

Somalia's resilience and progress towards recovery and attaining health security

Despite decades of conflict, civil unrest, protracted humanitarian crises and political instability, Somalia has made significant progress in its recovery efforts. This is evidenced by the positive strides made by the country towards improving health and well-being, with a modest decrease in maternal, infant and under-five mortality rates, although maternal and child mortality rates remain among the highest globally.

Somalia's health care system faced a significant challenge with the onset of the COVID-19 pandemic, with its first case reported on 16 March, 2020. By the end of May 2023, over 27 408 confirmed cases of COVID-19 and 1352 associated deaths were reported. Indeed, the COVID-19 pandemic exposed the vulnerabilities of Somalia's health care system, highlighting the need for significant investment and support to provide quality care to its population, particularly in times of crisis. Furthermore, the pandemic had a detrimental impact on routine essential health care, leading to gaps in the provision of immunization and basic health care services for children and pregnant and lactating

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The funding support from the Global Affairs Canada helped WHO to rapidly scale up its response efforts for COVID-19 pandemic across Somalia aimed at preventing and mitigating risk to disadvantaged mothers and children living in impoverished conditions.

Photo credit: WHO/Ismail Taxta



WHO established at-least three molecular diagnostic testing laboratories across the country rapidly during the earlier part of the COVID-19 pandemic with funding support from the Global Affairs Canada. This is a significant achievement since at the time of pandemic, there was no single laboratory in the country for testing of SARS-COV-2. *Photo credit: WHO/Ismail Taxta*

women. In addition, limited resources for surveillance, case detection, contact tracing, and testing hindered the Federal Ministry of Health's (FMOH) ability to respond to the COVID-19 emergency. A lot of strides, however, have been made towards recovery, peace and sustainable development.

The country has made several efforts towards reversing the decline in provision of essential health services witnessed during the pandemic through integrated immunization campaigns, conducting outreach services in hard-to-reach areas and other activities geared at promoting primary health care services at health facilities and at the community level. A lot of investment has been made towards attaining better health security and ensuring that the country is better prepared to tackle future public health events. COVID-19 presented the country with an opportunity to build institutional capacities and strengthen International Health Regulations (IHR 2005) core capacities such as establishment of public health laboratories at the national level and in all states of Somalia; implementation of Somalia's first ever multi-disease surveillance system; strengthening the capacity of the health workforce in health security; establishment of health emergencies coordination hubs; and formation of essential health services for health security. This has

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Coordination was a key element for effective, coherent and consistent response of the pandemic. WHO used the organization's own frameworks for emergency management to establish multidisciplinary Incident Management System (IMS) Teams within the organization and built the capacity of the Ministry of Health (MOH) to establish similar structures at national and subnational levels. The FMOH together with the WHO and partners also developed the National Preparedness and Response Plan for COVID-19 in Somalia. This response plan was the blueprint for COVID-19 response in the country – a plan which received critical support from Global Affairs Canada, alongside other United Nations (UN) and donor partners.

A partnership for building resilience: Global Affairs Canada's supporting role in fortifying Somalia's health system and **COVID-19 response**

To address the challenges posed by the COVID-19 pandemic, WHO conducted regular needs assessments with Somalia's FMOH. These assessments were done through joint FMOH/WHO COVID-19 situation reports and other assessments, from which WHO was able to develop three evidence-based COVID-19 response plans aligned to the national response plan. The assessments revealed numerous needs, including strengthening surveillance, as well as ensuring access to integrated essential health services, and scaling up access to medical oxygen and vaccinations countrywide to mitigate the impacts of COVID-19.

Based on the assessments, Global Affairs Canada partnered with WHO Somalia to respond to these challenges and save lives.

To these ends, Global Affairs Canada provided WHO Somalia with one bilateral contribution amounting to CAD \$ 1.5 million; a second contribution in the amount of US \$ 1 million through The Access to COVID-19 Tools Accelerator – a global partnership aimed at ensuring equitable distribution of COVID-19 tools such as vaccines, treatments and protective gear; and the setting up of solar-powered oxygen concentrator systems was completed in partnership with Grand Challenges Global Affairs Canada and the University of Alberta.

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Photo credit: WHO/Ismail Taxta

The partnership between Global Affairs Canada and WHO helped the health care facilities in Somalia to function optimally during the COVID-19 pandemic. WHO ensured that essential supplies and drugs are available in all health care facilities enabling mothers and children to access essential health care everywhere.

