early and comprehensive response, under strong leadership, avoided 300,000 to 500,000 cases and 9,000 to 15,000 deaths from the beginning of the epidemic to mid-May 2020.[3]

However, once restrictive measures began to be eased, starting in areas of the country ("Zone 1") where COVID-19 was considered well under control, cases and deaths have climbed. This is mainly due to large clusters among workers in industrial and commercial settings, such as fish processing factories and strawberry packing plants, where mass testing was initiated once businesses reopened and where workers often live in poor and crowded conditions. Most new cases, however, are in younger people and are asymptomatic or mild. As of September 4, 2020, there have been nearly 66,000 confirmed cases – 86% of them occurring since June 18 – and 1,253 deaths. This resurgence in cases has led to a reimposition of the travel ban between major cities and a return to lockdown measures and business closures in high-incidence cities, such as Tangiers.

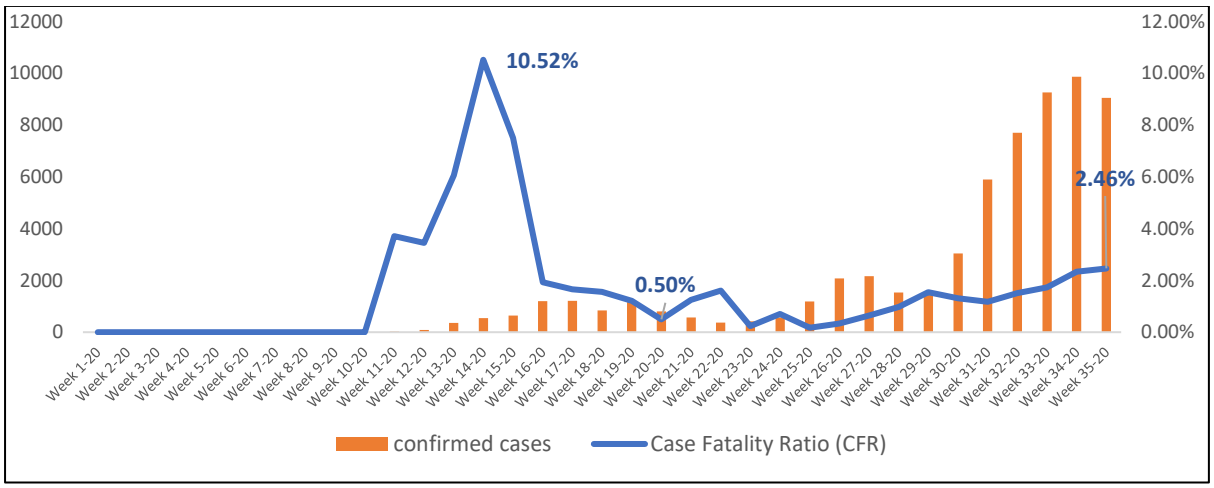
[1] Weekly Bulletin on the COVID-19 epidemic in Morocco, 31 March 2020.
[2] Indexmundi website: https://www.indexmundi.com/coronavirus/country/ma.
[3] Estimate made by the Directorate of Epidemiology and Disease Control in the Ministry of Health and presented in a presentation by Dr. M. Merabet from the Directorate.

Figure 1. The course of the COVID-19 outbreak in Morocco



This case study details the actions Morocco took both in the health sector and beyond, using a whole-of-government approach. It also describes how WHO's past and current support, especially in the areas of surveillance, lab testing, and pandemic preparedness, helped put the country in a position to mount an early and effective response, while striving to maintain essential health services.

Figure 2. Trends in COVID-19 case fatality rate in Morocco



Early actions and rapid scale-up by the health sector to prepare for and respond to the outbreak

Initial planning and surveillance

As soon as the initial outbreak was reported in China, the Moroccan Government activated systematic surveillance at ports of entry, and by January 26, 2020, the country's national influenza reference laboratory in the National Institute of Hygiene (NIH) had begun PCR testing for potential imported cases. Aware that the virus could spread quickly and overwhelm the health system, as happened in Wuhan, China and elsewhere, the Ministry of Health prepared and finalized a comprehensive National COVID-19 Surveillance and Response Plan by January 27 – more than five weeks before the first case was detected in the country. With the objectives of preventing the introduction of the virus into the country, detecting cases and containing its spread, organizing a national response, and reinforcing infection prevention and control measures in health facilities, the plan lays out specific procedures for epidemiological surveillance and contact tracing, case detection and management, governance and coordination (including activating national and regional emergency operations centers and rapid response teams), and information and communications.

Activation of emergency governance and coordination mechanisms

The Government also activated or established three committees early on to oversee different aspects of the response – enabling strong governance and coordination of the response. These are the inter-ministerial COVID-19 Steering Committee; a Scientific and Technical Committee (originally established for influenza outbreaks) to oversee; and approve guidelines and protocols for COVID surveillance and case management; and an Economic Monitoring Committee that was established in mid-March once the social and economic consequences of the outbreak became more apparent. The Scientific and Technical Committee, made up of prominent national scientists and medical experts, closely monitored the latest scientific evidence, guidelines and global recommendations to ensure that national treatment protocols and other policies and directives from the Government were grounded in sound evidence, taking stock of the fast-changing information available on this novel coronavirus.

Ramping up testing to enable early detection of COVID-19 infections

Early in the outbreak, only two national laboratories – the National Influenza Center in the NIH and the Pasteur Institute – had the capacity to conduct COVID PCR testing, with the labs responsible for different parts of the country (North and South), as outlined in the COVID plan. However, within two months, 26 laboratories, as well as five military or police labs, were conducting COVID testing using PCR or GenExpert machines. By May 22, Morocco was able to conduct 10,000 tests a day, and by the end of June, it had performed nearly 650,000 tests.[4] As of the end of August, an average of 20,000 tests are being conducted each day.

This rapid scale-up in testing was the result of training and technical assistance by staff of the National Influenza Center to 24 labs at universities, regional and local hospitals throughout the country – eight of which were already serving as sentinel sites for on-going influenza surveillance. It was also enabled by the Government's quick action in procuring test kits from overseas suppliers. With the increased testing capacity, the Government was able to carry out a comprehensive testing and contact tracing

[4] Ministry of Health. Bulletin epidemiologique No 6, 25 May 2020.

program, in which contacts considered at high risk were tested. In addition, the expanded testing capacity made it possible to conduct large-scale testing at worksites once industries began opening up in mid-June.

Morocco has further expanded the public's access to COVID testing by establishing mobile labs for rural and under-served areas, and by providing rapid antibody tests at primary health care centers as a means of quickly screening for COVID at the local level (see Box 1).

Ensuring sufficient hospital capacity to treat COVID-19 patients while maintaining other essential health services

The Government moved quickly to set up isolation units for COVID-19 patients in hospitals throughout the country – at one point setting aside nearly 14,300 beds in 72 public, military and private hospitals – based on an estimate of the potential magnitude of the outbreak. Two WHO recommendations for COVID treatment facilities were followed, including setting up separate COVID isolation units in the hospital and establishing rooms with negative pressure. With funds from the country's COVID Solidarity Fund (see Box 2), the Ministry of Health provided the hospitals with medical equipment, PPE and other supplies to adequately treat and isolate COVID-19 patients. By early May, the number of ICU beds in the country had increased 83% – from 1,642 to 3,000, though not all were operational due to a lack of personnel.

Box 1. Bringing COVID-19 services closer to the people

To improve the population's access to COVID-19 testing services, especially in under-served areas, Morocco has deployed mobile COVID testing labs – trucks or vans equipped with PCR machines. The first mobile unit was set up in mid-May by a university hospital and the National Influenza Centre to travel to remote areas with limited access to health services. There are now two mobile COVID-19 labs operating in three of the most affected regions of the country (Casablanca Settat, Tangier Tetouan and Fes Meknes), that combined had performed more than 40,000 tests by the end of August.

In a unique effort to prevent the re-importation of the virus into Morocco once the border was reopened, the National Influenza Centre equipped five passenger ships crossing from France in mid-July with PCR machines to conduct on board testing of passengers – essentially creating floating COVID-19 laboratories.

And in response to the gradual relaxation of lockdown measures and the subsequent uptick in cases since late June, the Moroccan Government will now be providing COVID-19 screening and home-based surveillance at primary health care centres to further increase the detection of the virus and ensure early care of COVID patients. According to an MOH circular issued in mid-August, primary health care centres will screen suspected cases, including those referred by pharmacists and private physicians, using a rapid antibody test and those who test positive, will be sent to a hospital for PRC testing. Asymptomatic patients will then receive home visits by the centre's staff to monitor their symptoms and ensure that they are quarantining safely, while symptomatic patients and those with risk factors will be sent to a hospital for care.

How WHO's long-term support enhanced Morocco's ability to respond to COVID-19 quickly and effectively

While the Government of Morocco has been very self-reliant in responding to the COVID-19 outbreak and has received only limited direct support from WHO for its response, WHO's role in strengthening the country's capacity in preparing for and responding to pandemic influenza and other health emergencies over the past several years has been instrumental in the country's ability to mount a rapid response to the coronavirus pandemic. This support has been provided through two main vehicles: the country's pandemic influenza preparedness plan (PIP) and work on strengthening its core capacities to implement the International Health Regulations (IHR).

Strengthening preparedness and response to pandemic influenza

Through its support for Morocco's pandemic influenza preparedness plan since 2014, WHO has helped build the country's capacities in virology lab testing, epidemiological surveillance and risk communications, as described below.

Building its viral diagnostic testing capabilities

WHO's support to the National Institute of Hygiene, which included training of lab technicians, sharing of protocols and tools, and procurement of PCR machines, reagents and other testing supplies, enabled the Institute's National Influenza Center (NIC) to become the country's national influenza reference lab capable of conducting PCR testing, including for viruses with pandemic potential, as well as genetic sequencing of influenza viruses Eight sentinel sites also acquired PCR testing capacity through the PIP. This capacity-building in influenza testing made it possible for the national reference laboratory to begin PCR testing for COVID-19 soon after COVID-19 test kits became available, and for the eight influenza sentinel laboratories to start COVID testing shortly after.

Strengthening epidemiological surveillance

With WHO technical and financial support through the PIP, integrated epidemiological and virological influenza surveillance is now operating in eight sentinel sites under the direction of the National Influenza Reference Center and the Department of Epidemiology and Disease Control. In addition, 24 rapid response teams at the national, regional and district levels have been established and trained to quickly investigate and respond to outbreaks of pandemic influenza or new emerging respiratory pathogens. Influenza data are now disaggregated by age, gender, location and other variable following WHO standards, and directly inputted by the sentinel sites through the NIC onto the Global Influenza Surveillance and Response System (GISRS).

Following training by WHO, the Ministry of Health is also now using the WHO Pandemic Influenza Severity Assessment (PISA) tool to assess the severity of influenza outbreaks in order to determine the timing, scale, intensity and urgency of response measures. All of these capabilities are being applied to the COVID-19 response, and in fact, a new protocol that combines influenza and COVID-19 surveillance is under development

Mobile laboratory 1

Mobile laboratory 2

Planning risk communications and community engagement (RCCE)

The Ministry of Health held a workshop in December 2019 with support from WHO to update and finalize a comprehensive RCCE plan in response to pandemic or seasonal influenza, a possible Ebola outbreak or multiple hazards. The workshop was attended by 40 government officials from a range of sectors, including health, agriculture, communications, the military and the royal police. This updated plan – only the second to be developed in the Eastern Mediterranean region – was used heavily to develop Morocco's risk communication strategies for COVID-19. These strategies included holding daily press briefings by the MOH to keep the public informed and counter misinformation, and the production and dissemination of numerous educational videos on COVID-19 – several supported by WHO – across social media platforms, television, radio and a digital community information platform. Posters and flyers targeting specific audiences, such as employees and consumers of supermarkets during the lockdown, users of public transportation, and immigrant populations were also broadly disseminated.

WHO also supported a project to monitor social media *(la veille médiatique)* to enable the MOH's communication unit to response rapidly to misinformation and false rumors in an effort to ensure the engagement of the population in the national COVID-19 response.

Building national capacity to prevent and control the cross-border spread of diseases and other health emergencies

Through the Health Emergencies (WHE) program at all levels of the organization, WHO has also worked with the Moroccan Government to better prepare for and respond to health emergencies, including strengthening its core capacities to implement the International Health Regulations (IHR 2005). Morocco was the third country in the region to have a joint external evaluation (JEE conducted (in 2016) to assess its implementation of the IHRs. The evaluation led to the country developing a multi-sectoral National Security Plan that addresses key areas of weakness found in the JEE and which forms the basis for WHO's continued support in this area.

Especially relevant to the country's COVID-19 response has been WHO's help in strengthening the ability of the country's 17 points of entry to screen for, detect and manage the importation of potential epidemic diseases. This support has included working with each point to develop emergency plans and procedures and training its staff.

Box 2. A whole-of-government approach at the heart of Morocco's COVID-19 response

Once it became apparent in March that the novel coronavirus was spreading locally, and seeing how even advanced economies, such as Italy and Spain, were struggling to treat patients and save lives, the Moroccan government moved swiftly to mount a strong whole-of-government response to the pandemic. Prompted by a forceful message from His Majesty King Mohammed VI calling on all parts of the Government to work together to deal with this crisis, Morocco's response is considered one of the strongest and most cohesive responses to an emergency in the country's history.

In addition to the health sector's actions described above, this multi-sector response has included:

- **Establishment of a special COVID-19 Solidarity Fund:** Under the initiative of His Majesty the King, this fund was set up on March 15 to cover the costs of medical equipment, supplies, and upgrading of infrastructure, as well as to provide financial support to businesses and households affected by the lockdown (see below). His Majesty personally made the initial pledge to the fund, quickly followed by donations from private companies, the public sector (including €450 million from the European Union),[5] and individuals. The Fund, directed by the Economic Monitoring Committee, has – as of July 1 – received pledges totalling 33 billion Moroccan dirhams (≈US$3.3 billion), including $200 million for the Ministry of Health.

- **Cash assistance to people unemployed by the lockdown:** In addition to providing cash transfers to laid off workers in the formal sector through the National Social Security Fund, the Government, using the COVID-19 Solidary Fund, started providing unconditional weekly stipends in early April to unemployed workers who are beneficiaries of the national medical insurance program for the poor (RAMED). Cash transfers through the RAMED system were sent relatively to 2.3 million households. An additional 2 million households in the informal sector also received cash payments by registering via a digital platform.

- **Mobilizing private industry to produce critical medical supplies:** Morocco's textile industry – made up of 1,600 companies and 185,000 workers – was urged by the Government in early March to make medical masks and other PPE in anticipation of a surge in COVID-19 cases. Within three weeks, factories were producing three million masks that met government specifications per day, which were initially distributed to 70,000 local shops through networks of two dairy companies and sold for a fixed price ($0.10). By early May, production had increased to seven million masks a day[16] – making the national mask mandate more feasible. The Petro-chemical industry was also pressed into service to produce hydroalcoholic gel as a disinfectant.

  The country has produced enough masks, gel and other PPE to not only meet its domestic needs, but to also donate these items to 15 African countries, as instructed by the King. [7]These countries have received more than eight million Moroccan-made masks, 30,000 litters of disinfectant gel and hundreds of thousands of medical coasts, caps and other PPE.

- **Leveraging diplomatic ties to procure critical supplies:** A key factor in Morocco being able expand COVID-19 testing and bed capacity in such a short period of time was its ability to procure test kits and medical equipment and supplies from countries such as China and the Republic of Korea. This was the result of diplomatic relations with these and other countries that King Mohammed VI and the Ministry of Foreign Affairs have built over many years

[5] Oxford Business Group. The innovations behind Morocco's internationally praised Covid-19 response. 20 May 2020.
[6] Morocco World News. Morocco allows export of 50% of locally-produced protective face masks. May 7, 2020.

[7] Africa News. Morocco sends 8 million masks to 15 African countries. June 15, 2020.

Continuing challenges as we move forward

With the surge of cases after lifting lockdown, Morocco needs to pay attention to its most vulnerable populations. These include not only people with chronic diseases and the elderly who are particularly at risk of severe disease, but also poor households living and working in difficult conditions and who cannot protect themselves from the virus. The challenge ahead will be to balance the economic imperatives of a lower middle-income country with necessary public health measures to combat the COVID-19 pandemic

Box 3. Supporting the continuity of essential health services during a pandemic

The WHO Morocco country office, cognizant of the toll that COVID-19 and lockdown measures would have on the demand for and provision of maternal and child health and other essential health services, started supporting the Government early in the outbreak to develop strategies and interventions to ensure that these services continued despite the challenges posed by the pandemic. Indeed, consultations at an emergency room in a major children's hospital in Rabat fell 74% during the one-month period of mid-March to mid-April from the same period the previous year.[8]

This support has included working with UNFPA to assist the Government in developing COVID-specific protocols and trainings for medical professionals on how to prevent COVID transmission while providing delivery and newborn care. Two interactive Webinars on this topic have thus far taken place, attended by a total of 700 nurses, midwives, doctors and MCH managers, and facilitated by specialists from the WHO Reproductive Health Collaborating Centre in Rabat. The trainings covered such topics as procedures for childbirth and Caesarean section for pregnant women with suspected or confirmed COVID-19, the care of infants with COVID, and breastfeeding practices during COVID-19.

WHO is continuing to support the Ministry of Health on devising strategies to ensure that other essential services continue, such as cancer treatment and palliative care (e.g., by ensuring that transportation is safe and waiting times are reduced), and care for non-communicable diseases (through phone consultations and check-ins). WHO has recently submitted, along with UNFPA and other partners, a proposal to the UN COVID-19 Multi-Partner Trust Fund to support the continuity of MCH services through such interventions as telemedicine, mobile health services, and continuing medical education using remote learning methods.

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[8] Mekaoui N et al. The effect of COVID-19 on paediatric emergencies and admissions in Morocco: cannot see the forest for the trees? *Journal of Tropical Pediatrics* 2020; 0 (1-2).

MYANMAR

Driving Collaboration to Respond to an Evolving Pandemic

As part of Myanmar's triple transition towards lasting peace, federal democracy, and socio-economic development, Government of Myanmar and multiple development partners are working together on many fronts, including health. For a sustained period of time, WHO has been one of the biggest supporters of the Country's efforts to improve the health of its peoples. Now, in the COVID-19 pandemic, WHO is a key partner to help country and partners respond swiftly and decisively to this continuing global threat.

Health in Myanmar

Republic of the Union of Myanmar is a country sharing borders with China, the Country where novel coronavirus, Sars-CoV-2, first emerged. A large diverse country, Myanmar also shares borders with Thailand and Laos, as well as Bangladesh and India. Myanmar's capital was moved from Yangon to Naypyitaw from November 2005, with Yangon retaining importance as the Country's commercial centre and the most populated metropolitan conurbation, with approximately eight million people. Apart from this, about 70% of Myanmar's population lives in rural areas, some very remote.

Health services in Myanmar are provided through about 1,350 hospitals and about 2,230 primary and secondary health facilities.[1] The health care worker ratio at 1.33 health workers (doctors, nurses and midwives) per 1,000 people is still below the WHO minimum recommended threshold of 2.3.[2] The challenge of providing health care for the population is not only posed by the shortage of human resources but also by protracted humanitarian situations within the Country. There are locations where access is limited for national government and international agencies, including those providing health services in the area.

