Review of WHO’s response to COVID-19 in the WHO African Region

2024
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2024
# Contents

Abbreviations ...................................................................................................................... iv

Executive summary .............................................................................................................. vi

I. Introduction and context ................................................................................................. 1

II. About the report ............................................................................................................. 4

Objectives of the report ....................................................................................................... 4

Overview of the methodology ............................................................................................. 5

III. Findings and recommendations .................................................................................. 9

Leadership & internal coordination ................................................................................... 9

Partner coordination and engagement ............................................................................... 11

Information and planning ................................................................................................... 14

Health operations and technical expertise ......................................................................... 17

Operations, support and logistics ....................................................................................... 44

Finance, administration and resource mobilization ............................................................. 48

Gender, equity and human rights ....................................................................................... 50

IV. Synthesis of recommendations .................................................................................... 53

V. Conclusion ................................................................................................................... 56

Reflections on guiding questions ....................................................................................... 71

VI. Annexes ..................................................................................................................... 59

Annex 1: Country deep dives ............................................................................................ 59

Angola ................................................................................................................................... 59

Botswana ............................................................................................................................. 62

Chad ..................................................................................................................................... 65

Democratic Republic of the Congo .................................................................................... 70

Nigeria ................................................................................................................................. 74

Seychelles ............................................................................................................................ 77

South Africa ......................................................................................................................... 80

Tanzania ............................................................................................................................... 88

Annex 2: Review framework ............................................................................................. 87

Annex 3: Interviewee list ..................................................................................................... 89

Annex 4: Documents included in desk research ................................................................ 94