Strides towards a strengthened national coordination mechanism for health emergencies

To fortify coordination and the national response, WHO provided technical and financial assistance to coordinate COVID-19 response activities at national, state, regional and district levels in Somalia. The WHO country office, in collaboration with FMOH, developed a COVID-19 Emergency Preparedness and Response Plan. This was an anticipatory plan developed before the first COVID-19 case was reported in Somalia and included different case scenarios. The plan was updated as the pandemic evolved based on needs and lessons learned.

Collaborating with Federal and State Ministries of Health and the Office of the Prime Minister, WHO established technical IMS teams at national and state levels. The teams comprised coordination, epidemiological surveillance, case management, logistics, operations, procurement, communication and external relations experts. The Office of the Prime Minister joined the IMS teams to enhance coordination of the response nationwide. The

functions of the IMS teams were largely guided by the National Preparedness and Response Plan for COVID-19 in Somalia. Additionally, WHO facilitated weekly UN COVID-19 Task Force meetings and Health Cluster Coordination meetings for nongovernmental organizations, implementing partners and women's rights organizations. WHO was also the lead agency for the UN Inter-Agency Coordination Committee and the executive crisis management team set up by the Designated Official of the UN System in Somalia. WHO and FMOH also jointly produced weekly epidemiological situation reports, monthly infographics and numerous risk assessments. These materials provided in-depth descriptions of the COVID-19 epidemic's characteristics at national and state levels, which supported evidence-based decision-making and enabled WHO to develop targeted COVID-19 emergency response plans and interventions to guide collective response efforts.



The community health workers deployed by WHO were the unsung heroes of Somalia's response to COVID-19 pandemic at the frontline. Their work supported by the Global Affairs Canada helped mitigate risk and prevent spread from SARS-COV-2 infection at the communities who were living in marginalized settings.

Photo credit: WHO/Ismail Taxta 5

Establishment of Somalia's first multi-disease surveillance system

The timely funding from **Global Affairs Canada enabled** WHO to support the FMOH in Somalia to establish its first country-owned multi-disease surveillance system. The IDSRS was established by the FMOH and partners through a road map identified in July 2021. The country has since made significant progress in implementing IDSRS which lists a total of 44 priority conditions (including COVID-19) reported through a mobile application to the national health management information system - DHIS2.

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To further strengthen surveillance for public health events, Somalia established the frontline FETP, a three month in-service training programme to build the capacity for 'disease detectives'. The frontline FETP aims to strengthen the detection of and response to diseases and events of public health importance or international concern, as well as equip frontline health teams with skills to generate quality surveillance data and to use this data for public health action. Initial funds to establish the programme were derived from the Canadian support. A total of four cohorts have completed the training with 95 (30 female) frontline health workers graduating.



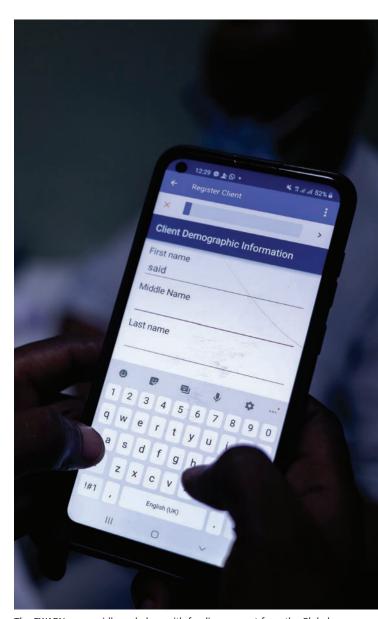
Identifying, tracking, and tracing any suspected case of SARS-COV-2 infection and close contacts in rural and peripheral areas were a challenge owing to inaccessibility and geographic distance. WHO worked with the local community and community health workers to overcome these barriers. *Photo credit: WHO/Ismail Taxta*