Engaging government and society from inception

In early January 2020, the Union Minister of Health and Sports and WHO Representative to Myanmar discussed the emergence of "*cases of pneumonia of unknown cause*" reported from Wuhan city, China. The Ministry of Health and Sports (MoHS) was already enhancing its surveillance, WHO South-East Asia Region (SEARO) and WHO Myanmar provided early advice. The Government set up an *Intersectoral Central Committee for COVID-19 Prevention, Control and Treatment* which was initially chaired by the Union Ministers of International Coordination and of Health and Sports.

WHO Representative to Myanmar convened partners' coordination fora, leveraging the already existing coordination mechanisms. Weekly meetings followed, initially lead by WHO, later hosted by the MoHS. They brought together partners from humanitarian and development organisations, health and non-health sectors, bilateral and multilateral, international non-governmental organizations, and civil society, to exchange information and discuss collaboration and support for Myanmar's COVID-19 preparedness and response.

[1] http://mmsis.gov.mm/statHtml/statHtml.do

[2] National Health Plan 2017-2021, Union Ministry of Health & Sports, Republic of the Union of Myanmar

WHO Representative to Myanmar, Dr Stephan P Jost, lead a coordination meeting with partners on COVID-19 response in WHO office in Yangon on 7 February 2020. Photo credit: WHO Myanmar

The Government quickly increased surveillance and monitoring of COVID-19 at Points of Entry. As on 1 February, in addition to closing its borders with China, Myanmar suspended on-arrival visa for visitors from China, to mitigate early importation of COVID-19. Immediately in the same month, the MoHS shared an initial flash proposal for COVID-19 preparedness and response for US$ 5 million, to enable the Country to implement the key public health measures to prevent and contain COVID-19 at an early stage. At this time, operational support was provided by WHO for the activation of the health emergency operations centres at national and sub-national levels.

Building on the initial flash proposal, WHO supported the MoHS in developing the health sector contingency plan outbreak response on COVID-19 and other emerging respiratory disease in Myanmar, based on WHO Strategic Preparedness and Response Plan guidance. The plan was finalised and endorsed in April. At this stage, Myanmar was yet to establish its testing capacity, hence for the time being, WHO supported the MoHS for sending samples to the Thailand's National Institute of Health in Bangkok.

On 14 March,[3] HE State Counsellor Daw Aung San Suu Kyi lead Myanmar's *National Central Committee on Prevention, Control and Treatment of COVID-19*. This key committee supports a whole-of-government response, facilitates collaboration of civilian and defence medical services, as well as partners and civil society organisations. When the first two cases of COVID-19 were detected in Myanmar on 23 March 2020, the Committee was prepared.

[3] http://aacc-asia.org/content/news/document/7_63_Covid%20Situation%20of%20Myanmar.pdf

Figure 1. Timeline of COVID-19 preparedness in Myanmar

WHO: convening partners, advocating collaboration, providing implementation support

WHO established three subgroups to streamline the coordination process for COVID-19 preparedness and response, and to allow more effective actions in response to COVID-19. All three subgroups are chaired by MoHS. Technical experts of WHO Myanmar co-chairing the subgroups on:

- surveillance and laboratory diagnostic capacity;
- case management and infection prevention and control;
- risk communication and community engagement.

The humanitarian cluster system is formally active in Myanmar and WHO co-leads the health cluster with the MoHS to respond to different humanitarian crises in Myanmar. This long-formed engagement with the humanitarian organisations enables the health response focused partners on reaching out to vulnerable populations affected by the humanitarian situation.

Within the United Nations Country Team (UNCT), the existing Operations Management Team (OMT) then formed the OMT COVID-19 Task Force, comprised the Resident Coordinator's office, UN Physician, and WHO, to strengthen the coordination and operational readiness among the United Nations' agencies. This UN task force is led by the Country director of the World Food Programme (WFP) with WHO providing close guidance. The OMT drives the UNCT's response to COVID-19 and helps the UN staff and their families navigate the unprecedented situation.

Continuing its support to UNCT, WHO engaged fully in the development the United Nations Framework for the immediate socio-economic response to COVID-19 (SERF) in Myanmar, leading the health pillar and ensuring that there is no overlap with the COVID-19 Country Preparedness and Response Plan (CPRP). It has been agreed that the SERF health pillar will focus less on direct COVID-19-related activities, putting more resources continuity of non-COVID-19 services, and looking more at the mid and long-term health system strengthening, supporting policy-making, strategies and structures. WHO is also engaged in mobilizing resources, mobilizing US$18 million from

the Global Fund to Fight AIDS, Tuberculosis and Malaria to the MoHS, to mitigate impact of COVID-19 on TB, HIV, and malaria services.

Surveillance and laboratory strengthening

Laboratory & surveillance group is identifying and supporting solutions to bottlenecks in the testing function, and assists operational aspects of surveillance, detection, testing of COVID-19. A testing strategy has been developed as a living document, updated every other week to ensure that the strategy and guidelines are in line with latest scientific evidence. The same mechanism is also applied to surveillance. The limited testing capacity and strict testing criteria in the early phase from March – May 2020 quickly improved, with scale-up and availability. WHO initiated discussion on a set of prevalence surveys to generate more evidence to contain COVID-19 outbreak and supporting effective response.

WFP special flight brought WHO medical supplies to support Myanmar's fight against Covid19. Photo credit: Ma Ohnmar Myint

WHO facilitated to repurpose the GeneXpert test platforms, normally used for TB and HIV, to accelerate COVID-19 test efficiently. Training has been conducted to help health staff operate the machine. WHO collaborated with The United Nations Office for Project Services (UNOPS) to provide the first 10,000 GeneXpert cartridges. Additional resources were mobilized through the Global Fund for GeneXpert cartridges, laboratory supplies, sample transportation, waste management and trainings. WFP humanitarian flights helped bring the cartridges and other laboratory equipment and supplies to Myanmar with financial support from the European Union and the Embassy of Switzerland to fund the flights.

From having no domestic capacity to do COVID-19 tests until 20 February 2020, now Myanmar has set up a network of laboratories for COVID-19 testing with the total capacity of 3,700 test per day. Four laboratories are in civilian facilities and three in military facilities. Twenty-six other sites are also conducting testing with GeneXpert machines, most of them are in hospitals. Three laboratories are in Yangon, three in Naypyitaw, one in Mandalay and one in Mawlamyine. The MoHS plans to expand the capacity to other hospitals where GeneXpert may be reallocated plus in other cities where proper lab facilities can be set, including Taunggyi (Shan state), Myitkyina (Kachin State), Loikaw (Kayah State), and Dawei (Tanintharyi Region). WHO supported the MoHS in designing testing strategies and implementation of the lab information system, training and providing supplies, including tests and consumables.

With WHO technical support, Myanmar joined a WHO-facilitated global sero-surveillance study to better understand COVID-19. This could eventually provide better scientific information on burden estimates and to support optimization of COVID-19 response.

Case management and infection prevention and control

The group of case management and infection prevention and control (IPC) is hands-on in carrying out its work. Members visited three key hospitals in Yangon Region, assessing and providing technical support in case management. The support has been continuously given to the national and local health authorities.

In collaboration with WHO SEARO, WHO Myanmar trained 20 frontline medical doctors on Severe Acute Respiratory Infections to improve quality of care of pre-Intensive Care Unit (ICU) case management. The second set of training has just commenced in September 2020. It has an additional goal: to equip trained young doctors with skills and expertise to further develop health care in Myanmar. Trainings in IPC are also conducted for doctors and nurses, facilitated by WHO and the MoHS. As the leading agency in health, WHO provides technical advice for COVID-19 diagnosis, treatment, and the entire case management process, working with the MoHS to keep doctors updated on the references and science of COVID-19.

Encouraging timely and accurate data collection important for decision making, WHO provided equipment, such as computers and mobile phones, that allowed hospitals to set up a data system that collects information on clinical management, then analyse and use to improve the quality of care. Under the leadership of WHO, the Group has managed to support the development and constant updates of clinical Guidelines, the Fever Clinic Guidelines (in the context of monsoon related diseases), mobilize resources, and draw together donors, to improve the support for hospital preparedness. Collaborations have assisted Myanmar in improving hospitals' capacity to provide care for COVID-19 patients. The number of ICU beds increased from 101 in April to 316 in September and the number of mechanical ventilators increased from 66 to 238. Investing in hospitals' preparedness is what WHO advocated to partners like the Global Fund, Asian Development Bank, and World Bank.

Risk communication and community engagement

The coordination group for risk communication and community engagement (RCCE) is chaired by the MoHS, co-chaired by WHO and UNICEF. Members include seven UN agencies and 32 partners from donors, international and national non-governmental organisations, civil society organisations, as well as faith-based organisations and communication experts. A comprehensive online mapping dashboard is available to visualize who does what and where. This Group meets every two weeks, or whenever required, to review RCCE work, identify context specific messaging, and discuss issues and challenges. The work of RCCE group has helped all partners to communicate better to public on the urgent need to contain COVID-19, particularly on the important messages of why and the how-to protect individuals, their families, and the community from COVID-19.

The RCCE framework was developed by 8 March, before the first case was detected in Myanmar. This informed development of RCCE Strategy and Implementation Plan which was finalized by 8 April. The Strategy and Implementation Plan guided the development of RCCE materials, define the target audiences and channels of communication, down to the geographical areas to focus. WHO and partners are promoting prevention messages on 3Ws- wash your hands, watch your distance, and wear a mask, combined with 3Cs- avoid crowded places, close contact settings, and confined poorly ventilated areas. Numerous COVID-19 guidelines and announcements were issued to the public. Partners collaborated to disseminate materials to different parts of the Country. RCCE partners were able to complement mass communication on public health measures deployed by the Government, like the suspension of the Water Festival--the biggest and longest festival in Myanmar, mass gatherings, and home-stay in different parts of Myanmar. WHO Representative interacts with media to convey messages on COVID-19. The related interviews have featured in numerous print and digital media.

COVID-19 3Cs poster is available for public use on the website of WHO Country Office for Myanmar.

Another part of RCCE work is to manage infodemic through monitoring print, digital, and social media, capturing rumours, misinformation, and concerns. Infodemic could cause counterproductive public behaviour and hinder COVID-19 response. A joint effort of WHO, UNICEF, UNOCHA, UNIC, UNFPA, UNDP, and Myanmar Tech Accountability Network, assist the MoHS to conduct print, digital, and social media monitoring. In the Country Office, myth-busting operation uses the available website and Facebook page. The monitoring and information from WHO benefits partners in their work to bust rumours and myths trending in social media.

The MoHS jointly with the Department of Medical Research and Myanmar Medical Association is hosting a COVID-19 call centre, from which public at large could get correct information on COVID-19. Public could also access information and all COVID-19 communication materials from a hub created by the MoHS, WHO, Myanmar Information Management Unit and partners. The MoHS is also pushing surveillance information, announcement, RCCE materials, and guidelines through Viber social chat and call application. Over 1.5 million subscribers receive information at least 2 times a day. To promote correct messaging from the journalist, UNOPS, UNESCO and *Internews Agencies* developed media guidelines, and trained local journalists on COVID-19.

The MoHS, WHO, UNICEF, and partners held numerous community insight surveys to measure the impact of RCCE. One of the surveys shows that 100% of respondents are aware of COVID-19 and over

80% respondents practice the recommended preventive behaviours. As COVID-19 situation progress, RCCE group continues to reinforce timely deliverance of tailored messages for public.

Coordination between development and humanitarian partners for COVID-19 response

WHO Myanmar and the MoHS co-chair the National Health Cluster coordination platform involving humanitarian actors. This humanitarian platform was already active years before the COVID-19 emergence, up and running to support COVID-19 preparedness and response. Although it is not an exact match to WHO's Emergency Response Framework, the humanitarian platform adequately facilitates the humanitarian actors to support Covid19 response.

Covid19 partners' coordination forum was convened from 31 January, rounding up media, bilateral partners, local travel and tourism agencies, private sector, and more, to join the two parallel conversations, within the development and humanitarian organisations, uniting supports to Covid19 response, particularly in areas where humanitarian organisations work.

Participation grew from about 70 organisations or entities who participate in national Health Cluster meetings to 114 organisations for specific interest in Covid19 preparedness and response in Myanmar, representing both health and non-health, development and humanitarian actors. Furthermore, an inter-cluster coordination group collaborates across different sectoral clusters for support in providing shelter, water and sanitation, in areas with ongoing humanitarian operations.

Basic orientations on Covid19 has been carried out in the field by WHO, with frontline actors in hard-to-reach, including non-government-controlled areas, in collaboration with the United Nations Office for the Coordination of Humanitarian Affairs (OCHA). WHO contributed to the development of the *Covid19 addendum* to the *2020 Myanmar Humanitarian Response Plan*, specific to supporting Covid19 preparedness and response in areas where ongoing humanitarian actions serve vulnerable communities.

Maintaining essential health services

The shortage of human resources for health in Myanmar constraints the Country's effort to maintain essential health services. At the same time, the government and WHO are working closely to keep essential services available. Immunization services, for example, which were interrupted for six weeks from late March to mid-May 2020, fully resumed from 1 June 2020. The number of children immunized since has exceeded the number of children immunized during the same period in 2019, indicating significant catch up. WHO & UNICEF are providing collaborating closely with the health authorities to help address human resource constraints.

Despite the situation, essential public health programmes restarted and continue. A public event was held for the World Hepatitis Day. Now, Myanmar is preparing itself to resume services while scaling up detection capacity to respond to the incoming migrant returnees from Thailand and China. Assisted by WHO, public health programmes are developing guidelines and tailoring interventions to the context of Covid19. WHO facilitated mobilization of US$ 18 million to mitigate the impact of Covid19 on services for TB, HIV and malaria and help maintain essential health services in these key collaborative programmes.

Further work for Covid-19 response and essential health services

"The success of Myanmar, so far, is attributed to early swift action, taken by whole-of-government in a whole-of-society approach. At the same time, as the pandemic evolves, the key challenge will be to sustain this" Dr Stephan P Jost, WHO Representative to Myanmar.

As at 9 September 2020, close to 181,000 specimens have been tested for Covid19, detecting 1,807 laboratory-confirmed cases. The case fatality ratio is currently close to 0.7%, and 460 confirmed cases have been discharged from hospital care. In the first five-months since the first case detected in the country in March, the number of reported Covid19 cases were 400 people. However, local case was reported from Rakhine State on 16 August 2020 where there are ongoing humanitarian operations. Following this, a high increase of Covid19 cases was detected between the last week of August to second week of September 2020. Majority of cases reported in this period were from Yangon Region as well as Rakhine State. The highest number of reported cases in a 24-hour period was on 8 September 2020 with 191 cases. A range of public health and social measures have been implemented in response, including stay-at-home order in Rakhine State from 20 August 2020 and in seven townships of Yangon Region from 2 September 2020.

The Government has been harnessing the potential of civilian *and* defence medical services. Myanmar is poised to continue to do so to contain the spread of Covid19, with concerted works of health and humanitarian partners, extending reach to areas where the control of Covid19, and the care for people infected by the disease, are yet to be improved. Additional support was mobilized to protecting health workers in delivering TB, HIV and malaria services. It further reinforces the Covid19 response itself, including, *inter alia*, 20 GeneXpert machines and cartridges boosting testing capacity and strategy, essential to continuing improvement of Myanmar's Covid19 testing capacity.

Continuing with its collaborations, WHO and partners are working for necessary logistics for detection and to help address all pillars of national Covid19 response plan, such as PPE, reagents, test kits, and maintenance of essential health services efficiently utilised. The UNCT Myanmar prepared a UN CPRP in support of the MoHS' health sector contingency plan outbreak response on Covid19 and other emerging respiratory diseases in Myanmar. Recognising that the Covid19 pandemic is a marathon, WHO takes the existing opportunity to assist Myanmar strengthen the health system. A joint MoHS-UN task force was formed to develop a *joint addendum* to the Myanmar Health Sector Contingency Plan on Covid19 and the UN CPRP, including extending the planning duration to 30 September 2021 and beyond.

Furthermore, considering that health is the function of different aspects, UNCT with key WHO support has just completed UN SERF document in Myanmar. This framework can help mobilize resources to mitigate the profound *socio-economic* impact of Covid19. This is crucial - in terms of determinants for health and in terms of overall help for Myanmar to pull through.

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World Health Organization

NORTH MACEDONIA

An early and active COVID-19 Response through whole of government approach with WHO support

North Macedonia immediately scaled up its capacity to detect, trace, prevent, treat and reduce transmission as soon as information of a new pathogen outbreak was declared in Wuhan. The country mobilized an all-of-government action to fight the new coronavirus, scaling up emergency response mechanisms in all sectors with full support of WHO. The government activated quickly its national crisis management unit, consisting of ministers and headed by the President of the Republic to ensure that the response to COVID-19 was based on a multi-sectoral approach. A formal declaration of emergency was issued on 18 March 2020, to counter the spread of COVID-19. The health response was led by the Minister of Health with advisory scientific support from the National Commission for Infectious Diseases where WHO is a recognized member with advisory role. The minutes of daily meetings of the Commission have become the basis for governmental decisions. WHO country office continued to serve as a link between the Commission's experts and the technical expertise worldwide, bringing in the required qualification to quickly respond to emerging needs.

Based on daily updates from WHO, the government of North Macedonia started preparing for the pandemic in January 2020, several weeks before the first case of COVID-19 (imported from Northern Italy) was confirmed in the country on 26 February 2020. WHO promptly rolled out its technical support early January 2020 and helped creating specialized national capacity in various areas including early identification and surveillance, laboratory testing, and readiness measures in the two airports and border land crossings. Following WHO guidance, strict infection control measures were initiated in all health facilities including longer-term health care centers like prohibiting visits to geriatric facilities and elderly homes. This single control measure has spared the vulnerable population (i.e. the elderly) from explosive outbreaks of COVID-19, as seen in other countries. As regular visits to General Practitioners in primary health care centers were halted, the government enabled systematic extension of prescriptions for patients with chronic conditions and remunerated the consultations by phone. As the government limited non COVID-19 medical consultations except in utmost emergency, local NGOs such as the Macedonian Red Cross, were mobilized to take care of elderly people and the disabled, supply them with required amenities, thus removing the need to leave their homes. All COVID-19 related testing and care was provided at the expense of the government irrelevant of the type of insurance and ability of the patient to pay.

Global demand for test kits and PPEs was exceeding the supply and local procurement could not meet the needs of North Macedonia. To resolve the issue at hand, WHO first mobilized its internal resources to provide PPE and procure other lifesaving materials to help combat COVID-19 in North Macedonia. As stated by Dr. Tawilah: "*Probably, we were the first in Western Balkan to have a COVID-19 case confirmed, and if the WHO and North Macedonia government had not moved ahead and had not gotten the laboratories ready since January, we would have been in a very bad situation. We had capacities built into readiness mode*"

The Ministry of Health, the UN agencies and external partners continuously approached WHO to seek advice on quality assurance of equipment and supplies, and best COVID-19 interventions. WHO conducted needs assessment and developed repeatedly costed supply lists that enabled the country to scope its procurement needs and submit requests to donors.