Annex 5: Survey ................................................................................................................ 106
### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAR</td>
<td>after-action review</td>
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<tr>
<td>AFRO</td>
<td>Regional Office for Africa</td>
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<td>AHC</td>
<td>attacks on health care</td>
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<td>AIRA</td>
<td>Africa Infodemics Response Alliance</td>
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<td>AU</td>
<td>African Union</td>
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<td>AVAREF</td>
<td>African Vaccines Regulatory Forum</td>
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<td>BMJ</td>
<td>British Medical Journal</td>
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<tr>
<td>CAC</td>
<td>community animation cells</td>
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<td>CBRI</td>
<td>Community-based response initiative</td>
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<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
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<tr>
<td>CEHS</td>
<td>continuity of essential health services</td>
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<tr>
<td>CES</td>
<td>continuity of essential services</td>
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<tr>
<td>CHW</td>
<td>community health worker</td>
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<td>CM</td>
<td>case management</td>
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<td>COVAX</td>
<td>COVID-19 Vaccines Global Access</td>
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<td>CSCS</td>
<td>COVID-19 supply chain system</td>
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<td>CSO</td>
<td>civil society organization</td>
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<td>CST</td>
<td>Country Support Team</td>
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<td>DRC</td>
<td>Democratic Republic of the Congo</td>
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<td>EMT</td>
<td>emergency medical team</td>
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<td>EOC</td>
<td>emergency operations centre</td>
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<td>EPR</td>
<td>emergency preparedness and response</td>
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<td>ERF</td>
<td>Emergency Response Framework</td>
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<td>ES</td>
<td>environmental surveillance</td>
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<tr>
<td>ESFT</td>
<td>Essential Supplies Forecasting Tool</td>
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<tr>
<td>EUL</td>
<td>Emergency Use Listing</td>
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<td>EVD</td>
<td>Ebola virus disease</td>
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<tr>
<td>Gavi</td>
<td>The Vaccine Alliance</td>
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<td>GBV</td>
<td>gender-based violence</td>
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<td>GEHR</td>
<td>gender, equity and human rights</td>
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<td>GHC</td>
<td>Global Health Cluster</td>
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<tr>
<td>HCW</td>
<td>health care worker</td>
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<tr>
<td>IAR</td>
<td>intra-action review</td>
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<tr>
<td>ICU</td>
<td>intensive care unit</td>
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<td>IDSR</td>
<td>Integrated Disease Surveillance and Response</td>
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<tr>
<td>IFRC</td>
<td>International Federation of Red Cross and Red Crescent Societies</td>
</tr>
<tr>
<td>IHR</td>
<td>International Health Regulations</td>
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<tr>
<td>IMS</td>
<td>Incident Management System</td>
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<td>IMST</td>
<td>Incident Management Support Team</td>
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<tr>
<td>IMT</td>
<td>Incident Management Team</td>
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<tr>
<td>IPC</td>
<td>infection prevention and control</td>
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<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>IST</td>
<td>intercountry support team</td>
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<td>KPI</td>
<td>key performance indicator</td>
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<tr>
<td>M&amp;E</td>
<td>monitoring and evaluation</td>
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<tr>
<td>MoH</td>
<td>ministries of health</td>
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<tr>
<td>MTN</td>
<td>Mobile Telephone Network</td>
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<tr>
<td>NCDC</td>
<td>Nigeria Centre for Disease Control</td>
</tr>
<tr>
<td>NDoH</td>
<td>National Department of Health</td>
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<tr>
<td>NDVP</td>
<td>National Deployment and Vaccination Plan</td>
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<tr>
<td>NEOC</td>
<td>national emergency operations centre</td>
</tr>
<tr>
<td>OSL</td>
<td>Operations support and logistics</td>
</tr>
<tr>
<td>PASM</td>
<td>Policy on addressing sexual misconduct</td>
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<tr>
<td>PCR</td>
<td>Policy on addressing sexual misconduct</td>
</tr>
<tr>
<td>PHC</td>
<td>polymerase chain reaction</td>
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<tr>
<td>PHE</td>
<td>primary health care</td>
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<tr>
<td>PHEIC</td>
<td>public health emergencies</td>
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<tr>
<td>PHEOC</td>
<td>public health emergency of international concern</td>
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<tr>
<td>PHSM</td>
<td>public health and social measures</td>
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<tr>
<td>PoE</td>
<td>points of entry</td>
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<tr>
<td>PPE</td>
<td>Personal protective equipment</td>
</tr>
<tr>
<td>PRET</td>
<td>Preparedness and Resilience for Emerging Threats</td>
</tr>
<tr>
<td>PRSEAH</td>
<td>prevention and response to sexual exploitation, abuse and harassment</td>
</tr>
<tr>
<td>RCCE</td>
<td>risk communication and community engagement</td>
</tr>
<tr>
<td>RD</td>
<td>Regional Director</td>
</tr>
<tr>
<td>REC</td>
<td>regional economic communities</td>
</tr>
<tr>
<td>RTA</td>
<td>real-time assessment</td>
</tr>
<tr>
<td>SANBI</td>
<td>South Africa National Bioinformatics Institute</td>
</tr>
<tr>
<td>SOPs</td>
<td>standard operating procedures</td>
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<tr>
<td>SPRP</td>
<td>Strategic Preparedness and Response Plan</td>
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<tr>
<td>SURGE</td>
<td>Strengthening and Utilizing Response Groups for Emergencies</td>
</tr>
<tr>
<td>TB</td>
<td>tuberculosis</td>
</tr>
<tr>
<td>ToRs</td>
<td>terms of reference</td>
</tr>
<tr>
<td>UCN</td>
<td>Universal Health Coverage/Communicable and Noncommunicable Diseases Cluster</td>
</tr>
<tr>
<td>UHC</td>
<td>universal health coverage</td>
</tr>
<tr>
<td>UHP</td>
<td>Universal health Coverage/Healthier Populations Cluster</td>
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<tr>
<td>ULC</td>
<td>Universal Health Coverage/Life Course Cluster</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
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<tr>
<td>UNICEF</td>
<td>United Nations Children's Fund</td>
</tr>
<tr>
<td>WASH</td>
<td>water, sanitation and hygiene</td>
</tr>
<tr>
<td>WCO</td>
<td>WHO country office</td>
</tr>
<tr>
<td>WFP</td>
<td>World Food Programme</td>
</tr>
<tr>
<td>WR</td>
<td>WHO Representative</td>
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</table>
COVID-19 was declared a public health emergency of international concern (PHEIC) in January 2020 and affected all spheres of life, including WHO’s work. The COVID-19 pandemic posed unprecedented challenges to African countries, including the 47 Member States of the WHO African Region, by compounding the stress on fragile health systems. As of the end of June 2023, over 12.8 million cases of laboratory-confirmed COVID-19 cases and 257,872 deaths had been registered in the Region. WHO’s internal operations and programming shifted significantly in response to the pandemic, repurposing 1286 staff to the response from February 2020 to December 2020.