Expanding EWARN

WHO expanded the EWARN surveillance system to help track and trace COVID-19 outbreaks, adding 156 new health facilities to the system and teaching 520 health care workers how to operate the system. This expansion led to a total of 694 facilities reporting competently through EWARN and furthermore, helped detect COVID-19 cases and monitor other public health issues in remote areas. District surveillance teams supported health care facilities in alert detection, reporting and investigation by visiting 61% of all EWARN surveillance sites monthly using online training platforms adapted to the country's needs and context. Specifically, the WHO country office, through its state-based public health emergency officers, provided training to each of the facilities enrolled into EWARN on the use of a syndromic case definition of COVID-19 and early recognition and reporting of suspected cases. The training also covered data entry and reporting using both the mobile platform of the EWARN system. In addition to the 14 epidemic-prone diseases already included in the system (e.g., waterborne, vaccinepreventable, vector-borne and mixed-transmission diseases), the case definition for COVID-19 was added and rolled out as a newly reportable health condition in EWARN. Health facilities detected 54% of all COVID-19 cases. The real-time data on COVID-19 provided through EWARN helped inform WHO's response strategies, such as identifying emerging clusters of COVID-19 and deploying district RRTs and CHWs to investigate. EWARN is usually implemented as an adjunct during health emergencies and is not a national disease surveillance system substitute. Once the acute emergency phase is over, it should be integrated into the national surveillance system. An evaluation of EWARN in Somalia was conducted using data from 2017 to 2020 to understand the surveillance needs of the country, including during COVID-19, before proceeding to establish an IDSRS.

The evaluation is published on the following link:

https://conflictandhealth.biomedcentral.com/articles/10.1186/s13031-022-00450-



The EWARN was rapidly scaled up with funding support from the Global Affairs Canada and use the digital technology (mobile application) by the health care workers enabled WHO and the health authorities to track the progression of the outbreak in real time. Photo credit: WHO/Ismail Taxta

The real-time data on COVID-19 provided through EWARN helped inform WHO's response strategies, such as identifying emerging clusters of COVID-19 and deploying district RRTs and CHWs to investigate.

Meeting the needs of vulnerable populations through deployment of CHWs and RRTs

In the period up to June 2021, WHO trained and deployed 1840 mainly female CHWs, and 207 RRTs covering 57 districts to reach the most vulnerable, especially in hard-to-reach areas. The CHWs conducted door-to-door visits to search for suspected cases of COVID-19, conducted contact tracing and follow-up of the contacts, monitored patients with mild illness who were on home-based care and provided health promotion messages to the community, including in internally displaced persons (IDPs) settlements. WHO worked with the national and state MOH to support IDPs and host communities by deploying teams to IDP camps to educate them about preventive measures and detect suspected cases of COVID-19. As a result, CHWs visited a cumulative total of 551 006 households in IDP settlements, reaching a total of 2 486 947 individuals (1 260 882 males, 1 226 065 females). Alerts from the community and IDPs, which were reported by CHWs through a digital real surveillance platform, were investigated by the RRTs. Out of all the COVID-19 confirmed cases reported by March 2022, 43% were detected by CHWs, while RRTs investigated 44% of COVID-19 alerts by June 2023. The CHWs identified

more than double the close contacts those identified EWARN health facilities. The efforts were aimed at preventing the spread of COVID-19 in vulnerable communities and ensuring that adequate care was provided to those affected. The key roles played by CHWs and RRTs in detection of COVID-19 cases and reducing the spread of the disease among the vulnerable populations in a weak and fragile cannot system overstated.

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During the pandemic, WHO deployed its own frontline staff to track and monitor the health of all close contacts irrespective of their place of livings to ensure no one is left behind for contact tracing and case identification. *Photo credit: WHO/Ismail Taxta*

Improved national laboratory capacity to test and detect epidemic-prone diseases

In 2016 when the first case of COVID-19 was reported, Somalia did not have real-time PCR machines, which are essential in testing for COVID-19 and other viruses. As a result, the initial samples of suspected COVID-19 cases were shipped to neighbouring countries which was not only costly but had a long turnaround. WHO supported federal and state MOH to equip and build the capacity of seven public health laboratories at national and in each state level to test for COVID-19 and other epidemic-prone diseases.

WHO also helped the MOH set up 21 GeneXpert COVID-19 testing centres across Somalia, providing training and salaries for laboratory staff, as well as other resources to ensure accessibility of COVID-19 testing in remote areas. WHO supported the national and subnational health authorities to introduce antigen-based rapid diagnostic tests in the country. This led to increased access to testing at the point of care (a twofold overall increase in testing), and increased access to COVID-19 testing for marginalized communities and nomadic populations. Subsequently the COVID-19 testing strategy for emergency setting and for routine care was developed.