WHO Supplies delivered to the infectious diseases clinic (left) and the virology lab at Institure of Public Health (right)

At early times of the outbreak, up to 20% of all COVID-19 cases were reported among medical personnel, half of them occurred in primary health care (PHC) facilities. This showcased shortage and poor utilization of personal protective supplies as well as poor emergency preparedness at the PHC and other first levels of care. This observation prompted WHO to organize several online trainings in local languages on contact tracing, infection control, care and other capacity building initiatives and promoted nurses' capacity to improve their role as first responders to COVID-19. Five WHO COVID-19 web-based trainings were translated and adapted to national languages. From May to August 2020, a total of 3805 health professionals mainly doctors have voluntarily taken the courses online. The courses were monitored and accredited as continuous professional education through an innovative digital system created in agreement between WHO, E-health directorate and the Macedonian Doctors' Chamber. Many additional seminars and courses continue to be conducted online in areas of quality laboratory testing, infection control and prevention and COVID-19 hospital care.

Celebration of Nursing day during COVID-19 acknowledging the contribution of forefront heroes of care in North Macedonia in the largest COVID-19 dedicated Hospital

As the country faced several outbreak peaks in the past months and reported the highest COVID-19 mortality rates in Western Balkans, the government intensified its collaboration with WHO and other developmental partners to jointly respond to the pandemic. Borrowing from other European country experiences and WHO guidance, the WHO country staff worked relentlessly on disseminating daily information and exchanging knowledge through press releases, media interviews, WHO guidelines, remote conferences, high level information and advocacy meetings, training and direct WHO expertise.

Early implementation of public health measures, such as mass gatherings and closure of educational facilities and curfew hours was set on 10 March 2020, only 12 days after the first case was reported and before the first death in the country was reported (20 March 2020). However, by end of March, COVID-19 has quickly spread across the country following increasing number of imported cases. The country worked hard to ensure hospitalization surge capacity with necessary repurposed health personnel and hospital beds increase. WHO support facilitated the strengthening of the epidemiological investigation capacity. Building on WHO/MOH harmonious partnership, an early and vigorous COVID-19 risk communication campaign was initiated on all possible communication channels including social media and TV. Initially the public demonstrated a positive response and compliance and strong trust in the government prevention measures. However, by summer, the public health restrictive measures were loosened due to public fatigue and the economic impact, resulting in resurgence of cases. In April 2020, the government launched the "StopKorona!" app, which alerts users if they have been in contact with someone who tested positive for COVID-19. Unfortunately, the application was not widely used (15-20% uptake) by the population.

Overall, the government's response was early and agile, with a whole of society response, and an incredible dedication of health workers, public health officers, all working tirelessly to save lives and protect people from COVID-19. By the end of August 2020, MOH had set up its first ever Epidemic and Public Health Emergency Operation Centre, increased testing capacity from 100 tests up to 2000 tests

per day, showed agile extension and repurposing of health facilities and human resources, prompt communication of daily health messages, coupled with a good public health response to identify and isolate cases. In just a few months, beds allocated to COVID-19 treatment increased from 4 in the capital to about 4000 distributed across country.

At the same time, COVID-19 highlighted some positive attributes about the country: transparency in decision-making during crisis times, trust in WHO and international partners to provide support as needed, reliance on and willingness to engage WHO as the main international health authority and coordinator in all possible aspects of the country's fight with the pandemic. "*COVID-19 is making people reinvent themselves every single day to adjust to new reality*," said Dr Jihane Tawilah, WHO Representative in North Macedonia. "*Since the start of the pandemic, the national team of North Macedonia has demonstrated diversity of efforts, flexibility and creativity in its response to challenges that COVID-19 brought about*," Dr Tawilah continued.

Central to the fruitful national efforts was the harmonized and synergized strong partnership between WHO and the MOH. Both parties collaborated in the planning and adaptation of WHO guidelines into national instructions, and WHO continues to support the MOH in estimating needs and build capacity by providing timely technical evidence-based support for fact checking, epidemic monitoring and analysis, technical training and risk communication.

Health personnel in PPE encouraging their co-workers at the COVID-19 ward at the University infectious diseases clinic in Skopje

COVID-19: revealing non-evident gaps and trying out new approaches

North Macedonia's score on the Global Health Security Index is 39.1 in 2019, ranking 90th out of 195 countries. The country's capacity for detection and reporting, which includes laboratory systems, real-time surveillance and reporting, the epidemiological workforce, and data integration across the human/ animal/ environmental health sectors is considered moderate, with North Macedonia scoring just below average (41.7 vs. an average of 41.9). The results of a thorough Joint External Evaluation of the implementation of International Health Regulations (2005) conducted in 2019, with WHO found several areas that required further attention: biosafety and biosecurity, information systems, health workforce, multisectoral collaboration, risk communication and national coordination.

North Macedonia has revived its emergency response preparedness in the last year with reactivating the national IHR committee, emergency simulation exercises, all supported by WHO and aimed at strengthening the country's IHR core capacity.

In addition, it was possible to establish in August 2020 the new Epidemic Intelligence and Emergency Operating Centre at the Institute of Public health (EOC). By this action, the Ministry of health aims at setting a real-data center to track the epidemic, inform policy, trigger control measures, combining early warning to risk assessment, and response intervention. The center is part of new concrete steps by the country to be ahead of the virus and proactively identifying, tracking and stopping the outbreak. One of the first outputs of the center is a unified national and subnational dashboard with real-time early indicators- at national and subnational level. (https://www.euro.who.int/en/countries/north-macedonia/news/news/2021/8/epidemics-and-public-health-emergency-operations-centre-opens-in-north-macedonia

Opening of the Epidemic and Public Health Emergency Operation Centre by Minister of Health Dr Venko Filipce and Dr Hans Kluge, WHO Regional Director for EUROPE, Skopje, August 2020

A telehealth component is being integrated with WHO support to the National system for Electronic Health Information – Moj Termin. This new digital health functionality will allow doctors to practice remote care and document it. When needed, patients could receive health care from home, which will reduce the long queuing at PHC facilities thus reducing potential risk of spread of the COVID-19 virus or other respiratory pathogens in the future

WHO helped introducing the Health Workforce Estimator; another WHO tool in its COVID-19 response. The Health Workforce Estimator has enabled the government to identify significant gaps in their health workforce structure and numbers. It also highlighted the overall weak connections between various levels of the healthcare system prompting for an improved and integrated collaboration for better health outcomes and a more resilient health system performance. In parallel, a more permanent digital roster of the health workforce is underway to match geographical health service's needs for managing and planning staff surge capacities.

A unified data system and improved capacity for analysis was felt crucial to support a more granular response at the local level. Thus, WHO assisted in creating a unique and live Register for COVID-19 positive patients gathering all information from contact tracing, testing to care for better tracking, monitoring and analyzing data

Evidence- informed advocacy to support the country

For more than ten years, North Macedonia did not receive any external support from donors towards health systems strengthening. North Macedonia's health system needed to be equipped to meet the increased demand for COVID-19 treatment, while simultaneously ensuring the continuity of essential health services. Health outcomes in North Macedonia continue to be challenging, and noncommunicable diseases (NCDs) are an important risk factor. A significant decrease in vaccination rates has also been observed in North Macedonia in recent years. These trends are generally thought to be due to suboptimal primary health care system, nursing and public health practices.

All through the epidemic, WHO continued answering inquiries and orienting the support from UN agencies and international partners to real needs of MOH, based on series of field assessments in different areas, and taking part in negotiations of the required support.

Despite the negative consequences of COVID-19, it gave an opportunity to WHO in advocating for the country to revive donors' interest in investing in the country's health sector. As ambassadors and representatives of international organizations started expressing their interest to potentially fund activities in the country, WHO played the leading role in providing transparent data, and depicting the objective picture that critically validated all potential opportunities and risks.

The country needed better instruments to understand the development of the pandemic beyond morbidity and mortality indicators and better understand how people behave and make decisions in the pandemic reality. Responding to this need, WHO introduced innovative behavioral insights surveys. "*For the first time people were asked how they felt and what they think about the situation, they received the possibility to tell if they believe the messages they hear from the government. The results of our studies showed that the epidemic risk communication should be redesigned. Risk communication should start from the very beginning of an outbreak and should be worked out in a*

continuous way," says Dr Tawilah. The government decided to use this WHO's tool systematically and is currently redesigning response policies using the data collected from two rounds of studies. The studies are planned to be repeated till the end of December 2020. which are simultaneously benefiting UN and other partners working on supporting risk communication and mobilizing communities.

WHO has led the first Pillar of the UN Socioeconomic impact framework: Health First and established an innovative indicators' matrix to measure and monitor the trends related to Health and socioeconomic impact of COVID-19.

Going Forward: ready to shift COVID-19 response gear and responding to impact

Challenges remain ahead. The response of the health sector has come with real costs in terms of erosion in the coverage and availability of routine health services that seems to be more pronounced at the peripheral level. Another important challenge is that people associate being a patient or a contact with stigma, as this has socio-economic implications. This has resulted in infringements of isolation measures and resistance to access testing and disclosing contacts. The recently conducted UN socioeconomic assessment of COVID-19 for North Macedonia indicates that the impact of COVID-19 on the country's economy will be greater than that of the global financial crisis of 2007-2009. Undoubtfully, this will influence the health sector. Financial and human resource investments will be required, and consideration should be given to tasks reallocation.

More health sector preparedness, public health risk management and emergency planning are needed to ensure the continuity of essential health services, vaccination of the population and continuous testing of the health workforce. Questions around the safety of return to schools and other activities are raised while still scaling up country readiness for an expected second wave for autumn 2020. Recognizing this, WHO is working hand in hand with the government of North Macedonia to adapt, design and implement new response measures while critically reflecting on the achievements and challenges of the past months.

One of the main lessons learned from the current COVID-19 pandemic in North Macedonia is that pandemic preparedness is not the only influencing factor for an adequate public health response. The emergency response can only go so far as the health system's first line of defense – primary health care – is alert and up to the task. Shortcomings of the primary health care system are far more than just about supplies; they are also about organization, staff mobilization, scope of practice and prioritization. WHO current efforts with the Ministry of Health in North Macedonia aspire to see a stronger primary health care that would be more like a one stop shop, with trusted nurse or doctor, available and trained to give safer care and answer questions regardless of outbreaks or changes around. Primary health care should be the first place to which everyone turns for early identification, health services or information, using hospitals only when truly necessary.

We need to learn from the crisis. Public Health has been also revealed as a central pillar for Health but also for the economic thrive and security of the country. WHO will focus further support on strengthening further Public Health capacity centrally and in the regions and modernize the practices using technologies, establishing an emergency dashboard and increasing epidemiological and contact tracing as well as risk communication capacities.

Going forward there is undoubtedly a need to shift gear to a response that proactively identifies and tracks health threats, outbreak evolution, finds and isolates every single case, traces close contacts that need to be quarantined to minimize and even interrupt transmission.

WHO stands by the government of North Macedonia, as there will be no social economic recovery without strong health. WHO will continue to support North Macedonia to combat COVID-19 related morbidity and mortality, build transparent and effective partnerships and strengthen the country's health system to allow for better preparation of future pandemics.

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RUSSIAN FEDERATION

Community Engagement and Fighting Infodemic

The Russian Federation is one of the countries with the highest number of COVID-19 cases in the world. More than half of the total number of confirmed cases have taken place in the capital city Moscow - and the rest of the cases have been reported across the country. The Russian Federation spans across two continents, eleven time zones, and is home to over 146 million inhabitants. Coordination and information have been essential in the Russian Federation's response to the epidemic.

The virus spread to Russia at the end of January 2020, but due to the rapid implementation of a comprehensive package of public health and social distancing measures, including the restriction of border crossings to China, extensive testing, cancelling events and gatherings, and declaration of non-working period and lock-downs, the virus was well contained for the first two months. In the beginning of March, a popular vacation season, Russia began to see its first influx of cases. The first COVID-19 related death to be reported in Russia occurred in mid-March.

During the first half of May the confirmed cases rapidly increased, and doubled in two weeks, placing Russia momentarily as the country with the second largest number of confirmed cases in the world. By the end of August there were nearly one million confirmed cases, and approximately 17,000 deaths.

Universal Health Coverage, specifically achieving access to quality health care for remote populations has been one of the country's highest priorities. The federal Ministry of Health (MoH) coordinates and develops policies while the 85 federal units have autonomy and responsibility in organising and delivering health services. The Russian Federation has taken extensive action to ensure that the entire country is well-prepared and adequately responds to the pandemic, in addition, the government has stepped up research efforts to develop a vaccine to fight the virus.

WHO continues to work closely with the Russian government and has collaborated to develop public communication materials to help dispel myths, mistruths and conspiracy theories that spread quickly during times of uncertainty. These efforts have brought critical information to the Russian population.

WHO has been engaged in discussions with the relevant authorities and has been central in disseminating technical documents and providing valuable input on COVID-19 related issues to the MoH. Furthermore, WHO through community engagement and collaboration with government authorities, and in the spirit of whole of government approach, has kept general public health matters along with health issues that affect vulnerable populations on the agenda. Feedback on the collaboration has been positive across the ministries and authorities.

Russia is an emerging donor country that is no longer a programme country for the UN. The UN entities in the country operate without the Resident Coordinator system but have established effective partnerships. These partnerships have shown its effectiveness during the COVID-19 response, agencies have jointly discussed how to best highlight the multiple facets of COVID-19 and

show the effective responses and good practices the country has employed. Currently, there are 19 UN agencies present in Russia.

Information - cure to uncertainty, medicine for myths

In the times of crisis, the need for accurate and credible information increases dramatically. The WHO Country Office in Russia has played a major role in ensuring that all parts of the vast Russian society receive accurate information about COVID-19. The Government shares important information on its legislative, regulatory and executive decisions with the public on a regular basis, and all Government sessions related to COVID-19 have been broadcasted, thus, increasing transparency of the situation and response.

In response to COVID-19, the Russian Government has ensured close alignment with WHO recommendations. Through its existing long-term partnership with MoH, WHO has ensured that all relevant Government institutions receive WHO COVID-19 updates, including risk factors and behaviors for noncommunicable diseases, mental health strengthening and ensuring the maintenance of essential health services.

WHO has supported direct communication with the public through interviews, Q&A programmes and awareness messages tailored to local circumstances and broadcasted on television and radio in major cities and regions. At the height of the epidemic, more than twenty public communication events were held every week. WHO supported the Government in reaching their target audience, those who use social media channels and platforms for news and information, by developing COVID-19 related news.

WHO Representative, Dr Melita Vujnovic presents at the conference "Neurocognitive health - successes and challenges for medical services" stressing the importance of mental health during the COVID-19 pandemic, 24 August 2020, Moscow

In April 2020, an official account for WHO in Russia was created on Vkontakte (VK), "the Russian Facebook" and the largest social media platform in the country. The WHO Country Office staff closely monitor and respond to comments on the VK page and also use the page to disseminate correct and useful information. This interaction with the public has allowed to better understand the public's sentiment around the pandemic, helping to identify the biggest information gaps and circulating misinformation which can affect people´s behaviour and potentially hamper the success of the epidemic response. With the continued spread of the virus in the country and the current situation, some WHO COVID-19 related posts on VK received several million views. As of now, the WHO account has over 34 thousand subscribers from Russia and other countries.

As seen globally, a wealth of misinformation has been circulating about the COVID-19 virus. Immediately after the onset of the pandemic, WHO and the authorities worked together on strengthening public communication and fighting the infodemic.

Three rounds of behavioural insight surveys, conducted jointly by WHO Russia and the City of Moscow Institute for Health Management, provided information on people´s perceptions of the measures put in place and challenges they face, and provided insight on how to tailor public health measures needed to contain transmission. In response to the growing need for information, WHO shared recommendations and technical documents with the Government. This information was also made publicly available on the MOH website and the *Rospotrebnadzor*, a Federal Service for Surveillance on Consumer Rights Protection and Human Well-Being website.

Throughout the behavioural insight surveys, the WHO Country Office in Russia and the Regional Office for Europe have engaged in discussions with the health authorities and supported their work during the pandemic, providing the latest information and technical advice.

Keeping up with health and well-being

RUSSIAN RESPONSE

- Russia triggered its emergency response system on high alert based on WHO´s information through IHR reporting system in January 2020
- National Action Plan based on intersectoral approach was activated and inter-ministerial working groups were established to direct and manage the country´s response preparations: to conduct inventory of resources, review potential scenarios and forecast needs.
- Based on the response plan procurement of additional life-saving equipment and massive training of health professionals were started, and hospital bed capacity and needed man-power were prepared for.
- COVID-19 policy response was coordinated by the President, and sessions led by the President were directly broadcasted for the utmost transparency. Each of the 85 regions assessed their epidemiological situation and created unique responses based on federal policies, strategies and technical advice.
- A media and information campaign supported Government´s efforts. The Prime Minister´s Office was

With WHO releasing more data on COVID-19 and its impact on health, the government prioritized the protection of the elderly and persons suffering from underlying and chronic diseases, asking them to stay at home.

Staying at home resulted in reduced physical activity and further implications on overall health. To encourage well-being and health of those strictly confined to homes and in the spirit of health through the life-course, WHO in agreement with the Department of Health of the City of Moscow supported the National Centre for Rehabilitation to develop exercise videos suitable for the elderly population. The videos were broadcasted on television and on various social media platforms, generating millions of views. Besides the initial target audience for these online exercise videos, many young people were also attracted to the online exercise videos, who then encouraged their older family members to get moving.

On a larger scale, maintaining essential health services while responding to COVID-19 has proven to be a challenge across the globe. Medical personnel have been reorganised from other sectors to respond to the pandemic, reducing services and access to services in other sectors. Global trends also show that people have been more reluctant to seek out medical services for other conditions during the pandemic in comparison to "normal times", out of fear of visiting a health facility and potentially contracting the COVID-19 virus, or simply out of consideration to "not burden" overstretched health services.

In Russia, nearly all regions significantly reduced or entirely stopped providing routine immunization during the restrictive period. WHO has kept the importance of continuous service provision on the agenda during the pandemic, naturally highlighting the principles of safety of health workers and children. With the easing of restrictions, immunization services were among the first to be fully restored.

Health authorities have been closely monitoring access to health services, particularly for those with cardio-vascular diseases and cancer patients. While preventive and periodical examinations stopped, consultations with patients continued through primary health care and the use of telemedicine, which is a relatively a new way of care. An analysis of the WHO survey on essential health services conducted globally, along with insights provided by key national experts during the first months showed that this additional burden might last longer than the pandemic itself. This information has also triggered decisions for easing restrictions and returning health facilities back to their original purposes and not only to COVID-19 treatments as soon as possible.

Many have stayed home and in isolation for long periods of time, due to concerns for their health and that of their loved ones. Restrictions on social interactions and routines have a significant negative effect on mental health, as such WHO closely works with partners in the mental health services space and the health care system, to focus on mental health as a major part of the COVID-19 response.