On 5 May 2023, the WHO Director-General said that COVID-19 is now an established and ongoing health issue and no longer constitutes a PHEIC. With this change in status, the time has come to reflect on the response that the WHO Regional Office for Africa (WHO AFRO) offered in the Region, document the progress achieved to date and identify lessons learned. As Dr Matshidiso Moeti, WHO Regional Director for Africa, has stated, “As we enter the new phase of the COVID-19 pandemic, we must use the lessons learnt over the past two years to strengthen our continent’s health systems so that we are better prepared to handle future waves of the disease”.

The COVID-19 pandemic affected all 47 Member States at the same time in the context of sometimes unique challenges. While there were common challenges in the COVID-19 response across Member States, such as health systems not being sufficiently resilient to withstand the shocks and insufficient funds, unique challenges in some Member States also impacted the response. Some Member States were battling other health emergencies when COVID-19 struck; others were slow to acknowledge the pandemic and accept vaccines when they became available.

Against this backdrop, WHO seeks to understand and learn from its response to the COVID-19 pandemic and the support provided to Member States in the African Region. To achieve this overarching objective, WHO AFRO identified three specific objectives: (1) identify and document lessons learned from WHO’s regional- and country-level response; (2) synthesize information and analyse the key enablers and challenges WHO faced; and (3) develop strategic recommendations to feed into WHO’s prevention of, preparedness for, detection of, response to and recovery from ongoing and future health emergencies; and to inform the building of resilient health systems.

This report follows the WHO Emergency Response Framework (ERF), which is aligned with the pillars provided for in the Strategic Preparedness and Response Plan (SPRP). It is not an evaluation; instead, it provides an overview of successes, challenges and lessons learnt to inform future pandemic preparedness and response. It is organized around the six critical functions of the ERF, covering nine pillars of the SPRP and cross-cutting issues, including gender, equity and human rights (GEHR). Insights recorded in this report are the results of a mixed methods approach, including interviews, focus group discussions, a survey and desk research. In all, 142 people were engaged through one-on-one interviews and focus group discussions across 18 Member States, WHO Headquarters and WHO AFRO. A total of 195 survey responses were collected across 18 Member States and WHO AFRO. At least 184 documents were reviewed to complement primary data. Reviewed documents included, but were not limited to, intra-Action Reviews, COVID-19 mission reports and case studies, strategic plans, Incident Management Support Team (IMST) reports and documents, donor reports, external reviews, peer-reviewed journals and articles and news articles.

The report shows that, as the lead technical agency, WHO successfully supported national COVID-19 response on multiple fronts, including

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1 WHO Coronavirus (COVID-19) dashboard.
3 WHO Regional Office for Africa, 2022, Africa on track to control COVID-19 pandemic in 2022.
mobilizing technical assistance and coordinating partners to support preparedness and building country capacity. The report highlights areas where WHO’s support contributed to a successful COVID-19 response, including technical advisory support that was deployed to all countries to assist with the development and adoption of guidelines and training of health care workers (HCWs). In addition, WHO played a central role in coordinating partner agencies, national Ministries of Health (MoHs) and civil society organizations (CSOs) to present a unified front against COVID-19. WHO also developed innovative approaches to partner effectively with CSOs to deploy health services in hard-to-reach areas.

WHO’s support was tailored to the needs and priorities of each Member State, covering technical and operational support. For example, in South Africa, one of the hardest-hit countries on the continent, Dr Moeti led a country mission to understand how WHO could best support the response. This resulted, among other things, in the training of 1200 HCWs and the deployment of 100 experts to eight provinces for infection prevention and control (IPC), case management and continuity of essential services (CES). In Seychelles, an island nation with limited links to other countries, WHO’s operations and logistics support was most critical to ensure timely and adequate delivery of COVID-19 supplies when supply routes were disrupted.

The report also demonstrates how investments made by WHO during the COVID-19 response strengthened the capacity of local health systems, including infrastructure that could continue to benefit Member States in the years to come. Some of the areas that received investments with long-term use include clinical case management (CM), genomic surveillance and laboratory testing. Oxygen plants and concentrators have dramatically increased on the continent with the support of WHO and partners.4 Also, through collaboration with partners such as the Africa Centres for Disease Control and Prevention, the COVID-19 sequencing network was launched, contributing to increase genomic surveillance on the continent alongside the establishment of three genomic surveillance centres in the Southern, West, and Central/East Africa subregions. Finally, all 47 Member States-built PCR testing capacity to detect SARS-CoV-2.