In 2022, WHO expanded the capability of three public health laboratories to undertake genomic sequencing

With the real-time PCR machines, Somalia can now test for influenza, dengue fever, chikungunya, mpox and other viruses. These laboratories will continue to have the potential of leaving a lasting and positive impact on the Somali health sector as they will have the capacity to test and detect various other types of epidemic-prone diseases in the future. of SARS-COV-2 virus allowing the country to detect and report new variants of SARS-COV-2. WHO provided sequencing devices and bioinformatics and reagents while helping to train laboratory staff to use the latest Oxford nanopore sequencing technology. Thus, Somalia is now also able to analyse the genome of other bacteria, pathogens and influenza viruses within the country. With the real-time PCR machines, Somalia can now test for influenza, dengue fever, chikungunya, mpox and other viruses. These laboratories will continue to have the potential of leaving a lasting and positive impact on the Somali health sector as they will have the capacity to test and detect various other types of epidemic-prone diseases in the future.



The public health laboratories supported by the Global Affairs Canada have contributed to improving national health security in Somalia. The laboratories continue to play a critical role for enhancing epidemic preparedness and readiness by testing and detecting emerging and re-emerging pathogens circulating in the country

Photo credit: WHO/Ismail Taxta

Solar-powered oxygen: saving lives during COVID-19 and beyond

Access to medical oxygen has been an overlooked area in Somalia's health care system despite being crucial for treating respiratory diseases like pneumonia. Pneumonia is the leading cause of death in children under five years of age in the country. Startlingly, up to 35% of childhood deaths from pneumonia are preventable with the use of medical oxygen. The COVID-19 pandemic heavily emphasized the need for medical oxygen as a life-saving treatment for patients with breathing difficulties across Somalia.

In response to the lack of medical oxygen in primary and secondary health care centres in Somalia, WHO committed to working together with the FMOH, as well as UN and donor partners to scale up the availability of medical oxygen in the country. Indeed, after distributing numerous oxygen concentrators to health facilities across the country, WHO Somalia partnered with Grand Challenges Global Affairs Canada to set up the first solar-powered medical oxygen concentrator system at Hanano Hospital in Dhusamareb, Galmudug State. Owing to this system's unprecedented success in terms of reliability and saving lives, WHO Somalia was then able to leverage Global Affairs Canada's funding through the Access to COVID-19 Tools Accelerator to install two additional solar-powered medical oxygen concentrator systems at Kismayo General Hospital in Jubbaland State and Bay Regional Hospital in Southwest State thereby using COVID-19 funding to serve those with other breathing problems. All three of these systems are comprised of three oxygen concentrator units with a capacity of 10 L/minute each, operating 24 hours per day, seven days per week.

The installation of these solar-powered oxygen concentrator systems represents a significant step towards improving Somalia's health infrastructure for equitably meeting the needs of vulnerable and other populations. A survival analysis for critical patients admitted to COVID-19 isolation facilities to assess health care options based on evidence found that patients who received medical oxygen had a 75% higher survival probability than those treated with both oxygen and non-invasive ventilation. Patients given non-invasive ventilation with medical oxygen had a risk of death 5.43 times higher than those given oxygen only. Moreover, in addition to reducing the country's reliance on traditional energy sources, which can be costly and unreliable, these solar-powered systems simultaneously provide sustainable and affordable access to medical oxygen which is critical in treatment of patients with severe respiratory infections while reducing the health sector's carbon footprint. Overall, Global Affairs Canada's support for setting up these systems has not only helped to save numerous lives, the majority of whom are children under five years of age, but it has also set a precedent across the health sector that solar power can and must be used to electrify entire health facilities, especially in remote locations - something that WHO and other partners are already working towards alongside the FMOH.

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With support from the Global Affairs Canada and Global Challenge Canada, WHO set up solar-powered oxygen delivery system in very remote and farthest part of the country. Most (94%) of care seekers were discharged without any disability after receiving medical oxygen from these facilities. Children younger than 5 years made up 64% of those receiving oxygen from these centres. *Photo credit: WHO/Ismail Taxta*

Improving access to essential health services

WHO supported the establishment of 19 treatment centres for COVID-19 across Somalia. These facilities were equipped with trained health care workers and necessary supplies including oxygen concentrators, essential drugs and medical supplies and personal protective equipment for prevention of COVID-19 transmission in health care settings. More than 8571 health care workers were trained on COVID-19 treatment and case management. WHO ensured that primary health care centres across Somalia were also equipped with essential supplies and were supported to continue providing both routine and emergency care during the pandemic.