A wide-spread movement of volunteers has had a major effect on issues which tend to disproportionately impact the most vulnerable such as access to medicines and food supplies. Since the beginning of lock-down volunteers have delivered produce and medicines to the homes of the elderly. WHO contributed to an assessment and advocated for the continuation of long-term and palliative care, ensuring the enough availability of at-home palliative medical care. Efforts are also

being made to optimize social care, which is overwhelmed due to the pandemic. WHO´s long term project on suicide prevention has continued as normal, and further developed software to monitor self-harm. Similarly, work on a pilot project that addresses dementia, and family awareness for dementia patients has been made available online.

COVID-19 vaccination research and development

Russia made major investments in research and development for COVID-19 by responding to the calls made by the WHO Director-General, which were strongly supported by national leaders, emphasizing the importance of science and research investments. Russia has developed several tests systems and started to work on several COVID-19 candidate vaccines and is conducting clinical trials for several self-developed medicines.

At the same time, the Ministry of Health also informed WHO on Russia's readiness to join the Solidarity Trial on medicines. Discussions with the authorities are ongoing for all EUL types, including requirements and information on potential candidate vaccines. The information system put in place in Moscow and other regions for COVID-19 patients will provide data for research on the cause of the disease, epidemiology, and other elements. WHO has kept in close contact with national health authorities and research institutions and continues to provide key information and encourage further engagement of Russian researchers in publishing findings and sharing results onCOVID-19 products as global common goods.

HEALTH SYSTEM RESPONSE

- The health system has strengthened its disease surveillance systems and rapidly increased testing. More than 36 million tests have been taken. The number of tests has increased from 2,200 to 300,000 a day from the beginning of the pandemic to present day. Tests are analysed in over 800 laboratories across the country.
- Each of the Russia´s 85 regions had the task to assess its own epidemiological situation, create unique responses to it, based on federal policies, strategies and technical advice, and launch relevant non-pharmaceutical interventions, including social distancing and response measures.
- Capacity of public health and primary health care centres, hospitals and laboratories has been expanded. Hospitals have been reorganised, temporary hospitals have been set up, and new hospitals have been constructed. More than 130,000 hospital beds have been prepared for COVID-19patients countrywide.
- Ensuring an adequate number of frontline health workers who are well-trained in early detection, treatment, and use of protective equipment.
- Strengthening the network of epidemiologists supporting case investigation and contact tracing at the local and regional levels.
- Salaries for health workers who treat COVID-19patients have been increased

GOVERNMENT MEASURES TO MITIGATE IMPACT

- Medical assistance and health care for all who need it
- Measures to minimize impact of quarantine on the population and businesses
- Increased unemployment benefits
- Subsidies for families with children
- Prioritizing youth employment
- Ensuring extra financial inputs for all health and social care personnel working with covid-19
- Speeding up technology and innovation development

KEEPING THEIR VOICES HEARD

Together with national partners, WHO Russia has as one of its major goals focused on keeping the voices of the most vulnerable people of the society on the agenda and heard.

Presentations have been made at a number of key technical meetings during the pandemic

- Conference on Aging – Covid-19
- Sustainable Development Goal Forum on HIV
- Valday Think-Tank club Policy Discussions
- Conference on Oncology and maintaining key essential health services
- Update on COVID-19and the role of WHO to students of Sechenov Medical University
- Presentation on multisectoral response and a role of young people to UN international course
- Presentation to Chamber of Commerce on occupational health and exposure to covid-19

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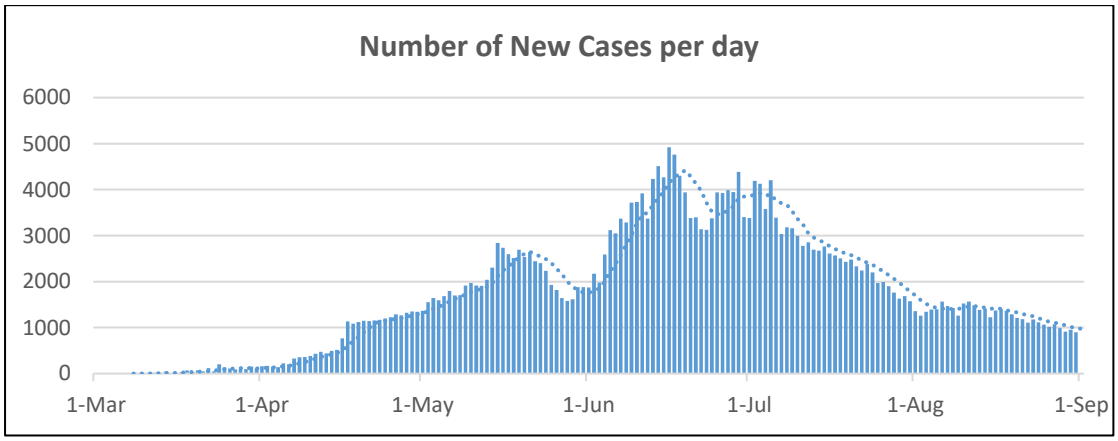
SAUDI ARABIA

An example of how preparedness, strengthened by past experience, enabled an early and robust national response to the COVID-19 pandemic

As of September 2, 2020, the Kingdom of Saudi Arabia, with a population of more than 34 million people, has reported a total of nearly 317,000 confirmed cases of COVID-19 and more than 3,900 deaths since the first case was detected on March 2 in a Saudi national returning from Iran via a third country. However, since the peak of the epidemic from early June to mid-July – during which 3,000 to more than 4,000 cases were reported each day – cases have come down steadily to around 1,000 per day (Fig. 1). The daily death toll has been between 27 and 42 since early August, with an overall case fatality rate of 1.2%.

Figure 1. COVID-19 Epidemic curve in Saudi Arabia



The Government has been able to limit the spread of the outbreak and reverse the epidemic curve through a series of early and quick actions involving the whole of government. In addition to mitigation measures, including the suspension of international flights, a lockdown on major cities, the closure of businesses and most public places (including schools, restaurants and mosques), and suspension of Umrah to all visitors, actions taken by the health sector have had a major impact on reducing transmission of the disease. As a result of these actions, described below, PCR testing for COVID-19 has been readily available free-of-charge for anyone who wants to be tested, including undocumented immigrants, since early on in the outbreak.

The Government's capacity to treat COVID-19 patients – both in hospitals and in outpatient clinics – has always exceeded the need, even during the period of peak incidence. A well-established surveillance system was activated early on, starting at ports of entry, to detect COVID-19 transmission and follow up for 14 days after arrival. And the public has been kept well informed about the disease, the course of the outbreak, and on how to reduce their risk and seek care through a wide variety of communications channels, including daily press briefings, social media and electronic platforms. With these systems and procedures in place to control the outbreak, the Government was able to hold the

annual Hajj – albeit a much smaller and more restricted version – in mid-July, without a single COVID-19 case occurring among the participants.

A key reason for the country's ability to mount a comprehensive, coordinated and quick response to COVID-19 has been its experience in preparing for and responding to health emergencies, including potential infectious disease outbreaks that might arise among the 2.5 million people who descend upon Makkah and Madinah each year for five days during the Hajj pilgrimage – among the largest mass gatherings in the world. The health-related structures, systems and procedures that have been put in place for the annual Hajj, coupled with the lessons learned from the country's experience with the Middle Eastern Respiratory Syndrome (MERS) – a more deadly disease caused by another coronavirus – have put Saudi Arabia in a unique position to prepare for and respond to the COVID-19 pandemic. This case study explores key aspects of the response, how it was informed and strengthened by these past experiences, as well as WHO's partnership in building the country's capabilities in critical technical areas.

Early actions to prepare for the response

As soon as the outbreak of a novel coronavirus was reported out of China, the Government of Saudi Arabia established in early January an inter-ministerial COVID-19 Monitoring Committee to follow global updates and prepare the country for the possible introduction and spread of the virus. The Committee, chaired by the Minister of Health, consists of government ministers from a range of sectors (e.g., education, interior, among others) and top officials of key agencies, including the Saudi Food and Drug Administration and the Saudi Centers for Disease Control. The Saudi Government has long experience in using multi-sector committees to oversee events with health implications, including the national committee that oversees the annual Hajj, which includes ministers for the Hajj, health, interior, and transportation.

In addition, by January 10 – nearly two months before the first case of COVID-19 was detected in the Kingdom – the Ministry of Health finalized a COVID-19 preparedness and response plan, as well as the first version (since updated) of detailed operational guidelines covering all aspects of the response – from specimen collection and laboratory testing to case management, risk communications, contract tracing and quarantine requirements. The speed with which these documents were produced is explained by the fact that they were adapted from existing plans, including a national pandemic plan and influenza preparedness plans, which had been developed with WHO support.

Another early action to limit the importation of the virus – before international travel was suspended in mid-March – was to require all international travelers, including Saudi nationals, to quarantine upon arrival for 14 days (this was later reduced), initially in dedicated quarantine facilities and hotels designated by the Government and later at home.

Rapid scale up of COVID-19 PCR testing

To ensure that all people who wanted a test – including those without symptoms – could be tested, the Ministry of Health rapidly expanded laboratory capacity for PCR and simultaneously increased the public's access to testing sites. Initially, PCR testing for COVID-19 was limited to the National Health Laboratory in Riyadh, which had become a reference laboratory for advanced diagnostics and accredited with WHO support, as well as three regional public health labs – with a total capacity of 1,800 tests per day. Testing was quickly expanded to 10 additional regional labs, for a total of 14 public health laboratories that, as early as the beginning of July, were together able to perform more than 60,000 tests per day. To prevent possible bottlenecks in testing, the Government also began certifying private labs in early May (currently totally 51) to conduct COVID-19 PCR testing, after ensuring that they had the necessary equipment and capabilities. And to further increase testing capacity, the Government entered into a contract in April with a Chinese company to establish six regional labs, including a mobile lab that can conduct 10,000 tests per day.

The Government created different avenues for people to readily get tested, including through the use of mobile technology. A COVID-19 service was added to the Ministry of Health's 937 hotline for people experiencing COVID symptoms to call. Doctors staffing the hotline, which served people in four languages (Arabic, Persian, Urdu and English), determined if a caller had suspected COVID and directed them to one of the designated hospitals for testing and treatment, along with instructions on setting up an appointment through a mobile app (Mawid). Once stand-alone COVID-19 clinics were created starting in early June, as described below, people experiencing symptoms could go directly to one of these clinics to be tested, without a prior appointment.

Unlike in many countries, people without symptoms were also able to get tested at drive-through testing sites called *Ta'kkad* ("assure"), starting in early to mid-June, during which time 21 centers were established. Appointments using an app (*Sehaty*) are required for testing through these sites and results are available via the app within 24 hours. By the end of August 32 *Ta'kkad* sites were operating in cities thorough the country.

Ensuring sufficient capacity to manage COVID-19 cases

During the early planning stage in January, the Ministry of Health, in anticipation of a surge in cases if the virus comes into the country, designated 25 public hospitals as COVID-19 treatment and isolation centers. These hospitals – with a combined capacity of 80,000 beds, including 8,000 ICU beds – had capabilities in infection prevention and control (IPC), isolation and care of patients with a highly-infectious respiratory illness, including through prior experience treating MERS cases. As a contingency plan, three temporary field hospitals were also set up in hotspots – a 500-bed facility in Jeddah and 100-bed facilities in Makkah and Madinah. Within three months, ICU beds increased by 2,200. The demand for COVID beds never exceeded the supply and in fact, the field hospitals were barely used.

As the outbreak progressed, the MOH decided to establish stand-alone clinics (*Tettaman*) for the diagnosis and treatment of COVID-19 on an outpatient basis. This unique model – built upon the country's shift towards primary health care and the establishment of 2,500 PHC centers – allows people with symptoms to walk into a clinic for COVID-19 testing and treatment without needing an

appointment. Since the first *Tettaman* clinics were open in early June, their growth has been steady – reaching 238 throughout the country by early September 2020. Patients can also now receive care for COVID-19 in the private facilities that have passed a government inspection.

How Saudi Arabia's efforts to strengthen its diseases outbreak preparedness and response capabilities, in partnership with WHO, led to the country's robust COVID-19 response

While Saudi Arabia required little direct assistance in many of the aspects of the response mentioned above – given its level of economic development – WHO has provided technical assistance over the years in specific areas, including through its support for the health-related activities for the annual Hajj and the country's response to the 2013 MERS outbreak. Examples of this support in recent years include working with the MOH in establishing a national network of public health laboratories, strengthening infection prevention and control practices in health facilities, and contributing to the updated national guidelines on MERS-CoV. Below we highlight two additional technical areas where WHO has worked with the MOH – disease surveillance and report and risk communications – that have been strengthened over the years and are examples of best practices during the country's COVID-19 response.

Disease surveillance and reporting

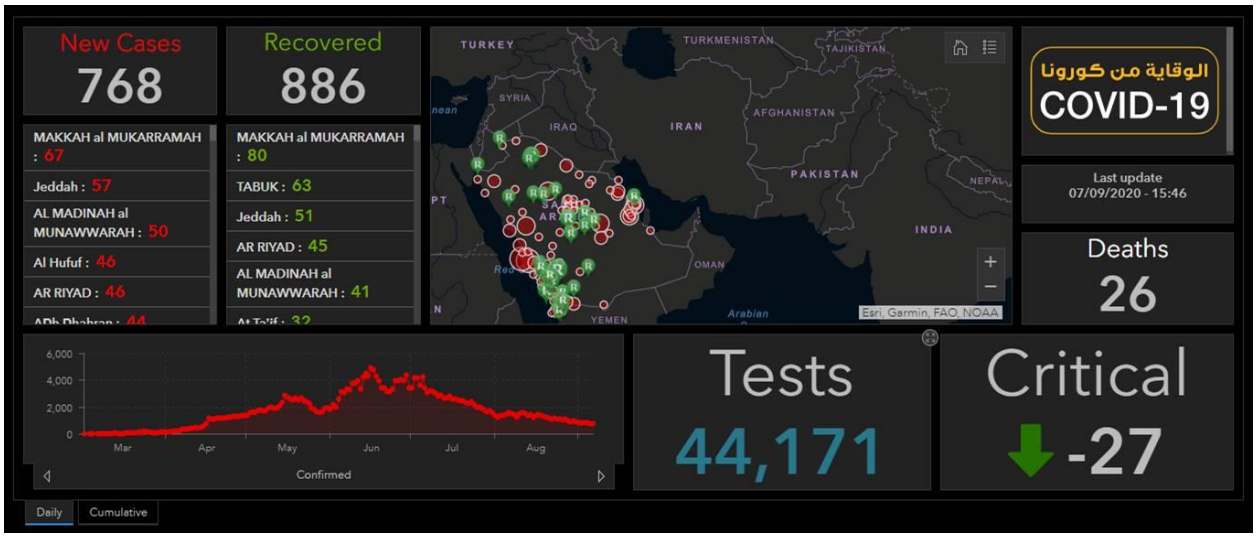
The potential for health emergencies to occur during Hajj, as well as the MERS outbreak that began in 2013, prompted the MOH to establish a Command and Control Center in 2014 with WHO support, to coordinate and lead national responses to public health emergencies. Other WHO support to strengthen the country's ability to detect and respond to potential disease outbreaks during the Hajj has included conducting a training workshop for national rapid response teams (RRTs) operating during the Hajj and supporting the implementation of an early warning and alert response system (EWARS), both in 2018.

In addition, each year since 2015, WHO has partnered with the MOH in preparing for and monitoring any health-related issues during the Hajj. The WHO Representative and two or three epidemiologists from the Regional Office work with the MOH to prepare for and prevent health emergencies among the pilgrims, monitor health conditions during the event to ensure that no infectious disease outbreaks occur, and issue a statement summarizing any health issues or events.

One manifestation of Saudi Arabia's strong and responsive surveillance system was the active screening and testing that began on April 17 by 150 teams sent across the country to areas where new cases may be present, to take samples and conduct health education. This resulted in the early identification of many cases; in some instances, 60% of reported cases were detected by these teams.

Another major advancement, prompted by the MERS outbreak has been the development of an electronic disease surveillance and reporting system, with WHO technical support. Since early on the outbreak, the MOH has produced daily summary reports on the number of cases, deaths, recoveries and tests that are available on the Ministry's website and Twitter accounts. This information has also been displayed since mid-June on a MOH-run dashboard that is updated daily.

Fig. 2 Screenshot of the Government of Saudi Arabia's COVID-19 dashboard



Risk communications

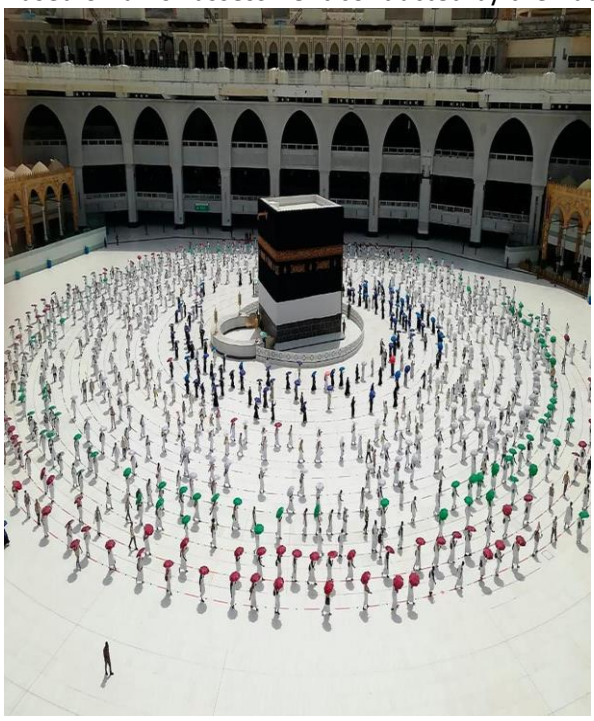
One of the most striking aspects of Saudi Arabia's response to COVID-19 has been its multi-faceted, well-coordinated communications campaign across media platforms to raise public awareness of the disease and epidemic, provide information on reducing the risk (e.g., through physical distancing, wearing a mask) and inform people on what to do if they are experiencing symptoms, using simple and consistent messaging. This intensive campaign has included producing dozens of public information and "explainer" videos distributed via mass media and social media channels; sending billions of SMS messages in 17 languages about how people can protect themselves and their families; and having government ministers, celebrities, academics and religious leaders send simple messages, such as "Stay home" and "flatten the curve" to their Twitter followers.

Also, noteworthy has been the Government's transparent and frequent communications during the COVID-19 crisis. The Government had learned a key lesson from the MERS about the critical importance of keeping the public informed and being transparent. Consequently, the Vice-Minister – the main government spokesperson for the COVID response – has held daily press conferences since early March (now twice weekly) to present information on the course of the outbreak and actions taken by the Government, and to respond forthrightly to questions from the media.