To bolster its support for the COVID-19 response, WHO accelerated efforts to enhance internal operations in line with its Transformation Agenda of WHO in the African Region (Transformation Agenda). The Transformation Agenda sets WHO’s strategic direction (2019–2025) to strengthen capacities in critical emergency areas.5 This includes the role that leadership played at the global, regional and country levels to establish the Incident Management Support (IMS) at the regional and country levels, its central role to mobilize financial resources at the global, regional and country levels and its ability to measure its impact throughout the response.

While the response to COVID-19 delivered many successes, there are several areas for improvement which, if successfully implemented, can strengthen WHO’s ability to support Member States in future health emergencies. Some of the issues that affected the WHO COVID-19 response include the lack of clarity on the scope of the response, which contributed to the tardy integration of the vaccination pillar and the continuity of essential health services (CEHS) pillar. The delayed integration of these pillars created some operational inefficiencies, including challenges in monitoring the uptake of services, and delayed the mobilization of technical support in Member States. Secondly, the IMST’s organizational structure created some inefficiencies, particularly at the beginning of the pandemic, leading to a vertical structure which affected cross-pillar activities. Finally, the shortage of human resources delayed the response in some pillars such as risk communication and community engagement (RCCE), case management, and operations support and logistics (OSL).

The review identified many lessons from the response to COVID-19 that could help WHO and its partners enhance its capacity to prepare and respond to pandemics. This report includes an exhaustive review of the lessons learned emerging from the interviews, desk research, focus groups, survey and country deep dives.

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4 WHO Regional Office for Africa, 2022, Africa on track to control COVID-19 pandemic in 2022.
5 WHO, 2018, Thirteenth general programme of work 2019–2023: promote health, keep the world safe, serve the vulnerable.
recommendations have been included in the relevant sections throughout the report. Overall, the most important areas for WHO and partners to concentrate on are the following:

**Support Member States to expand national pandemic preparedness plans to prevent and respond to emerging infectious diseases.** Many countries did not have an all-hazard preparedness and response plan to build on for a timely response. Emergency preparedness and emergency response teams should collaborate in developing these plans to ensure seamless implementation.

**Enhance the resilience of health systems by supporting countries to develop comprehensive health systems with synergies between health security, health promotion and universal health coverage (UHC).** This will allow Member States to better respond to pandemics and ensure that populations are more resistant to the consequences of diseases.

**Support Member States to strengthen national health systems that include strong relationships with local communities and organizations.** Partner coordination with local communities and organizations proved to be easier in Member States in which health clusters had been activated. WHO Country Offices (WCOs) should continue to build their partner coordination capacities through the Country Support Teams to effectively engage local communities and organizations.

**Support Member States to ensure long-term sustainability of pandemic prevention, preparedness and response capacity investments.** Carefully designed and implemented health financing policies can help to ensure the longer-term sustainability of these investments and progress towards UHC.

**Strengthen surveillance at the animal-human interface using the One Health approach.** The COVID-19 pandemic brought the hitherto theoretical “One Health” concept into wide use, raising awareness around the linkages between environmental, human and animal health. WHO should continue to strengthen surveillance using the One Health approach.

**Maintain a vaccination-plus strategy that combines vaccination as part of routine immunization in primary health care (PHC) programmes, availability and affordability of testing, treatment for new infections and post COVID-19 condition.** The vaccination strategy should be complementary with public health and social measures (including the wearing of masks in some contexts), promotion of safe workplaces and economic and social support for self-isolation.

**Bolster regional research and development capacity and commodity production, including vaccines and other medical countermeasures.** WHO AFRO could use the model of the WHO Hub for Pandemic and Epidemic Intelligence in Berlin and adapt it to the needs and capacities in the Region, in partnership with local research institutes, capitalizing on the regional hubs of Dakar and Nairobi to centralize efforts.