In addressing the limitations of managing critically ill patients in Somalia, WHO and the national health authorities collaborated to implement a 3-month project to establish emergency, critical and operative care services. Through the project, a set of basic emergency care activities were implemented for emergency, operative and critical care services within the continuum of integrated health services delivery in the country. The project also supported Somali health workers to strengthen their skills in basic emergency care, mass casualty management and trauma care, hospital management and infection prevention and control, among other topics.

COVID-19 created a disruption in the provision of essential health care services during the COVID-19 pandemic. WHO partnered with other actors to augment essential health care services, which allowed immunization services, essential newborn care, care

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for pregnant and lactating women, and other routine primary health care services to resume normally during the pandemic. Using physical distancing and other public health measures, WHO staff also increased monitoring and supervisory visits to these vaccination, maternal and child health care centres to ensure that routine health services resumed operations, while at the same time reducing the risk of both health care seekers and providers being exposed to COVID-19. Immunization campaigns were introduced, which included house-to-house immunization programmes aimed at reaching vulnerable children who had missed out on vital immunization and boosting population immunity to measles and polio. Post-campaign monitoring using lot quality assurance sampling showed a 94.6% vaccination coverage. Disease control campaigns such as indoor residual spraying continued despite the challenges that came with the pandemic. This is a demonstration that essential health services in fragile settings can continue even in a pandemic when standard health safety measures are in place.



The support of Global Affairs Canada ensured that essential health services continue to be delivered to the vulnerable populations across the country. Any disruption would have had a catastrophic impact on the lives of mothers and children in such a fragile setting. *Photo credit: WHO/Ismail Taxta*



WHO's vision of building a resilient health system to improve access to quality health care for all during the COVID-19 pandemic would not have been possible without the generous contribution received from the Global Affairs Canada.

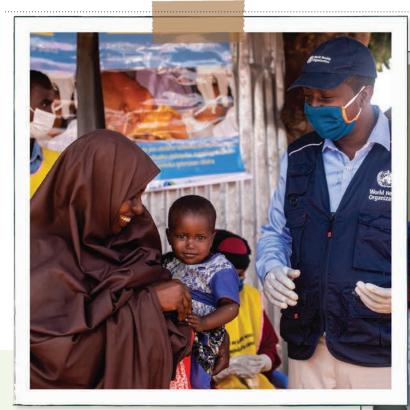
Photo credit: WHO/Ismail Taxta

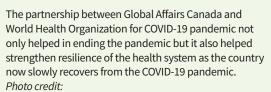
Conclusion

Overall, Global Affairs Canada's support to Somalia via WHO during the COVID-19 pandemic helped to strengthen the country's health system, while simultaneously responding to the COVID-19 pandemic. Indeed, Global Affairs Canada's support has been crucial for improving public health functions in the country, as well as establishing important longer-term interventions, including national and state level laboratories, and helping to kick-start the use of solar power for electrifying entire health facilities. By leveraging on such investments, WHO will continue

actively working to improve public health functions for other diseases, establish community based surveillance systems, expand laboratory capacities further and engage CHWs for other priority health interventions for advancing global health security. In these respects, WHO looks forward to continuing to work in close collaboration with its Canadian partners in line with Global Affairs Canada's feminist international assistance policy, to ensure that women and children remain at the forefront of all health programming work across the country.

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Related links

- WHO's response to COVID-19 in Somalia, road to an inclusive recovery. (https://applications.emro.who.int/docs/9789292740627-eng.pdf?ua=1)
- COVID-19 information note 2: (https://www.emro.who.int/images/stories/somalia/covid-19-information-note-2.pdf?ua=1)
- COVID-19 information note 3: (https://www.emro.who.int/images/stories/somalia/covid-19-information-note-3.pdf?ua=1)
- COVID-19 information note 4: (https://www.emro.who.int/images/stories/somalia/documents/covid-19-information-note-4.pdf?ua=1)
- COVID-19 information note 10: (https://www.emro.who.int/images/stories/somalia/documents/covid-19-information-note-10.pdf?ua=1)
- COVID-19-19 information note 15: (https://www.emro.who.int/images/stories/somalia/documents/covid-19-information-note-15.pdf?ua=1)
- WHO's response to COVID-19 in Somalia; A year of impact, resilience and innovation (https://www.emro.who.int/images/stories/somalia/documents/who-response-to-covid-in-somalia.pdf?ua=1)
- Evaluation of the electronic Early Warning and Response Network (EWARN) system in Somalia,
 2017–2020: (https://conflictandhealth.biomedcentral.com/articles/10.1186/s13031-022-00450-4)



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