Likely contributing to the improved communications strategies for COVID-19 was a two-day workshop on strengthening national risk communications for mass gatherings in July 2018, which was facilitated by a WHO expert from Geneva and attended by 50 participants from across the health sector, including the supervisor general and other members of the MOH's Emergency and Disaster Management Department and organizations involved in the Hajj. This interactive workshop explored what communicating for health and other risks is about and went through the steps on how to facilitate risk communication processes during various events, with a focus on the Hajj. Participants practiced designing compelling messages for specific events, communicating with the media (e.g., through role playing), and preparing press releases. The workshop brought home the point that a strong risk communications campaign is critical to the success of a response to a health emergency.

Organizing a successful, event-free Hajj in the middle of a pandemic

Despite the pandemic, the Saudi Government was confident enough of its ability to conduct a scaled-down version of the annual Hajj in mid-July, when COVID cases were still high but starting to decline. Based on a risk assessment conducted by the national Hajj committee and discussed with the WHO, the number of pilgrims was limited to 10,000 (compared to 2.5 million in a normal year), to allow for sufficient physical distancing and be able to manage and monitor their movements. To minimize the risk of re-importing the virus, the event was limited to people living in Saudi Arabia – with 30% of the slots given to Saudi nationals and 70% to non-Saudi residents. With health being a major criterion for selection of the pilgrims, all nationals were health care workers and security personnel who had been infected with COVID-19 and had fully-recovered, and thus presumably immune to the infection. All pilgrims had to be 50 years old or younger and have no chronic health conditions, while non-Saudi residents also had to be first-time pilgrims and undergo a negative PCR test. The Government covered all travel, food, lodging and other expenses of the pilgrims.



In addition, the pilgrims were required to quarantine in hotels or at home prior to and following the five-day event, and given wristbands connected to their phones to monitor their movements. They were also given their own prayer rugs and required to practice social distancing when praying and walking around the Kaaba rules that they learned through online sessions given in different languages. As is true every year, health services were made available at the pilgrimage sites. No cases of COVID-19 were reported among the pilgrims.

Conclusion

The experience with COVID-19 in Saudi Arabia is an example of how good preparedness, along with a comprehensive, multi-faceted response to a pandemic – that simultaneously addresses the needs to prevent the outbreak, detect and report cases, conduct laboratory diagnosis, manage cases, and communicate with the public – can be effective in controlling an epidemic. It also demonstrates how WHO can work effectively in a high-income country to guide policy and strengthen specific technical capabilities, upon request by the Government.

Using technology to improve the COVID-19 response

With 93% of the Saudi population already using the Internet, the country has made excellent use of mobile technology to engage the public in the COVID-19 response and enhance their access to information, as well as testing and treatment services. While the use of social media, SMS messaging and other technologies to provide timely, accurate information to the public about COVID-19 has been

described above, we highlight below some innovative mobile apps developed to assist individuals to access testing and treatment services for COVID-19, as well as contact tracing. These apps can be accessed through multiple channels, including the MOH Facebook page, MOH Website, Saudi Press Association Website, and SMS and Twitter messages sent by the Government.

Sehaty ("my health"): Persons without COVID-19 symptoms who want to get tested through the drive-through Ta'kkad testing sites must make an appointment using this application, which had earlier been created to promote health lifestyles among the population. The app sends an SMS with the date, time and location of the testing site, and sends the test results via another SMS. If the result is positive, the app automatically notifies the Ministry of Health, which follows up with the individual. Data costs are waived for users of this app.

Mawid ("appointment"): Already in use for making medical appointments at primary health care facilities, a COVID-19 component to this application has been added. The app walks the user through a self-assessment to determine if he or she has COVID-19 symptoms and if the answer is yes, directs the user (to do what? Does it make appointments? Please complete this.

Tabaud: a social distancing and contact tracing app that helps people know through GPS signaling if they have come in contact with an individual infected by COVID-19. Individuals can then use the app to notify others or ask for help.

Saudi Arabia's leadership role in mobilizing resources for the global COVID-19 response

As the rotating President of the G20, Saudi Arabia has played a leading role in obtaining pledges from the G20 countries totaling $500 million to fund the Strategic Preparedness and Response Plan for the global fight against COVID-19, with $80 million going to WHO to support country, regional and global efforts to respond to the pandemic. The Kingdom itself, through the Ministry of Foreign Affairs, pledged $80 million to the SPRP.

In addition, during the early days of the pandemic, in March, the King Salman Humanitarian Aid and Relief Center (KSrelief) – the country's international development agency with which WHO has a close partnership – made a $10 million donation to WHO to implement urgent measures to minimize the global spread of the disease and to support countries with vulnerable health systems with their preparedness and response. The agency provided an additional $13 million to the WHO country office in Yemen to purchase critical medical supplies and equipment, including PPE for health workers, laboratory tests, and trauma medication, to support the country's readiness to respond to COVID-19.

In all, Saudi Arabia has to date provided $103 million to WHO to combat the pandemic. The prominent role that the Kingdom has and will continue to play, through its G20 leadership and national institutions is expected to only strengthen its partnership with WHO.

THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

A Robust Health System Responding Effectively to COVID-19 Pandemic

Sri Lanka's response to the COVID-19 pandemic has been swift, decisive, and coordinated, using whole-of-society approach under the strong leadership of HE President Gotabaya Rajapaksa with technical guidance from the Ministry of Health and Indigenous Medical Services and the World Health Organization.

A health system prepared for a pandemic

"Universal health coverage and health security are two sides of the same coin." Dr. Tedros Adhanom Ghebreyesus, WHO Director-General, 17 May 2018.[1]

Robust health system

Free health care service for every citizen has been available in Sri Lanka since the 1930s. Through decades of national crisis, the Government has managed to move towards the goal of universal health coverage with the "good health at low cost" approach and developed a vigorous health workforce with one doctor and two nurses per 1000 population.[2] Now, the country's 21.8 million[3] of population, living across the country's nine provinces and 25 districts, have been benefitting from the strong preventive and curative health system. Sri Lanka has already achieved maternal, under-five, and neonatal mortality rates, which are less than half of the 2030 SDG targets. The country has successfully eliminated many diseases including Malaria, Measles, Rubella, and mother to child transmission of HIV and Syphilis.

Pandemic Emergency preparedness

In the last decade alone, Sri Lanka has experienced more than 11 000 emergencies.[4] Although most of the incidents are flood, drought, and strong winds, the Government has taken the initiative to develop the country's preparedness and response capacity to all hazards within the framework of the International Health Regulations (IHR, 2005). The three levels of WHO worked with Sri Lanka's key

[1] https://www.who.int/hac/techguidance/preparedness/health-emergency-and-disaster-risk-management-framework-eng.pdf?ua=1

[2] Smith, O. 2018. "Sri Lanka: Achieving Pro-Poor Universal Health Coverage without Health Financing Reforms". Universal Health Coverage Study Series No. 38, World Bank Group, Washington, DC. http://documents1.worldbank.org/curated/en/138941516179080537/pdf/Sri-Lanka-Achieving-pro-poor-universal-health-coverage-without-health-financing-reforms.pdf

[3] https://www.worldbank.org/en/country/srilanka/overview Updated data as per 13 July 2020

[4] World Health Organization. Country Office for Sri-Lanka. 2019. WHO Sri Lanka Biennium Report 2018-2019. World Health Organization. Country Office for Sri-Lanka. https://apps.who.int/iris/handle/10665/331435.

national stakeholders to strengthen human resource capacity and systems capacity for chemical, biological, radiological, and nuclear (CBRN) emergency management.

A joint external evaluation (JEE) was conducted in 2017, in which WHO subject-matter experts identified the areas that Sri Lanka needs to improve to strengthen the implementation of the IHR (2005). The recommendations from the JEE became the reference for the development of Sri Lanka's National Action Plan for Health Security (NAPHS) 2019-2023.

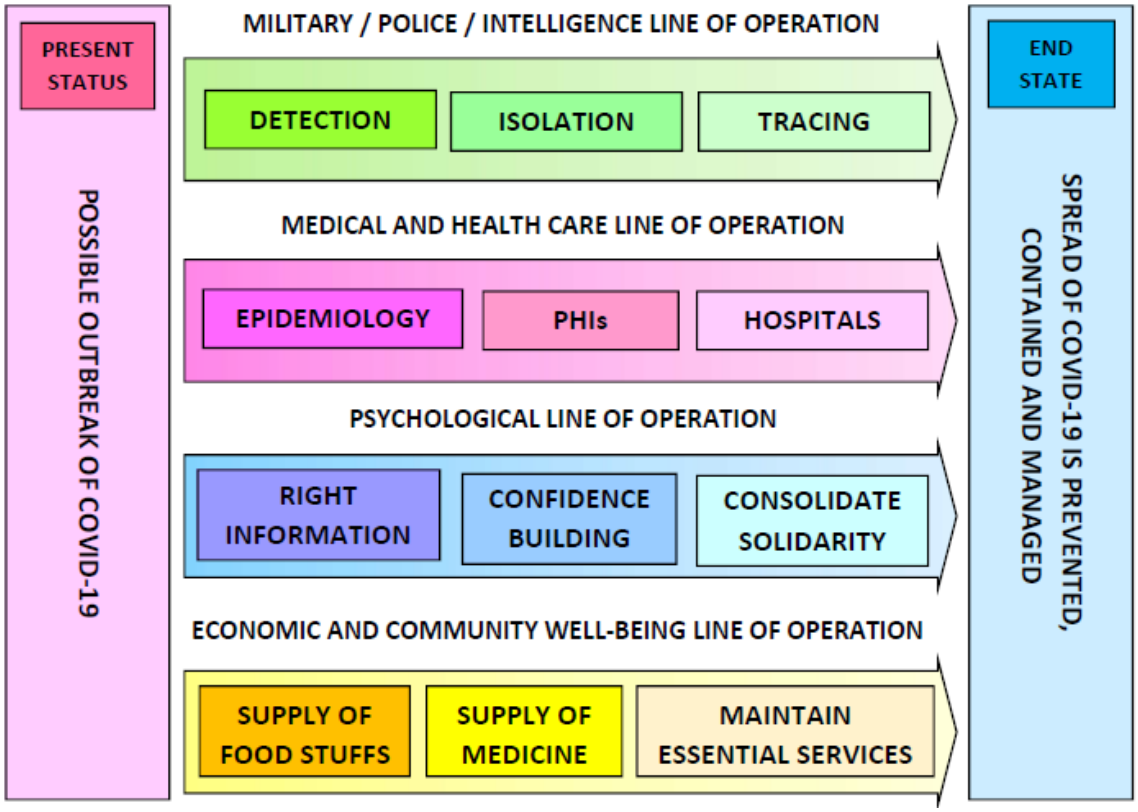
Strong leadership and effective coordination for prompt action

Since the emergence of COVID-19 in Wuhan, China, the Ministry of Health and Indigenous Medical Services (MoH) has received strong political support from the President of Sri Lanka. On 27 January, the first case of COVID-19 was detected in Sri Lanka, from a 44-year-old Chinese visiting from the Hubei Province of China. The President immediately took the lead of the national COVID-19 response. Using WHO guidelines as a reference, the MoH developed the Sri Lanka Preparedness and Response Plan for COVID-19.[5]

A cohesive collaboration of different sectors and stakeholders

Responding to COVID-19, Sri Lanka implemented the whole-of-government approach with four lines of operation: Tri-Forces, police, and intelligence; medical and health care; community engagement; and economic and psychosocial well-being.

Figure 1. Conceptualization of whole-of-government approach[6]



[5] http://www.health.gov.lk/moh_final/english/public/elfinder/files/publications/2020/SPRP.pdf
[6] Combatting COVID – 19 Sri Lankan Approach: concept paper by Sri Lanka State Intelligence Services

In January, the President appointed a National Steering Committee to bring together a range of stakeholders from different sectors to support COVID-19 response. The National Steering Committee includes the Ministry of External Affairs, the Ministry of Defense, the Ministry of Finance, the Ministry of Ports and Shipping, the Civil Aviation Authority, Department of Customs, Department of Immigration and Emigration, the Disaster Management Centre, airports, and country consulates.

In mid-March, a Presidential Task Force was established to coordinate COVID-19 response. This was headed by the Minister of Health, with the Director General of Health Services (DGHS) as the technical lead and the Commander in Chief of the Tri-Forces as the operational lead. In addition, the National Action Committee against COVID-19 was established to enhance coordination within the MoH with DGHS providing technical and operational leadership and guidance.

On 11 March, the MoH announced the country's first local case of COVID-19, a Sri Lankan who works as a tourist guide. On 20 March, the Government declared a lockdown along with recommended public health measures in its effort to break the transmission circuit. The Government imposed movement restriction, except for essential services. These measures continued for eight weeks, coordinated by the Tri-Forces, police, and national intelligence, for ensuring public compliance.

Coordination with UN and Health sector

The UN Resident Coordinator activated the UN Humanitarian Country Team and designated the WHO Representative as the Chair of the Health Cluster, along with the MoH and Civil Society Collective as Co-Chairs. The Health Cluster became a pivotal platform for state and non-state actors to share information, coordinate, and collaborate in the implementation the Sri Lanka Preparedness and Response Plan (SPRP). To date, seven cluster meetings have been organized with more than 30 organizations participating in the virtual meetings.

Accessible and proactive communication

Health Promotion Bureau of the MoH, which is responsible for risk communication and community engagement, worked closely with WHO and UNICEF from the start. An alliance was formed with local-level officials, to better reach different community groups with correct and consistent information about COVID-19 transmission, its effect, and effective prevention measures.

The MoH worked with WHO and the UN Resident Coordinator to monitor, identify, and analyse rumors and misinformation. Mainstream media was engaged to help dispel the infodemic. In early March, the Government established a 24/7 hotline to invite public feedback and communicate accurate information about COVID-19 to the public. A designated COVID-19 website with all information about COVID-19 in Sri Lanka was developed[7], and a chatbot was launched to provide the most current evidence-based information.

[7] https://covid19.gov.lk

WHO uses games to inform and engage communities to practice preventive measures for COVID-19 (WHO Sri Lanka Facebook account).

WHO worked with numerous partners to develop and disseminate various RCCE materials. Considering the multicultural population of Sri Lanka, all communication contents and materials were developed in the three official languages of Sri Lanka: Sinhala, Tamil, and English. Community and religious leaders, musicians and celebrities, youth groups and volunteers, all engaged in RCCE activities. The Food and Agriculture Organization (FAO) and the World Food Program (WFP) supported the development of food safety measures for markets. WHO supported the Government in developing and disseminating information about Infection Prevention and Control (IPC) in quarantine centres.

WHO mobilized resources from the Australian government (DFAT) through the UN Multi-Donor Trust Fund to implement with the Civil Society Collective and Sarvodaya a community engagement project in selected high-risk districts. The project component includes activities which aim to engage and sensitize vulnerable communities, address stigma and discrimination, and strengthen the participation of women and girls in decision making concerning the COVID-19 response.

During the height of the epidemic in the country, the DGHS, Army commander and police spokesperson provided daily updates in the morning and evening to keep people informed and prevent panic. In addition, daily situation reports on COVID-19 was published by the Epidemiology unit of the Ministry of Health in their website. The Health Promotion Bureau and WHO also provided the latest information on COVID-19, guidelines, and myth busters.

Towards the new normal, the MoH now is working with WHO and the Government Medical Officers' Association to launch a DReAM social marketing campaign for the new normal, using different platforms like national television, billboards, radio, local PA systems, posters, and stickers. DReAM stands for:

D – Distancing (physical distancing)
Re – Respiratory etiquette (cough/sneeze using the inner side of your elbow and not directly in front of you)
A – Aseptic techniques (handwashing, using hand sanitizer, avoiding touching your face)
M – Mask (proper wearing of a face mask and its proper disposal)

DReAM poster developed by WHO and the MOH.

Scaling up surveillance and rapid case Investigations - *on the lookout for COVID-19*

The development of Sri Lanka's strong surveillance and containment dates to 1897.[8] From that date, Sri Lanka has already shown successful results by eliminating several communicable diseases. The Country resilience as a nation was proven by standing up against the 2004 boxing day tsunami devastation.

Contact tracing and management

National Epidemiology unit being the focal point of surveillance in the Ministry of Health is having the high technical capacity in implementing the surveillance through the district and divisional technical units. Epidemiology unit was given the leadership to carry out surveillance mechanism for COVID 19 across Sri Lanka's nine provinces, regional and district epidemiologists, Medical Officers, and Public Health Inspectors.

Across Sri Lanka's 9 Provinces districts, directors and staff of the Provincial Directors of Health Services, regional epidemiologists, Medical Officers of Health, and Public Health Inspectors joined the detection efforts. The National Intelligence Services stepped up its activities to identify the second and third circle of contacts of confirmed COVID-19 cases. This work has been instrumental in Sri Lanka's success in COVID-19 case detection and containment measures.

For every person tested positive for COVID-19 or fits the COVID-19 case definitions, each of its close contacts were tested for COVID-19. Even for those without COVID-19 symptoms, they are required to quarantine for 14 days. COVID-19 test results and institutional or hotel quarantine are mandatory for Sri Lanka's nationals returning to their homeland and for any foreigners visiting Sri Lanka.

Containing the spread through effective vigilance at point of Entry

Responding to COVID-19, the Government has been scaling up its capacity to detect the new disease at the country's points of entry (PoE) by operationalizing the National Public Health Contingency Plan for designated airports and the Public Health Emergency Preparedness and Response Plan for seaports. The National Intelligence Services and Tri-Forces stepped up its activities to identify the second and third level contacts of confirmed COVID-19 cases. This work has been instrumental in Sri Lanka's success in COVID-19 case detection and containment measures.

[8] https://www.quarantine.health.gov.lk/images/pdf/act/quarantine_and_prevention_of_disease_act553.pdf

Initially, returnees and the close contacts of COVID-19 cases were primarily quarantined free of charge in government-operated quarantine facilities. The initial 58 quarantine centres could host 3000 people. The Government has expanded the quarantine capacity to 72 quarantine centres which includes 42 pay-and-stay hotels, and 20 hostels from government facilities such as agriculture, Ayurveda, and training schools. Now, Sri Lanka there are 119 quarantine centres that in total could accommodate 10 000 people. The Tri-Forces of the Army, Navy and Air Force were assigned with the public health staff to implement the detect-trace-isolate process, and to manage the quarantine centres.

Scaling up laboratory capacity while contributing to the testing of SARS-CoV-2

In late January 2020, the National Influenza Centre of the Department of Virology, Medical Research Institute (MRI) in Sri Lanka, established an in-house molecular test for SARS-CoV-2[9] virus and validated the method through the WHO Coronavirus Reference Laboratory, University of Hong Kong (HKU), achieving 100% concordance of the results.

Guidelines on performing the PCR test at the private sector was issued in March. As of 1 June, Sri Lanka has 22 laboratories supporting COVID-19 testing. Four laboratories in the private sector have been established so far, adding to the six laboratories under the MoH and four in Medical Faculties. In the same month, after collaborating with the Sri Lanka College of Microbiologist and WHO, the MoH issued a laboratory strategy for COVID-19. PCR testing laboratory has also been established at Bandaranaike International Airport for testing the incoming passengers before they are sent to the quarantine centres.

With the support of international partners, Sri Lanka had the requirements for testing available, even when the commercial assays were limited. WHO supported test kits, supplies and equipment for the testing. WHO also supported designing of an information-technology-based data system to capture the laboratory data of COVID -19 testing. With the rapid development of laboratory capacity, the daily testing capacity has increased to 3000 per day. Similarly, the testing strategy was changed from passive surveillance to active surveillance in May 2020.