**Mainstream gender, equity and human rights (GEHR) considerations in all pillars of the ERF.**

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6 WHO, 2023, The WHO Hub for Pandemic and Epidemic Intelligence.
COVID-19 was declared a public health emergency of international concern (PHEIC) in January 2020 and affected all spheres of life, including WHO’s work. The COVID-19 pandemic posed unprecedented challenges to African countries, including the 47 WHO African Region Member States, by compounding the stress on already fragile health systems. WHO’s internal operations and programming shifted significantly in response to the pandemic, repurposing 1286 staff to the response from February 2020 to December 2020.7

On 5 May 2023, the WHO Director-General pronounced that COVID-19 is now an established and ongoing health issue and no longer constitutes a PHEIC. Now that COVID-19 does not constitute a PHEIC, it is a good time to reflect on the response of the WHO Regional Office for Africa, document the progress achieved to date and identify lessons learned. As Dr Moeti, the WHO Regional Director for Africa, has stated, “As we enter the new phase of the COVID-19 pandemic, we must use the lessons learned over the past two years to strengthen our continent’s health systems so that we are better prepared to handle future waves of the disease”.8

WHO worked in line with its responsibilities for emergency operations under the International Health Regulations (IHR (2005)).9 The report reviews how WHO, as the custodian of the IHR, undertook a risk assessment and situational analysis, deployed expert staff and materials, established a management structure for the in-country response, coordinated with partners, developed an evidence-based health sector response strategy, ensured that disease surveillance and early warning were in place, and provided up to date information on health situation and health sector performance.

The COVID-19 pandemic affected all 47 Members States at the same time in the context of unique challenges. While there were common challenges in the COVID-19 response across countries, such as underprepared health systems and insufficient funds, unique challenges in some countries also impacted the response. Some countries were battling other health emergencies when COVID-19 struck; others were slow to acknowledge the pandemic and accept vaccines when they became available.

The burden of the pandemic in the African Region evolved, as cumulative reported case counts and deaths grew. From early 2021 to late 2022, the number of cumulative reported cases in the WHO African Region increased from 1.86 million10 to 7.3 million11 and the number of cumulative deaths increased from 41,50512 to 156,48913. As of end of June 2023, over 12.8 million cases of laboratory-confirmed COVID-19 cases and 257,872 deaths had been registered in the African Region.14
Health care worker infections were of particular concern on the continent owing to the stress placed on health systems. WHO AFRO estimated that HCWs accounted for more than 10% of all cases in the early pandemic. For the first 750,000 reported COVID-19 cases on the continent, 10,000 health worker infections were reported. Less than a year later, reported health worker infections in the Region increased to 87,638 in February 2021. The burden of health care worker infections was borne predominantly by women, who disproportionately represent nurses and midwives in the Region; globally, women account for 67% of the global health and social care workforce.

While all national health systems were not resilient enough to withstand the shocks from the COVID-19 pandemic, those with prior health emergency experience were more geared towards coordinating emergency responses and thus more rapid and effective in their response. Health systems in all Member States in the African Region were not resilient enough to respond to a pandemic of the magnitude of COVID-19 across all dimensions, including service delivery, health workforce readiness, information management, availability of critical medical and technological supplies and financing. However, Member States that faced prior health emergencies such as Ebola virus disease (EVD), tuberculosis (TB), and HIV had relatively more resilient health systems that were built on lessons from experience.

15 WHO Coronavirus (COVID-19) dashboard.
18 WHO, 2023, Value gender and equity in the global health workforce.
19 Arush Lal et al., 2021, Fragmented health systems in COVID-19: rectifying the misalignment between global health security and universal health coverage.
Against this backdrop, WHO AFRO wishes to present an overview of its response to the COVID-19 pandemic, specifically its successes, challenges and lessons learned for future pandemic preparedness and response. This report is grounded on WHO’s ERF covering the six core functions and the 11 Strategic Preparedness and Response Plan (SPRP) pillars. This report is based on 142 people interviewed, 195 survey responses and desk review of at least 184 documents. The report represents input from clusters that contributed to the COVID-19 response in WHO AFRO.

20 Note: the scope of this study is from January 2020 to March 2023.
II. About the report

WHO’s response to the COVID-19 pandemic involved all three organizational levels: WHO country offices (WCOs), WHO Regional Office for Africa (WHO AFRO) and WHO Headquarters. This report focuses on how each of the three levels delivered WHO’s core functions in the Region to support Member States, especially focusing on WHO AFRO and the Region’s WCOs. It also describes how each level interacted with and supported one another, focusing on how WHO AFRO supported the Region’s WCOs.

Objectives of the report

WHO seeks to understand and learn from its response to the COVID-19 pandemic and the support provided to Member States in WHO AFRO from January 2020 to March 2023. Specific objectives of the report are to:

1. Identify and document lessons learned from WHO’s regional- and country-level response.
2. Synthesize information and analyse the key enablers and challenges faced by WHO.
3. Develop strategic recommendations to feed into WHO’s prevention of, preparedness for, detection of, response to and recovery from ongoing and future health emergencies and to inform the building of resilient health systems.
Overview of the methodology

Guiding questions

This report is guided by the questions outlined in the table below.

Fig. 2: Review questions

<table>
<thead>
<tr>
<th>Topic</th>
<th>Guiding questions</th>
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<tbody>
<tr>
<td>Country response context</td>
<td>How prepared were the national health systems in the African Region to handle the</td>
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<td></td>
<td>pandemic at its debut?</td>
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<td></td>
<td>How did the health systems in the Africa Region adapt to handle the pandemic?</td>
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<td>Role of WHO in the response</td>
<td>How did WHO's support to Member States' health systems evolve throughout the</td>
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<tr>
<td></td>
<td>pandemic?</td>
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<td></td>
<td>What investments did WHO make towards the pandemic response?</td>
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<tr>
<td>Successes and challenges of WHO</td>
<td>What changed because of WHO's investment? What was the impact on the response</td>
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<td></td>
<td>of WHO involvement? How are these gains being used?</td>
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<tr>
<td></td>
<td>What were the results of WHO’s involvement?</td>
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<td>How did the COVID-19 pandemic affect the way WHO operates in response to</td>
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<td>pandemics?</td>
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<td></td>
<td>To what extent did WHO AFRO engage with other partners to fulfil its mandate and</td>
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<td></td>
<td>how well did it perform its coordination role as the Global Health Cluster (GHC)</td>
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<td>lead agency?</td>
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<td></td>
<td>How did WHO AFRO deliver on its responsibility for WHO staff health, well-being</td>
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<td></td>
<td>and security during the response?</td>
</tr>
<tr>
<td>Lessons learnt for WHO's future</td>
<td>What lessons have been learnt from this response?</td>
</tr>
<tr>
<td>response</td>
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</table>

Focus countries

Country-level evidence and perspectives have been gathered from select WHO Member States in the WHO African Region. For this report, WHO chose 18 countries as a representative sample of its 47 Member States in the WHO African Region. The selection of focus countries is representative of the dynamics of the WHO response in the African Region, which will ensure that lessons learned are broadly applicable.

Of the 18 focus countries, WHO conducted a deep dive into eight countries and documented the specific context of the national COVID-19 response and the impact and lessons learned from the WHO response. The deep-dive countries include, Angola, Botswana, Chad, the Democratic Republic of the Congo, Nigeria, Seychelles, South Africa and Tanzania. Figure 3 illustrates the focus countries and deep-dive countries.

WHO used a combination of criteria to identify the focus countries to ensure that the insights generated were representative of its response in the African Region. The selection criteria included:

- Disease burden on the community and HCWs, as measured by COVID-19 case and death rates.
- The Member State's performance against WHO’s key performance indicators (KPIs).
- Impact of the COVID-19 pandemic on service delivery in the country.
- Other socioeconomic and geographical factors, including population and country size, small island states, language spoken and pre-existing emergencies.
Fig. 3: Focus countries for the report

Review framework

This report follows the WHO ERF\textsuperscript{21} to communicate the results. The report is organized around the six critical functions of the ERF\textsuperscript{22} and a cross-cutting issue of GEHR, as illustrated in Figure 4. A detailed breakdown of each function is included in the Annex.

Fig. 4: Functions of the ERF

\textsuperscript{22} Ibid.
The framework is aligned with the SPRP. Figure 5 illustrates the alignment between the ERF functions and the SPRP pillars.

**Fig. 5: Mapping of the ERF functions to the SPRP pillars**

Combining the 6 functions of the ERF and 11 pillars of the SPRP

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**Research methods**

This report takes a mixed-method approach and captures perspectives from a range of stakeholders and documents:

**Primary research**

The review captures feedback from stakeholders at the country level, at the regional level and at WHO Headquarters:

- **At the country level**, key informants include WCO staff, external partners and Ministry of Health (MoH) officials with knowledge of the WHO COVID-19 response in the country.