Sri Lanka has taken a step further in making the most of its laboratory capacity by commissioning two Unity sero-surveillance studies based on a protocol that was established by WHO. The studies aim to generate scientific data on epidemiological parameters of COVID-19. The studies also cover COVID-19 transmission patterns, immunity, severity, clinical features, and risk factors for infection to understand and control the COVID-19 pandemic. The two sero-surveillance studies are conducted among the infected Navy personnel and their close contacts in the COVID-19 outbreak in a Naval Base in Welisara, where 363 cases and 263 close contacts were investigated; and among the 107 infected and 901 close contacts and 1614- non-close contacts of an outbreak in the premises of Colombo Municipal Council. Creating more evidence to understand COVID-19, the MRI collaborated with HKU and the Centre for Dengue Research in the University of Sri Jayewardenepura, to do genomic sequencing of virus strains detected in Sri Lanka.

To ensure quality of SARS CoV2 PCR testing, WHO got four labs in the public sector validated through WHO's supported external quality assessment program (EQAP) by University of Hong Kong in June

[9] The name of COVID-19 virus

2020 with a score of 100% assuring high quality laboratory diagnosis. Additional 18 labs have been enrolled for EQAP.

Ensuring Infection Prevention and Control measures

At the beginning of the pandemic, when Personal Protective Equipment (PPE) were limited, WHO provided PPE to help protect the frontline workers. In March, the Government called on Sri Lankan's support to locally manufacture personal protective items. The local apparel industry, women's groups, Sri Lankan Army and Air Force took part in manufacturing the protective items.[10] Except for N95 mask, Sri Lanka is self-sufficient in production of PPEs.

In enabling health care workers to effectively manage COVID-19 patients, early in the pandemic, the MoH trained 750 nurses to manage severe cases and provide ICU support. For medical doctors, WHO and the Sri Lanka Medical Association conducted an awareness session on COVID 19 infection and management. The MoH also developed a set of training modules on COVID-19 infection, prevention, and control (IPC) by adapting the WHO guidelines to Sri Lanka's context. The nine-module training package for health workers is available in the three official languages and for long-distance learning.

Currently, WHO is supporting the MoH to develop an Electronic Learning Management System which covers all basic training programmes in training centres and in-service training units, like the ones in the Family Health Bureau, Epidemiology Unit, National Institute of Infectious Diseases, National Institute of Mental Health, Directorate of Health Care Quality and Safety, National Institute of Health Sciences, and the National Blood Transfusion Services.

The in-service training programme will offer their short courses through their platform, available to all in service persons and existing frontline health care providers. Since these training modules are in English and developed by focal agencies with guaranteed standards, they can be easily linked to the open WHO platform and WHO academy so that other countries in the region could learn from the practices that has brought Sri Lanka to achieve its success. WHO will further support the in-service training programme with information technology (IT) hardware and capacity development for the trainers.

To prevent transmission of the virus in workplaces, the MoH has also released guidelines to government officers and to other work settings to adhere to, on resumption of normal activities and returning to work during the opening of districts. Similarly, guidelines for restrictions related to travel and mass gatherings were developed by the government. Furthermore, in mid-April the Government made wearing a face mask compulsory in public.

Strengthening case management capacity of health facilities for COVID-19 patients

The National Guidelines for the Management of COVID-19 cases was issued well before the first COVID-19 case was detected in the island. The case management applies three-tier categorization: mild cases in isolation areas; moderate cases with additional oxygen supply in isolation areas with resuscitation facilities; and critical cases in isolation areas with intensive care facilities

[10] http://www.ft.lk/front-page/Army-and-Air-Force-begin-locally-manufacturing-protective-gear-to-treat-COVID-19-patients/44-697954

A rapid assessment of secondary and tertiary health facilities was conducted by WHO to provide information to surge capacity planning. The three-tier approach was used to calculate the necessary capacity, on the assumption that 20% of patients potentially progress to severe case and 5% of them will require ICU beds. Initially, 12 hospitals across the country were designated for isolation. The number has increased to 39 with the capacity to isolate 1587 patients. Although in January, Sri Lanka only had the National Institute of Infectious Diseases in Colombo as the only treatment centre with 10 ICU and 30 HDU units, now the entire country has a total bed capacity exceeding 2500 and 100 ICU beds available in the 12 designated hospitals. With the declining number of cases, the government has four designated hospitals readily available for COVID-19 treatment in case new cases would increase.

Sri Lanka response to COVID-19 cases is supported by a nation-wide 'Suwaseriya' Ambulance Service (toll free - 1990) Network that can transport COVID-19 patients quickly and safely to designated isolation hospitals. On the average, the response time for 1990 ambulance service is 8 minutes and 23 seconds in the Western Province and 11 minutes and 25 seconds in the rest of the country (2019)[11]

Partnerships for operational support

"WHO is a trusted partner, working closely with the Ministry of Health and all relevant stakeholders for an evidence-based response to COVID-19 in Sri Lanka." Dr Razia Narayan Pendse, WHO Representative to Sri Lanka

As the Chair of the UN HCT Health Cluster Team, the WHO Country Office for Sri Lanka (WHO) has been actively engaged with the MoH, UN agencies, development partners, civil society and other stakeholders, in providing timely and evidence-based advice on strategic preparedness and response to COVID-19. WHO supported the MoH in developing the Sri Lanka Preparedness and Response Plan and mapping the country's resource gaps and resource mobilization for COVID-19.

Joining the collaboration of WHO and the Government of Sri Lanka were a multitude of partners such as the World Bank, Asian Development Bank, European Union Delegation, Government of China, Government of Japan, United Kingdom, Norwegian Embassy, German Embassy, the Australian High Commission, the Australian Department of Foreign Affairs and Trade (DFAT), the United States Agency for International Development (USAID), the Global Fund and other UN agencies. Their contribution spans over effective planning, coordination, assessment, analysis, strategy, standards, advocacy, resource mobilization and monitoring.

Swift technical, operational, and logistical supports

WHO is invited and represented at the Presidential Task Force on COVID-19 to provide evidence-based technical advice to the Government, stakeholders, and partners.

On the logistical front, based on the WHO Disease Commodity Package and COVID-19 Kit, WHO supported the MoH in conducting a country inventory review of supplies, assessing the logistical system, and mapping Sri Lanka's resources. The MoH reviewed the supply chain control and

[11] https://www.lankabusinessonline.com/suwa-seriya-ambulance-service-launches-1990-mobile-app/#:~:text=Currently%2C%20the%20average%20response%20time,better%20than%20most%20developed%20countries.

management system for medical supplies and other essentials; procurement processes; assessed the capacity of suppliers to meet increased demand; and established a central stock reserve in Colombo. WHO committed to support the further strengthening of the logistic system by facilitating a systematic review of processes and developing a roadmap for implementation.

Assisting the Government to strengthen the capacity of the Epidemiology Unit and surveillance at the provincial and district units, WHO provided IT equipment and enhanced internet connectivity particularly in 50 sentinel sites for Severe Acute Respiratory Infection (SARI) and Influenza-Like Illness (ILI) surveillance and 365 Medical Officer of Health units at divisional level.

The WHO Country Office to Sri Lanka has mobilized approximately US$ 6.5 million for the direct health sector response, of which US$ 2 Million is in the pipeline. To date, about US$ 2.0 million were already spent to support the implementation of the Sri Lanka Strategic Preparedness and Response Plan (SPRP) in planning, surveillance, case management, laboratory strengthening, risk communication and community engagement, IPC, and research. The World Bank has pledged US$ 128.6 million for the implementation of Sri Lanka's SPRP, medium-term preparedness of the health system, and down to supplying equipment for health facilities. The Asian Development Bank (ADB) has reallocated 15 million USD to Sri Lanka to strengthen the capacities of the points of entries and national laboratories. WHO will also provide technical advice for the implementation of Sri Lanka's SPRP.

WHO takes the role of facilitating and coordinating support for COVID-19 response from different agencies to the Government of Sri Lanka. With DFAT, WHO donated medical equipment, worth of US$ 578 379, to be distributed by the MoH to 19 ICU hospitals. Through WHO, DFAT contributed AUS$ 600 000 to SPRP to strengthen surveillance, case management and national laboratories. Adding to this donation, WHO provided laboratory equipment and consumables worth of US$ 108 337 to the Biomedical Engineering Unit and gave support to the quality validation of state laboratories. Supporting test further, 40 000 COVID-19 test kits have been given to the MoH and 40 000 more are in pipeline.

Medical and laboratory equipment from WHO and DFAT were handed over. Photo Credit: WHO Sri Lanka.

An additional US$ 100 000 has also been provided by DFAT to WHO through the UN Multi-Donor Trust Fund (MDTF). This support was specifically allocated for community engagement with the NGO Sarvodaya.

With USAID, WHO facilitated the donation of 200 portable ventilators and additional equipment to the Government. USAID funding to WHO was utilized for strengthening surveillance, expanding testing capacity in laboratories, as well as assisting partner coordination, planning and operational support.

The European Union is providing € 2 million (US$ 2.17 million) to WHO to assist Sri Lanka in managing COVID-19 cases; to participate in research and global evidence generation initiatives; conduct risk

communication activities and promote community engagement; and maintain the delivery of Essential Health Services (EHS) during the COVID-19 pandemic, specifically for psychosocial and mental health services.

On 16 March, WHO headquarters launched the COVID-19 Partners Platform in which countries, implementing partners, donors and contributors could share information about COVID-19 situation in the Member States and their responses which covers the nine Public Health Pillars.[12] This Partners Platform provides real-time information about the financial, logistics and human resource needs of each Member State so that the other collaborators could give their support accordingly. The Incident Management Team of WHO coordinates with the Government and development partners to collect detailed information for the Platform. Sri Lanka has actively and regularly updated the Platform and built strong coordination with national authorities, UN Country Team (UNCT), and partners.

Leadership in UNCT

WHO chairs the core UN technical team for COVID-19 preparedness and response and connects the Government with other UN agencies, bilateral and multilateral partners, and diplomatic community.

Within the UN family, WHO collaborates with UNICEF and the United Nations Office for Project Services (UNOPS), to facilitate international and local procurements of goods and equipment for immediate COVID-19 response. The United Nations Development Programme (UNDP) mobilized around US$ 1 million and reprogrammed around US$ 7million to respond to the country's COVID-19 related priorities, such as procurement of test kits, provision of PPEs and improvement of health care waste management. Another technical equipment support worth 45 million Sri Lankan Rupees were handed over by the International Organization for Migration (IOM) to the Bandaranaike International Airport to strengthen the PoE. IOM also assists the daily monitoring of PoE operational status, internal mobility and travel restrictions, and uploads the information to the IOM global displacement tracking matrix. They also worked with the United Nations High Commissioner for Refugees (UNHCR) to disseminate COVID-19 risk communication materials to refugees, asylum seekers, and migrant returnees.

The office of the UN Resident Coordinator (UNRC) activated the UN Humanitarian Country Team (UN HCT) to develop a platform to map partners support to SPRP, identify gaps and key priorities, ensure equitable and fair access to services especially to vulnerable populations, and exchange information to harmonize assistance. A UN Advisory Paper: Immediate Socio-economic Response to COVID-19 in Sri Lanka was developed by the wider UN Country Team and submitted to the Presidential Task Force in June under the leadership of the UNRC. WHO took the lead in developing the health pillar: Protecting health systems and services during the crisis. For Sri Lanka, the first strategic priority is to sustain the health sector response to COVID-19 while ensuring health system capacity to deliver essential services and build resilience to future shocks, with adequate and sustainable financing. This complements the other priorities on social protection, economic support, social cohesion, community resilience and macroeconomic response towards recovery.

Ensuring the continuity of essential health services

[12] Country-level coordination, planning, and monitoring; risk communication and community engagement; surveillance, rapid response teams, and case investigation; points of entry, international travel and transport; national laboratories; infection prevention and control; case management; operational supports and logistics; maintaining essential health services and systems. https://www.who.int/publications/i/item/draft-operational-planning-guidance-for-un-country-teams

Sri Lanka's central, provincial, and local governments ensured that essential health services continue despite COVID-19 outbreak response and lockdown. The Government identified the routine and elective health services that could be delayed or relocated. They ensured that across the country, essential medicines and medical supplies are available, mechanisms are in place to maintain the supply chain, and that by redistributions and task sharing, the health care personnel have the capacity to provide care.

Nurses continues to provide maternal and child health care in hospitals. Photo Credit: UN Sri Lanka.

The MoH and WHO along with other professional bodies, developed guidelines on the provision of essential and emergency care for pregnant, postpartum women and newborns while protecting them and health care workers from COVID-19 infection. With COVID-19 transmission and lockdown in mid-March, immunization activities for children and pregnant women were suspended except for BCG vaccination. As cases across the country stabilized in mid-April, the MoH released the guidelines to resume immunization services for all children and pregnant women towards 20 April. The immunization gap was completely covered by mid-May through extended clinic hours and extra clinic days. Nutrition supplements for pregnant mothers and under five children were continuously delivered to targeted households using health as well as non-health field workers.

In attempt to maintain the delivery of essential health services amidst the pandemic situation, the MoH has issued guidelines to maintain malaria testing and surveillance, sputum testing for TB and supply of Anti-retroviral drugs for people with HIV/AIDS. Till date this year, 25 444 suspected dengue cases were reported to the Epidemiology Unit around the island. The MoH has developed a special instruction on triage for dengue fever patients.

During the eight-week lockdown, noncommunicable disease (NCD) clinics were closed. Guaranteeing that people with chronic diseases have enough supply of their medicines, the Government initiated a system in which medicines were prepared by pharmacists at hospitals, and the refill packages were delivered using the Country's postal service. For people who use private sector health facilities, the MoH worked with the Pharmacy Association and the Pharmaceutical Organization to develop a system where patients could order their drugs online and have them home-delivered by online suppliers. In April, people with diabetes began receiving home deliveries of their insulin. For the health staff to consistently monitor the condition of people with NCD, field health staff measure their blood pressure and blood sugar at the doorstep of their houses.

For people who need continuous medication for their existing mental health conditions, the same delivery mechanism with NCDs applied to their medicines. The Directorate of Mental Health deployed the community mental health staff to keep providing home-based care as required while adhering to the public health preventive measures.

The different and unprecedented situations caused by the COVID-19 pandemic could have implications for people's mental health. Recognizing this, in mid-March, WHO and the Directorate of Mental Health worked with media to address the issue and promote the importance of psychological well-being and the availability of mental health services.

Mental health and Psycho-Social Activities of Directorate of Mental Health with WHO support:

- MOH Helpline for case-to-case support and comfort to frontline staff and their families; formulated guidelines for health administrators to promote the mental well-being of health care workers, in collaboration with the Sri Lanka College of Psychiatrists
- Training of quarantine centres staff on providing mental and psychosocial support to the people in their facilities
- Support people facing withdrawal due to reduced access to tobacco, alcohol, and other Support substance, and those who wanted to quit drug use
- Developed a psychosocial well-being package to schools, including a teacher guideline covering anxiety management, practical steps for stress management, and positive coping skill development for students, in collaboration with the Ministry of Education

Ongoing response to the COVID-19 pandemic

"The pandemic highlights the urgent need for all countries to invest in strong health systems and primary healthcare as the best defense against outbreaks like COVID-19 and against the many other health threats that people around the world face every day." ***– Dr Tedros Ghebreyesus, Director General, WHO***

In contrast to numerous countries around the world which have witnessed the doubling of infections in a few days, it took Sri Lanka 92 days to report 600 cases. As of 23 August 2020, Sri Lanka stands at 2947 COVID-19 cases. The case fatality ratio is 0.40% (12 deaths) and the recovery rate is at 95.2%. There has been no patient under intensive care for the last four consecutive weeks, except for 1 case who passed away on 23rd August 2020. The statistics reflect the success of the country's ability to respond to an epidemic, saving lives and protecting its population. The proactive and rapid preventive strategies that were implemented and the combined public health approach with strong leadership and whole of society approach have helped Sri Lanka to be in the position it is today.

Key to this success is Sri Lanka's health system performance and the government's commitment to provide free health care to everyone. Its legacy of achieving good health at low cost through early investments in health has been crucial in its effective response to the COVID-19 situation. It is known that countries that are closer to achieving UHC including Sri Lanka, have been able to mobilize existing infrastructure and systems to implement community-level disease prevention and control measures such as risk communication, testing, contact tracing, and isolation. Further, citizens infected with COVID-19 have been able to seek treatment without further economic losses.

Maintaining other essential health services at optimum level despite the pandemic is facilitated by the extensive network of health facilities available within 3 km of every household in the whole island. This is supported by a strong public health system, committed front-line workforce, and Sri Lankan's health-seeking behaviour and high literacy rate at 98.78%.

Moving into post-lockdown, Sri Lanka has started to reopen its economy and positions itself to open its borders in the coming months. To do this, the country has embarked in a social marketing campaign to encourage people to protect themselves and others by continuing to implement same preventive measures such as physical distancing, regular hand washing, and to wear mask. The MoH has also released guidelines for government offices and other settings when normal activities gradually resume.

Resuming economic activity in the 'new normal'. Photo Credit: UN Sri Lanka.

Adherence to public health and social measures was tested in the recently concluded general election in the country. The MoH banned large public gatherings but allowed campaigning to take place after developing extensive election guidelines. The election was successfully conducted island-wide without any amplifying event. It is one of Sri Lanka's biggest success stories and illustrates just how far the country has come in controlling this deadly virus.

The government is also committed to continue its efforts in finding, isolating, testing and treating cases as well as tracing and putting contacts in quarantine. Services targeted to vulnerable population especially pregnant mothers, new born, those with communicable and chronic disease conditions are prioritized to ensure uninterrupted access at the time of need.

Sri Lanka has successfully controlled the COVID-19 epidemic in the country through its past investments to build a robust and resilient health system. It is important to put critical attention in protecting the gains in this area and continue to explore opportunities to further strengthen its future preparedness to deal with future epidemics and public health emergencies such as natural disasters, dengue and other emerging threats. With the strong political leadership, committed and capacitated health workers, empowered communities and coordinated support of development partners, the country can withstand and better prepared for future health emergencies.

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Whole-of-government leadership complemented by strong engagement of partners and stakeholders contribute to the national COVID-19 response

The current economic, social and health sector conditions

Zimbabwe recorded its first COVID-19 case on 20 March 2020, an importation from the U.K. Subsequently the country experienced predominantly imported COVID-19 transmission from countries with widespread community transmission until mid-July 2020. From the second half of July 2020, Zimbabwe experienced an escalation of local COVID-19 transmission. As of September 7, 2020, Zimbabwe has reported 7,298 confirmed cases of COVID-19 and 210 deaths, with 58% of cases reported from its two largest cities – Harare and Bulawayo and locally-transmitted cases accounting for 82%. The case fatality rate stands at 2.9%, with a national recovery rate currently at 75%.