- **At the regional level**, key informants were leaders and technical experts across the functions and pillars of the Incident Management System (IMS) that have developed institutional knowledge from their contribution to the setup and execution of the regional strategy to support countries.

- **At WHO headquarters**, key informants were members of the leadership that have contributed to the design and implementation of the COVID-19 response and closely collaborated with stakeholders at the regional and country levels to provide guidance and support.

The review employed two main primary data collection methods:

- **142** people were engaged across WHO Headquarters, AFRO and eight Member States through **83** one-on-one interviews and **eight focus group discussions** conducted by members of the Dalberg Advisors team.

- **195** responses to a survey developed by Dalberg Advisors, including respondents WHO AFRO and 18 Member States.

**Secondary research**

Over **184 documents** reviewed through desk research. Reviewed documents included, but not limited to, intra-action review (IARs), COVID-19 mission reports and case studies, strategic plans, reports and documents of the Incident Management Support Teams (IMSTs), donor reports, external reviews, peer-reviewed journals and articles and new articles. **Annex 4** provides a summary of reviewed documents.
The findings from the interviews were triangulated with the survey results and secondary research to summarize the successes, challenges, lessons learned and recommendations. The report accounts for varying perspectives and levels of evidence for findings driven by data availability.

Limitations

While this report aimed to take perspectives of the different stakeholder groups in the 18 Member States, this could not be achieved in all countries owing to limited responsiveness from some stakeholders. The team shared requests and sent follow-ups for feedback from all different stakeholder groups for one-on-one interviews, focus groups and survey. Owing to limited engagement from stakeholders, the team was unable to take the perspectives of all the different stakeholder groups in some of the Member States.
III. Findings and recommendations

This section provides an overview of findings and recommendations across the six emergency functions in the review’s assessment framework. Each section contains: Key activities, Successes, Challenges and Recommendations.

Leadership and internal coordination

Leadership at the global, regional and country level was perceived as being essential in the response. In line with its Transformation Agenda, WHO AFRO leadership stepped up, providing strategic direction, advocating to Government officials on the importance of the COVID-19 response and providing support to ensure staff health, well-being and security. All WHO clusters were integrated into the IMST and worked together to identify and deploy the required support.

The leadership & internal coordination pillar conducted the following types of activities (note: examples are illustrative and not exhaustive):

- Overall management of the WHO response at all levels, including supervision of team leads
- Strategic leadership and day-to-day oversight
- Ensuring staff security, safety and well-being
- Coordinating WHO’s response to media and public requests for information and supervising the development of responses to media and public requests for information for both internal and external communication products.
- Coordinating activities related to resource mobilization, donor relations and advocacy.

Successes

Throughout the response, WHO stepped up its leadership at the global, regional and country levels. At the global level, the leadership ensured the timely deployment of the IMST when the first case was reported. The leadership led the response and effectively coordinated with regional and country levels through several mechanisms such as the Global outbreak alert and response network, which provided a global operational framework of capacities and expertise to countries. At the regional level, WHO senior management created effective oversight mechanisms through oversight boards meeting and led biweekly meetings with directors for continuous feedback. WHO senior leadership adapted the IMST structure to respond effectively to the pandemic by strengthening the operations, support and logistics (OSL) function and integrating the vaccine and CES as key pillars in the response. At the country level, the WHO Representatives (WRs) were instrumental in ensuring the timely deployment of the Incident Management Team (IMT) that served as exemplars to set up MoH emergency operation centres (EOC).

All WHO clusters were integrated in the IMST and worked together to deploy the required level of support. During the response, most teams from other clusters were repurposed to the COVID-19 emergency response. To effectively coordinate across the clusters, the WHO AFRO leadership set up an inter-cluster task force. Staff members from the universal health coverage – healthier populations (UHP) cluster were repurposed to the RCCE pillar. Staff of the universal health coverage – communicable and noncommunicable disease (UCN) cluster led the vaccine pillar, while the universal health coverage – life course (ULC) cluster supported several activities such as information systems and led the modelling work to help countries plan the number of health workers expected to be deployed. Staff from the Assistant Regional Director cluster led CES.
Senior leadership was central to WHO’s response and advocated to the highest level in the Member States on the importance of COVID-19 response. Notably, the Regional Director for Africa, Dr Moeti (RD) conducted country visits to advocate to heads of state and leadership in the MoH in Botswana, Ethiopia, Kenya, Nigeria and South Africa. In South Africa, the RD supported the WCO’s request with significant staff, guidance, and technical support and introduced a first team of 43 surge personnel; in total, 107 surge support personnel were deployed.\(^\text{23}\) Additionally, the RD advocated to the highest level of leadership in Botswana to open borders, which was critical to ensuring the supply of essential goods into and through the country.