Even before the onset of the COVID-19 pandemic, Zimbabwe was experiencing climatic and economic shocks that contributed to increasing humanitarian needs within the country[1]. The country experienced devastating drought in 2018 and 2019 and in addition, it was struck by Cyclone Idai in March 2019, together with Mozambique and Malawi. This situation was aggravated by macro-economic challenges, including hyperinflation (766% over the past year) and by April 2020, it was estimated that seven million people in both rural and urban areas were in need of humanitarian assistance, including food aid, across Zimbabwe.

Despite the challenges, Zimbabwe has made considerable progress in key aspects of the COVID-19 response – most notably in planning and coordination, laboratory testing, and disease surveillance and contact tracing. This has been the result of strong political commitment at the highest political level with President Emmerson Mnangagwa demonstrating strong leadership. In line with WHO guidance, a whole-of-government, whole-of-society response effort, overseen by an Inter-ministerial Task Force, was put in place. Well-coordinated technical, financial and logistical support from international partners, the private sector, and civil society complemented the Government's action.

WHO's focus has been in supporting the Government and partners to adapt global COVID-19 frameworks, guidance and protocols to the Zimbabwe context; coordinating with partners from the UN system, bilateral agencies, international financing institutions, national and international NGOs, civil society and academia to support the national COVID-19 response plan; and providing technical assistance together with partners in specific technical areas (e.g. lab testing, surveillance, infection prevention and control). This assistance has involved working at all levels of the national health system – from the national level to the provincial and district levels.

[1] Humanitarian Response Plan, Zimbabwe. July 2020

Early actions in establishing a COVID-19 management structure and planning for the response

In early February 2020, soon after WHO declared COVID-19 a public health emergency of international concern, the Government of Zimbabwe organized an inter-ministerial meeting on COVID-19 preparedness. The outcome of this meeting fed into the development of a national COVID-19 preparedness and response plan. Also in February, WHO supported the Ministry of Health and Child Care (MOHCC) in conducting a review of: (a) the capacity of major points of entry and hospitals to handle COVID-19; (b) the country's preparedness and response plan for pandemic influenza; (c) recommendations from the 2018 Independent External Evaluation of Zimbabwe's IHR core capacities and from simulation exercises conducted in 2019 to strengthen these capacities. The outcome of these reviews further informed the finalization of the national COVID-19 preparedness and response plan.

The President launched the National COVID-19 preparedness and response plan on 19th March 2020, two days after he had declared a state of national disaster and a day before the first COVID-19 case was detected in the country. On March 30, a 35-day lockdown in the country began, later extended and followed by nightly curfews in July in response to a spike in cases. In short order, the President established an inter-ministerial national COVID-19 Response Task Force, chaired by one of the country's Vice Presidents, to coordinate the response, using a whole-of-government approach. In May 2020, a position of Chief Coordinator of the National COVID-19 Response was established in the Office of the President and Cabinet.

WHO providing on the job support to Seke District RRT team at Beatrice Isolation Centre in Mashonaland East Province. Here, WHO is helping them enter new cases into the ODK platform

The public health response to COVID-19 in Zimbabwe was organized around nine pillars – corresponding to the technical areas laid out in the national response plan (e.g., national laboratory, surveillance, risk communications, infection prevention and control), to guide and oversee the response activities in each area. The creation of the pillars in March set into motion plans and activities to respond to the outbreak through enhanced surveillance and activation of provincial and district rapid response teams (RRTs); identification and refurbishing of COVID-19 isolation and treatment facilities, as well as a network of quarantine centers; scaling up laboratory testing; and implementing a risk communications strategy. Each pillar, headed by a senior Government of Zimbabwe official, included representatives from the MOHCC and other government ministries, bilateral and multilateral

partner agencies, civil society, private sector and academia. WHO was represented in all nine pillars. All pillars report to the weekly Coordination Meeting chaired by the Permanent Secretary. A detailed three-month operational Plan was later developed (in May), with the support of WHO and other partners.

Building laboratory testing capacity

In a relatively short period of time, Zimbabwe has been able to expand the number of laboratories conducting COVID-19 testing from one – the National Microbiology Reference Laboratory (NMRL) – to 33 by early August. This rapid scale-up was made possible by a strong laboratory pillar, headed by a MOHCC scientist; good collaboration between partners in providing technical, financial and material support; and the fact that many of the laboratories already had the machines and expertise in place to conduct PCR and GeneXpert testing, which they had been doing for HIV and tuberculosis.

COVID-19 testing began at the NMRL in February on a small scale (five tests per day), after one lab technician received training in South Africa. Once the lab pillar was established in early March, the MOHCC and the NMRL, with WHO and the U.S. CDC, conducted an assessment of the country's public and private laboratories to determine their readiness to perform COVID-19 testing. An international WHO consultant worked very closely with the MOHCC and partners to develop a national COVID-19 testing strategy. This guided subsequent training and scaling up of testing in phases using a tier-based approach, starting with the NMRL (Tier 1); five other national or academic laboratories, including the National TB Reference Laboratory and the National Virology Lab (Tier 2); and finally, provincial labs (Tier 3).

Using lab testing guidelines and protocols developed with WHO and CDC assistance, the laboratory training program began in March for seven scientists at the NMRL, facilitated by WHO and the CDC. Training then took place for 14 staff from the five Tier 2 labs, again facilitated by WHO and the CDC, and by April, these laboratories were supporting the NMRL in COVID-19 testing. Training was then expanded, starting in May, to eventually 22 provincial labs – mainly on the GeneXpert machines already in use – with the Clinton Health Access Initiative (CHAI) taking the lead.

WHO training Beitbridge Hospital Laboratory personnel on how to use the Abbott Platform to test for COVID-19.

Several private sector labs were also approved for COVID-19 testing, following assessment visits, training and agreements with the Government – facilitated by WHO – that they would adhere to the national testing protocols and report their test results on a daily basis using the government reporting

system. Thirty-three public and private laboratories are now capable of COVID-19 testing, and a total of 1,000 to 1,600 tests are being conducted per day, with a priority on testing returnees from other countries, patients newly admitted to hospital, those experiencing symptoms and the contacts of cases. The country has not yet reached its goal of performing 2,000 tests per day, due to gaps in collecting specimens from the target groups, as well as supply chain issues. WHO, with other partners, continues to support the labs, conducting supervisory and training visits to all provinces and helping ensure timely and accurate reporting of test results.

Enabling the detection, tracking and real-time reporting of COVID-19 cases

While COVID-19 surveillance varies in quality across the country, several provinces have made excellent progress in case detection and contact tracing, with on-going technical support from WHO. The Country Office worked with the MOHCC at the national level to develop COVID-specific surveillance tools (e.g., case investigation forms, contact line listing forms, contact monitoring forms) and helped train the provincial rapid response teams (RRTs) in COVID surveillance, which in turn trained district RRTs using a cascade training strategy.

In well-performing provinces where WHO has provided support, including Masvingo and Mashonaland East province, the RRTs actively investigate suspected cases identified in the community (e.g., through rumors), at point of entry and at health facilities; collect a specimen from the cases for lab testing; and complete an electronic case investigation form, which includes information on their close contacts. They are supported by a network of Environmental Health Technicians (EHTs) – the backbone of the surveillance system at the local level – who carry out much of the tracing and follow-up of contacts. Strong contact tracing practices in provinces, such as Mashonaland East, have led to the identification of the majority of confirmed COVID-19 cases in these areas (see box).

The gains in surveillance and contact tracing in these provinces have been the result of on-the-job training, mentorship and supportive supervision provided jointly by the MOHCC and WHO through field visits. In Masvingo Province, for instance, a MOHCC/WHO team worked side-by-side with district rapid response teams in six districts to collect information missing from case investigation forms and initiate contact tracing, even visiting homes of identified cases in some instances. Similar on-the-job training took place at an isolation center in Mashonaland East province, where the staff were completely unaware of the case investigation process or forms.

Contact tracing in Mashonaland East Province: an example of best practices

Once a case is confirmed at the provincial laboratory, and a case investigation form is completed, which includes information on close contacts, a team of primarily Environmental Health Technicians make home visits to the contacts. The team asks them about symptoms, checks their temperature, and gives them instructions on quarantining for 14 days, mainly in their homes. A clinician from the district RRT collects a specimen from the contacts for testing if asymptomatic, and the contact tracers conduct follow-up home visits every day to check for symptoms and ensure that they are quarantining safely. The same team conducts the follow-up visits during the entire quarantine period to build trust and a rapport with the contacts. Data from the initial and follow-up visits are entered electronically onto the ODK platform using tablets and sent to the provincial and then national level.

From end of March to August 2, the contact tracers in the province had visited 916 contacts and were able to collect specimens and follow up around 80% of them for the entire 14-day quarantine

period. The fact that only around 20% of contacts were lost to follow-up can be attributed to the participation of community leaders in educating residents about contact tracing and its importance in controlling the outbreak, as well the diligence of the contact tracing teams.

Of the 172 cases confirmed during the past four months' period in the province, 94 (or 55%) were found through the contact tracing process.

WHO and CDC Africa providing on the job support to the Seke District RRT at Beatrice Isolation Centre (Mashonaland East) where they managed to submit all missing cases onto the ODK platform.

In addition to the provincial and district-level work, WHO has worked closely with the MOHCC in compiling and analyzing surveillance data collected from each province and in producing daily and weekly situation reports. Besides reporting the total number of cases and deaths by province – both new and cumulative – the reports break down cases and deaths by sex, age, and imported vs. locally-transmitted. They also include incidence and mortality rates by location, test positivity rates, and other information that can guide actions and policy.

Continuing challenges and the way forward

WHO and partners need to maintain the gains made and continue to work on the challenges. Continued high-level advocacy within the Inter-Ministerial COVID-19 Task Force and provinces is needed. Partnerships at all levels should be expanded to include the participation of more community-based civil society organizations, as well as the use of interns from the various training programmes. More operational resources for the provinces and districts also need to be mobilized. There is also a need for greater focus on the high-risk provinces of Harare, Bulawayo, Matabeleland South, Midlands and Manicaland to curtail local transmission. This focus should strengthen coordination, partnerships, operational planning (including budgeting), data analysis and use – to drive the response – as well as documentation. Provincial and national intra-action reviews of the response are urgently needed and WHO is in a good position to provide guidance for these reviews, using recently developed tools.

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African Region

Burundi:

- **WHO provided medical equipment for the fight against COVID-19 and continuity of essential services**, including 50 portable oxygen concentrators, personal protective equipment and equipment consisting of face masks, several types of protective goggles and aprons; laboratory products and consumables including amplification and extraction reagents, as well as swabs; and safety boxes to manage contaminated sharps. In addition to these lots intended mainly for the fight against COVID-19, the donation also includes A & B emergency surgical and trauma kits, assembled to WHO standards, which include equipment and drugs to meet the needs of patients requiring surgical care in emergency situations. (5 August 2020)
- **Laboratory assistants trained to support national campaign against COVID-19**. Since July, the Ministry of Public Health and the Fight against AIDS, in collaboration with WHO in Burundi, has organised training sessions for laboratory assistants. It covers the collection, secure transport and analysis of suspected samples of the COVID-19 virus, in support of the mass screening campaign. (11 August 2020)

Cape Verde:

- **Technicians receive training in managing critically ill patients with COVID-19**. About 15 health professionals participated, including doctors, nurses and physiotherapists, who are part of the COVID-19 case management team at the referred hospital. (13 August 2020)

Ghana:

- **Pooling samples boosts COVID-19 testing**. Already at capacity, working round the clock in 12-hour shifts, Noguchi Institute decided to deploy "pooled sampling" to meet demand. Each pool has 10 samples and 100 pools are tested at a time. Instead of testing one person at a time, samples from multiple individuals are put together and tested as one pool. If the pooled test comes back negative, everyone in the pool is declared negative. But if it is positive, each member of the pool is then retested individually for the infected person to be identified. (31 July 2020)
- **First Lady advocates: Support mothers to breastfeed if they want**. Mrs. Rebecca Akufo-Addo has called on all to take key steps to address the practical, economic and socio-cultural barriers that still stand in the way of women breastfeeding and work together to enable mothers to breastfeed for as long as they wish to protect all babies from commercial interests. (11 August 2020)

Guinea Bissau:

- **WHO recruits more international consultants to strengthen the response to COVID-19**, a multidisciplinary team composed of health professionals with specialties in the fields of logistics, Infection Prevention and Control and COVID-19 Clinical Case Management and Management, which will strengthen the capacity of hospitals with treatment centers for COVID-19 and other health structures in the country. (11 August 2020)

Ivory Coast:

- **Radios stand up against COVID-19**. West FM radio is one of the 120 radio stations in the country grouped together under Radio Santé Côte d'Ivoire. In the context of the response to the COVID-19 disease, radio is an essential channel for sharing awareness messages and ensuring that people remain protected. A recent WHO survey and a government-led study both found that radio and television are the primary sources of information for 99% of the population. (24 August 2020)

Liberia:

- **WHO Donates 21 oxygen concentrators to boost COVID-19 response** (13 August 2020)

Madagascar:

- **Additional provision of personal protective equipment and drugs for the population and health workers**. Donations of personal protective equipment and medicines, valued at over $724,000, of which $500,000 by WHO and $224,000 by UNFPA were turned over to the Ministry of Public Health. (4 August 2020)

Mali:

- **WHO, Africa CDC join forces for research on traditional medicine for COVID-19** to strengthen research and development of traditional medicines in Africa. An expert advisory committee was launched, responsible for providing independent scientific advice and support to countries on the safety, efficacy and quality of traditional medicine therapies. (4 August 2020)

Mauritius:

- **National Health Sector Strategic Plan launched by Prime Minister**. This national HSSP has been aligned with the Mauritius Vision 2030 and the Government Programme 2020-2024 to give a clear direction to the health care sector. (12 August 2020)

Namibia:

- **Heroes from the COVID-19 health front-line: An epidemiologist's narrative** as they play a central role in investigating patterns and causes of disease in humans. "In the context of the novel Coronavirus (COVID-19), as epidemiologists our focus lies in reducing the risk and occurrence of negative health outcomes through research, community education and health policy. (14 August 2020)

Nigeria:

- **WHO scale up COVID-19 and TB search with mobile testing in communities** with the screening of 2306 persons for COVID-19 and 2506 persons for Tuberculosis (TB), using Chest X-Ray, and GeneXpert machine through mobile testing in Kaduna State communities. Already, 265 COVID-19 cases and 105 presumptive with eight TB cases were diagnosed in six weeks (June and July 2020). (6 August 2020)
- **Bolstering COVID-19 surveillance in Lagos**, which accounts for almost half of Nigeria's infections. WHO is supporting the health authorities by mobilizing surveillance teams to help investigate and trace patients presenting COVID-19 symptoms at healthcare facilities. They dig through hospital rerecords every day looking for patients who may be showing COVID-19 and who may have been missed by hospital staff. (6 August 2020)
- **COVID-19 response boosts surveillance of other diseases**. When COVID-19 crept into the southern Delta region in April, one solution government teams and health workers hit upon was to bring the aggressive COVID-19 surveillance into the systems used to monitor priority diseases. Across the Niger Delta WHO and partners retrained 3 874 surveillance officers who had been mobilized to detect COVID-19 cases in hospitals and communities to also look for acute flaccid paralysis (AFP), polio, meningitis, cholera, neonatal tetanus, yellow fever, measles and more. (13 August 2020)

Senegal:

- **Saint-Louis – the example of a united and coordinated team in the face of COVID-19**, where WHO and the Ministry of Health conducted a joint visit to the medical region. It was shown necessary to adopt new means, consisting of mask, hydroalcoholic gel, hand washing, and preventive measures. (18 August 2020)

South Africa:

- **WHO surge team arrives**, including 43 experts from various fields to support the COVID-19 outbreak response management. The first 17 health expects will arrive today and include key expertise in epidemiology, surveillance, case management, infection, prevention and control, procurement, as well as community mobilization and health education. (5 August 2020)
- **Hygiene in health facilities stepped up to protect against COVID-19**, including the use of PPEs and cleaning and disinfection of medical equipment and environment, to protect both patients and health workers from infection. (12 August 2020)

South Sudan:

- **Capacity of health workers strengthened to improve COVID-19 case management** to establish optimal capacities for effective patients care. WHO and the Ministry of Health trained over 350 health care workers in 10 states and 4 prioritized COVID-19 locations. (17 August 2020)

Zambia:

- **COVID-19 home-based care relieves health facilities**. Under the home-based care system, asymptomatic and mildly symptomatic COVID-19 patients under 50 years without underlying conditions or co-morbidities are cared for at home by families with the support of community-based volunteers. But patients with moderate or severe symptoms are admitted to a health facility. The home-based care had been envisaged in the national response plan and became operational in May. (20 August 2020)

Zimbabwe:

- **EHT officers follow WHO guidelines for early detection of COVID-19 symptoms**, for Zimbabwean returnees who have illegally crossed the border from South Africa and who also contribute to Zimbabwe's high burden of COVID-19 positive cases as they are not tested and quarantined upon return. (4 August 2020)
- **Continued delivery of immunization services in the context of COVID-19 pandemic** (17 August 2020)
- **Enhancing capacity for laboratory diagnosis for COVID-19 at Beitbridge District Hospital** (24 August 2020)

Region of the Americas

Bahamas:

- **PAHO continues COVID-19 response through donations to MOH**, to expand the country's COVID-19 testing capacity and increase the number of persons that can be tested daily. (7 August 2020)

Barbados and the Eastern Caribbean Countries:

- **Seminars for community leaders and hotline workers on mental health and psycho-social support**, in response to the stringent lockdown measures and drastic changes to every-day living due to the COVID-19 pandemic. Countries were rapidly identifying the need to prioritize Mental Health and Psychosocial Support (MHPSS) for their citizens as the mental health impact became obvious. (2 August 2020)

Bolivia

- **Canada and PAHO donate medical supplies to the COVID-19 response in indigenous populations**. In total, the Government of Canada allocated CA$2.5 million for the emergency in South America. Bolivia received approximately US$140,000, used mainly to purchase Personal Protective Equipment (PPE) for health personnel that provide focused care for the most vulnerable indigenous populations in Bolivia. (3 August 2020)

- **WHO sends 46 tons of humanitarian aid made up of Personal Protective Equipment for health professionals serving COVID-19**, including Personal Protective Equipment valued at $1.8 million. The donation is made up of 334 thousand face shields, 17 thousand 200 glasses, 49 thousand surgical gowns, more than 2 million medical masks and more than 480 thousand N95 chinstraps. (3 August 2020)
- **Similarities and differences between COVID-19 and flu** (19 August 2020)

Brazil:

- **PAHO organized training to assist women in situations of violence during the COVID-19 pandemic**, providing training for about 40 municipal workers, as violence against women tends to increase during emergencies. For this reason, care services for these people are essential during the COVID-19 pandemic, a disease caused by the new coronavirus. (31 July 2020)

Colombia:

- **PAHO delivers kits to 50 hospitals in the country to contribute to maternal and nutritional health** with an investment of more than $200,000 (800 million pesos). WHO, with support of ECHO and OFDA, delivered maternal, obstetric, vaccination and anthropometric kits to 50 hospitals located in 14 departments of the country to ensure that population groups such as migrants, people with disabilities, people with HIV, indigenous peoples and Afro-descendants, and those living in poverty and in conditions of greater vulnerability, do not lose access to these care and further backsliding towards universal health. (18 August 2020)

Costa Rica:

- **PAHO donated 27.2 tons of protective equipment to the Ministry of Health**, including surgical gowns, surgical masks, N95 respirators, goggles and protective masks. (14 August 2020)

Cuba:

- **A session to share the Cuban experience in the treatment of COVID-19** (7 August 2020)

Dominican Republic:

- **With new donation, PAHO continues support to strengthen National Laboratory**, including two laboratory refrigerators for conservation samples; 125 refrigerators and 500 dry ice for transport and conservation of samples, 12 pipettes (Tip); a PCR micro-centrifuge tube and a seventh-generation computer. In recent weeks, WHO also donated 4 000 viral transport swabs, 30 reagent kits, increasing the National Laboratory's test processing capacity to 15,000. PAHO has also donated six kits containing the SARS-Cov-2 reagents and diagnostic supplies for the COBAS 6800 kit; viral DNA extraction kits; 12 boxes of means of transport; and supplies to process tests to detect other respiratory viruses that are circulating in the country in addition to SARS-CoV-2, such as the different influenza viruses. (12 August 2020)
- **PAHO made new donation to continue response plan**, as part of a technical cooperation and implementing the Operational Plan for Emergency Response, specifically the pillars of surveillance, rapid response team and case investigation, and capacity building from laboratory. It included 10,000 units of viral transport media to collect PCR-Real Time samples, to increase the laboratory capacity at the territorial level for the safe taking and transport of samples for the detection of COVID-19. (19 August 2020)
- **PAHO donated 49 tons of Personal Protective Equipment** (PPE) for health workers. The donated supplies, valued at $ 1.6 million, consist of 2,350,000 surgical medical masks; 464,000 medical respiratory masks; 50,000 isolation suits and 16,600 protective goggles; as part of the technical cooperation actions between PAHO and the Government, in the implementation of the Operational Plan for Emergency Response due to COVID-19. (25 August 2020)

Ecuador:

- WHO supports the **protection of health workers of the Ministry of Public Health**, who carry out the diagnosis of COVID-19, through a donation of 1000 face shields, 300 protective glasses and 100 N-95 respirators to the National Institute of Health Public (INSPI). (5 August 2020)
- **WHO delivers PPEs for frontline workers to respond to COVID-19.** The Ministry of Health received 46,000 face shields for nine Zonal Health Coordination's of the country. The Ecuador Red Cross and Quito Fire Department received 150 face shields, 100 surgical gowns and 250 protective glasses to each of the institutions. The donation for the State University of Bolívar included 150 face shields, 100 surgical gowns, 250 goggles and 50 KN-95 masks. (11 August 2020)
- **WHO supports emergency response activities for COVID-19 in local towns** to improve the response in the local territories, in collaboration with other governmental and civil society organizations. With the support of UNESCO, the adaptation and printing of risk communication materials with cultural relevance for the country's indigenous, Afro-descendant, Montubia, Shuar, Achuar and Waorani communities were carried out; to communicate in a better way about COVID-19 and avoiding transmission, considering and respecting their culture. Materials included 7000 impressions: 1000 in Spanish, 1000 Kichwa from the sierra, 1000 Kichwa from the Amazon, 1000 for Waorani, 1000 for Afro-descendants, 1000 for Montubios; 500 Shuar, 500 Achuar. She also highlighted the importance of having this material for informed decision making. (11 August 2020)

Guatemala:

- **WHO donates more than 30 tons of protective equipment for health personnel with support from Canada**. These include 129,400 plastic masks (n2019-DJM) clear plastic, box of 200; 6,200 protective goggles (n117-LB 3) wraparound, soft frame, box of 200; 19,000 gowns (n2005 -Yvimed), non-sterile, size L, box of 100; 2,556,000 Surgical Masks (n66-Jingmen), Type II, box of 2000; and 114,000 Respirator Mask (n151 Garry Galaxy), GB19083, Grade 1. (27 July 2020)

Guyana:

- **WHO supports the Government in the fight against COVID-19** from the Government of Canada, including over 10,000 test kits so far; and, will be receiving 30, 000 more. (12 August 2020)

Haiti:

- **2,800 community health workers trained for the COVID-19 response** including 2,700 community health agents and 162 community health nurses and auxiliary nurses as part of the response to COVID-19. PAHO also conducted meetings with Community leaders including voodoo priests, catholic priests, pastors, and traditional birth attendants to provide them with accurate information and communication messages about COVID-19 such as protective measures, treatment centres and continuity of essential services in health care institutions. (12 August 2020)

Honduras:

- **Mental health and psycho-social phone-in initiative**, developed with the support of PAHO/WHO, Doctors Without Borders and the International Committee of the Red Cross. Psychosocial care and support are provided in the first and second instance, as well as follow-up and referral for specific treatment and support for grief and monitoring of losses. This initiative is based on the component of the National Emergency Strategy in Mental Health in the face of the Epidemic, with the aim of systematizing the organization of the response to emotional, anxiety and behavioral problems of the general population before stressful situations caused by the COVID-19 pandemic. (3 August 2020)
- **Health workers address the introduction of the COVID-19 vaccine and the approach to the pandemic** with WHO Representative Magister Piedad Huerta and Vice-Chancellor Norma Cerrato, who detailed the technical cooperation received by international cooperation agencies in the framework of the approach pandemic of COVID-19; and director of the Health Surveillance Unit, Dra. Karla Pavón, addressing the issue of the Virology laboratory, the acquisition of supplies and the maintenance of the equipment to perform PCR tests to reduce the delay of the results of these tests. (6 August 2020)
- **Panel on 'Breastfeeding in times of COVID-19'** (7 August 2020)
- **La Venta community strengthens human resources to improve response capacity of health services** (6 August 2020)

- **Project to strengthen the laboratory register, information system and situation rooms** (7 August 2020)
- **Induction day for the team of field epidemiologists** hired to strengthen epidemiological surveillance in the health regions prioritized by the project. (17 August 2020)
- **Dr Luis Macías recognised as Humanitarian Hero 2020** (19 August 2020)
- PAHO has **included mental health issues in all the trainings given to health personnel**, airports, personnel of other secretariats, of PAHO/WHO in Honduras, from the UN System and their families and the REDHUM Humanitarian Network, health personnel from triage centers of the Mayor's Office of Tegucigalpa and in Roatán, among others. Trainings provided recommendations on stress management, self-care and basic psychosocial skills; reaching more than 2,786 people in the last three months. (26 August 2020)
- **PAHO donated equipment for the care of the COVID-19 patients** to Ministry of Health, including 206 extraction kits for PCR tests, 40 oxygen concentrators, 1,538,000 medical masks, and 135,000 reactors for PCR tests; delivered to the National Virology Laboratory. (25 August 2020)

Jamaica:

- **Getting ahead of COVID-19 with Go. Data** has helped Jamaica get ahead of the virus and reduce transmission. The rapid installation of the Go. Data surveillance system occurred quickly after the announcement of the pandemic, and enabled health authorities to gain control of the virus using 77 surveillance sites across the country. (31 July 2020)

Mexico:

- **PAHO and National Institute of Indigenous Peoples promote the health of indigenous peoples**, disseminating information for the prevention of COVID-19 through campaigns that are broadcast in indigenous languages on the 22 stations of the Indigenous Cultural Radio System (SRCI) operated by INPI. Messages include information on how to prevent high blood pressure, heart disease, diabetes, obesity or chronic respiratory conditions, as well as dengue and malaria. (30 July 2020)

Panama:

- **PAHO donated swab collection kits to increase COVID-19 testing**, including 25,000 sampling kits for nasopharyngeal swabs, tube with stabilizer solution for nucleic acids (exclusive for PCR) and 1,000 sampling kits for nasopharyngeal swabs, tube with universal viral transport medium (PCR, viral isolation, antigen). (19 August 2020)
- **PAHO procures medical supplies donated by the Government of Japan**, including 282,500 products, including gowns, medical masks, N95 masks, protective glasses, isolation gowns and face shields. (13 August 2020)

Paraguay:

- **There is also good news:** **seven babies came safely into the world amidst the pandemic** (5 August 2020)
- **Parents urged to continue vaccinating their children according to national policies** with support of the Government of Japan, including 10 tents, equipped with furniture and 50 sinks for distribution to ten sanitary regions. (18 August 2020)

Peru:

- **PAHO, WFP, Regional Government of Áncash, and Diresa inaugurated a 24/7 call center**, for the care of people suspected of having contracted COVID-19. The Call Center connects the population with rapid response teams and serves as a point of contact in the epidemiological surveillance mechanism to obtain information on suspected cases, locating them geographically and establishing contact with rapid response teams located at strategic points in the 6 health networks, which they must go to do the epidemiological investigation. (25 August 2020)
- **Ancash Region to increase testing in patients with suspected COVID-19** with support from PAHO and WFP, through the purchase of 10,000 detection and extraction kits. The first 4,224 determinations were delivered to the INS on August 24. A second batch of 5,776 kits is expected to be delivered in September. 8,000 viral transport media and swabs have been purchased to collect samples patients suspected of having the COVID-19 disease. (25 August 2020)
- **WHO, WFP deliver second batch of supplies for COVID-19 case management and PPEs** to protect the Rapid Response Teams, provide supplies for the management of cases, lab supplies to carry out molecular tests (RT-PCR) and the timely detection of COVID-19 pneumonia cases, as well as equipment to facilitate hygiene practices in markets. This second batch of medical supplies and equipment included 9,990 polycarbonate lenses, 2,000 mercury thermometers, 2,000 digital thermometers, 700 pulse oximeters, 7 ultrasound machines, extraction kits and means of transport, and portable stainless-steel sinks. (25 August 2020)

Suriname:

- **Responding to COVID-19 boosts health system**, as the pandemic highlights the gaps in the country's health system. The Government is acting quickly to drive its response, engaging partners, reaching remote communities through primary health care and building a strong foundation for universal health coverage. COVID-19 has highlighted its small health workforce: just eight physicians and 23 nurses per 10,000 people, health infrastructure that is still being developed and limited emergency response capacity, among others. (4 August 2020)

Eastern Mediterranean Region

Afghanistan:

- **One patient recounts his experience with COVID-19** (10 August 2020)
- **Health workers on the frontline against COVID-19** (19 August 2020)

Iraq:

- **WHO and Ministry of Health launch second phase of COVID-19 awareness-raising campaign** in the heavily populated, high-risk areas of Thi Qar and Missan, south of Baghdad. The campaign "Your health is important" will be extended later in the month to Basra, Wasit, and to Sulaymaniyah, north of the capital Baghdad. (10 August 2020)
- **COVID-19 awareness-raising campaign in the south concludes**. WHO, in partnership with the Ministry of Health and its implementing partners intensified community outreach to educate people on measures to limit transmission, reaching more than 5 million people in 4 densely populated and heavily affected areas in Basra, Wasit, Thi Qar and Missan. (19 August 2020)
- **WHO delivers 6 ambulances and health technologies to Kurdistan** region to support emergency referrals and COVID-19 containment efforts. The consignment also included 22 tons of health technologies to support the efforts of the Government in containing COVID-19. It included oxygen concentrators, nucleic acid extraction kits, viral transport medium, personal protective equipment and intensive care hospital beds. (25 August 2020)
- **WHO supports COVID-19 awareness-raising campaign in the Kurdistan region** (23 August 2020)

Lebanon:

- Beirut Explosion: **Social mobilization: without official assistance, people help each other to move on from the initial impact of the Beirut blast** (19 August 2020)
- Beirut Explosion: **Towards recovery after the blast: Rosary Sisters Hospital, Beirut** (16 August 2020)

Palestine:

- **WHO pays tribute to Real Life Heroes on World Humanitarian Day: Salsabeel**

Pakistan:

- **Drive to restore essential health services during COVID-19** as they have been under pressure to keep health systems well-organized and prepared. While Pakistan has demonstrated a strong resolve to deliver on the promise of health for all through universal health coverage (UHC), the country's health system is under immense strain from COVID-19. (28 August 2020)

Somalia:

- **Somalia responds swiftly to measles outbreak in Jubaland State**, through its Early Warning and Alert Network (EWARN) as a real-time early warning disease alert system, as in June 2020. This time, WHO was alerted to a possible measles outbreak in a camp for internally displaced people (IDPs) in Jubaland State and shared this information with the State Ministry of Health. (9 August 2020)
- **'Geesi' Diaries: Facing a virus while setting up data systems to fight the virus**. 31-year-old Mohamed Yare, WHO National Polio Surveillance Data Manager, is providing support to the Ministry of Health to develop a COVID-19 data collection system integrated into the surveillance and information management system while enhancing information management. (18 August 2020)

Sudan:

- **Overcoming difficulties: the long journey towards establishing a public health laboratory to serve all Darfur states**. While facing the COVID-19 pandemic, a laboratory was not used immediately, and all equipment were present but not used. Samples were collected and sent to Khartoum to be tested in the National Public Health Laboratory to then be sent back, which was problematic as there were delays in testing and results which affected effective response. Consequently, this delay led to the decision of using the newly established laboratory in Nyala to accelerate the COVID-19 response. (10 August 2020)

Tunisia:

- **UN Resident Coordinator, WHO Representative visit COVID-19 laboratories**

European Region

Azerbaijan:

- **Better testing and contact tracing are key to COVID-19 response**. During a 10-day visit, the team found that most of the recommendations of the first team had been fully or partially implemented. The experts noted substantial investments in human resources, extensive use of digital health tools, and improvements in the care of COVID-19 patients. They suggested that data collection and analysis should also be improved. (11 August 2020)

North Macedonia:

- **Epidemics and Public Health Emergency Operations Centre opens** to provide centralized, real-time information, monitoring and reporting, and advice on the response to public health events and emergencies. (7 August 2020)

Romania:

- **Trust, dialogue and cooperation at community level to combat COVID-19** (27 August 2020)

South-East Asia Region

Bangladesh\Cox's Bazar:

- **International Youth Day - A Hero in time** (10 August 2020)
- **International Youth Day - The hidden heroes of Lab testing** (11 August 2020)
- **International Youth Day: The vital role of frontline health workers** (12 August 2020)
- **WHO strengthening community-based surveillance to address COVID-19 related rumours in the community**, by providing technical input to quickly respond to rumours and promote community feedback through communication with community mechanisms and is collaborating with partners to disseminate information on preventing COVID-19 infections. (15 August 2020)
- **Skilled, knowledgeable and compassionate care: the resolve of Midwives in the Rohingya refugee camps** (19 August 2020)
- **No one should get sick seeking care: the critical role of infection prevention and control during the COVID-19 outbreak** (20 August 2020)
- **Driving change, every day, every ride** (21 August 2020)
- **3 years of Disease surveillance in Cox's Bazar humanitarian emergency** (21 August 2020)
- **3 years of vaccination program in Cox's Bazar: envisioning a world free of vaccine-preventable diseases** (25 August 2020)
- **3 years of IEDCR Cox's Bazar Field Laboratory: establishing laboratory quality amidst a humanitarian crisis** (26 August 2020)

Indonesia:

- **Disseminating the revised national COVID-19 guidelines**, shared with approximately 1,900 healthcare workers from healthcare facilities and District and Provincial Health Offices from all 34 Indonesian provinces. The fifth edition of the national guidelines were developed to address the dynamic evolution of COVID-19 as more information about the disease and how to respond as its epidemiology is getting to be understood. WHO technical staff provided technical inputs during the revision to align the fifth edition with WHO recommendations on topics such as preferred diagnostic testing and patient discharge criteria. (11 August 2020)
- **Intra-Action Review (IAR) conducted for COVID-19 response**, a comprehensive multi-sector qualitative review of actions undertaken thus far in response to an ongoing emergency. It is a valuable mechanism to identify gaps and opportunities for learning and improvement to better respond to the COVID-19 outbreak. (25 August 2020)
- **Digitising COVID-19 risk communication for hard-to-reach communities**, collaborating with Wahana Visi Indonesia (WVI) to develop a contextualized content and utilising alternative media and digital communication channels. The plan will comprise activities that aim to reach

children - especially teenagers - and families with children under-five with vital information on COVID-19 prevention strategies; and strengthen the capacity of frontline health workers as key communicators of COVID-19 matters. (23 August 2020)

Thailand:

- **"New Normal" healthcare system launched to Build Back Better After COVID-19** to help healthcare facilities and personnel strengthen their response to the pandemic, and to improve the health care system after the pandemic subsides. All healthcare facilities in Bangkok and 12 Regional Health Offices across the country will participate in the project over the next 10 months, with support from WHO and the government of Japan. A 'new normal' model for health service delivery to strengthen the healthcare system and support health workers has been developed. (11 August 2020)
- ***New Normal* launched to 'Build Back Better' after COVID-19**, through a comprehensive project to help healthcare facilities and personnel strengthen their response to COVID-19, and to improve the health care system. (11 August 2020)

Western Pacific Region

Cambodia:

- **WHO ensures access to COVID-19 tools continues** to strengthen the supply chains, accelerate research and ensure provision of supplies for COVID-19 prevention, preparedness and response (28 August 2020)

Laos PDR:

- **Working with communities to ensure early detection of potential outbreaks of COVID-19**. Up until now, Lao PDR's main lines of defence against the introduction of COVID-19 have been limiting the number of people who can enter the country, mandatory quarantine and COVID-19 tests for those people who do enter and testing anyone hospitalized with severe pneumonia or breathing difficulties for COVID-19. (28 July 2020)
- **Ministry of Health holds COVID-19 technical briefing for Lao media** (6 August 2020)
- **WHO supports Ministry of Health to develop training videos to protect Lao medical workers from COVID-19**. The eight videos include topics like how to keep staff and other patients safe, how to put on personal protective equipment, how to keep the hospital clean, staff wellbeing and how to keep essential health services running during COVID-19. (12 August 2020)
- **Observing implementation of preventive measures during mass gathering** with a visit to Sisaket Temple to observe the implementation of preventive measures during mass gathering. (19 August 2020)
- **Engaging with monks to understand implementing COVID-19 preventive measures**, like the Lao Front for National Development and the Lao Buddhist Fellowship, to provide advice on safe funeral rites, physical distancing when visiting temples, and on giving alms. (17 August 2020)

Malaysia:

- **Video**: Hand hygiene campaign by Asian Health Ministers (3 August 2020)
- **Polio response resumes amidst COVID-19 pandemic** after its temporary downscaling in Sabah State and delay in Federal Territory of Labuan due to the COVID-19 pandemic. Currently polio immunization campaigns are well underway in every district to reach all children under 13 years of age regardless of their previous immunization status. (27 August 2020)

Mongolia:

- **Reaching the most vulnerable older groups**, by launching a joint project to introduce community-based integrated care and support to the most vulnerable group of older people in the capital Ulaanbaatar, and on the new normal. The city is home to 50% of the older population aged 65 and above, and 6,985 or 7% of whom are categorized in IV and V health groups making them the most vulnerable group of older people. (17 August 2020)

Philippines:

- **Breastfeeding must continue amidst COVID-19** (5 August 2020)