The establishment of a communication unit played a critical role in facilitating external communication during the COVID-19 response, with the active support of senior leadership. WHO launched this communication unit to keep Member States and partners informed. The COVID-19 newsletter recorded an average open rate of more than 50%, including forwarding messages.\(^\text{24}\) The communication unit also played a central role in the response by producing more than 20 impact stories, highlighting the role that WHO was playing in several countries in the Region.\(^\text{25}\) To increase social media presence, the communication team worked through X (formerly Twitter) and Facebook accounts that received around 200 000 to 400 000 views, with some reaching one million views from February to December 2020.\(^\text{26}\)

WHO AFRO senior leadership provided support to ensure staff health, well-being and security. WHO AFRO’s leadership deployed rotating responsibilities for incident managers to address the risk of burn-out. Additionally, WHO AFRO recruited psychologists to support staff and their family members and provided support to all WRs to provide similar services to WCO staff. To support staff, WHO provided Internet access for people to work virtually, as well as flexible working hours. WHO also promoted access to vaccination for staff and identified and managed high-risk staff.

Challenges

The IMST was initially too vertical and coordination with the WCOs could have been better. At the beginning of the pandemic, stakeholders highlighted that the different pillars conducted their operation too vertically.\(^\text{27}\) Additionally, the list and functions of the IMST staff was not always communicated at the country level. All staff were not familiar with the structure of the IMST and with the ERF, which created some confusion at the beginning of the response. Additionally, interviewees mentioned that coordination was challenging in some Member States with multiple emergencies and IMSTs in place.

Some WRs did not have the experience to be immediately effective in the response. Interviewees indicated that prior experience with emergencies is usually critical for an effective response and some WRs did not have this level of operational experience. Interviewees also indicated that WRs who had prior relationships with MoHs and partners in-country were often the most successful in responding to the pandemic.
In some countries, the setting up of the Emergency Operations Centres (EOCs)/MoH (IMT) was delayed, which had an adverse impact on the response. The operationalization of the IMT at subnational levels faced delays and insufficient mechanisms to support the access of emergency response staff to needed resources. Interviewees mentioned that in some countries, the delayed setting up of the role of EOC was due to a limited understanding of the role and the management of the facilities. Additionally, coordination between the IMT at the national, provincial and district levels was not always optimal owing to limitations in linkages between response teams or clear role definition.

**Recommendations**

1. **Promote and support Member States to improve access to mental health services and psychosocial support.** WHO AFRO provided training during the COVID-19 response to health workers on mental health and psychological support. This is an area in which WHO AFRO should continue to invest in the future to provide counselling services in a timely and inclusive manner.

2. **Communicate the structure of the IMST and the ERF to all staff at the beginning of the pandemic.** This will be critical to ensure all staff have a clear understanding of the coordination mechanisms and views on roles and responsibilities.

3. **Train WRs to build capabilities to respond to public health emergencies (PHEs).** WRs are central to the response to pandemics and those WRs who had experience with prior health emergencies and/or relationships with MoHs and partners in countries were often the most successful in responding to the pandemic.

4. **Support Member States to deploy timely and well-functioning PHEOCs.** Continue to provide capacity-building to support Member States to establish PHEOCs at the national and subnational level and better disseminate the standard operating procedures (SOPs), and terms of reference (ToRs) for effective emergency preparedness and response (EPR).

**Partner coordination and engagement**

**WHO coordinated with country MoH and partner agencies across the different pillars of the response.** WHO provided regular updates to country MoHs and established technical and operational partnerships with United Nations (UN) agencies, the African Union (AU) the regional economic communities (RECs), the UN Economic Commission for Africa and non-traditional partners such as civil society organizations (CSOs). At the subregional level, WHO also led coordination mechanisms through several technical working groups set up in the Dakar and the Nairobi hubs and in the three intercountry support teams (ISTs) in Harare, Libreville and Ouagadougou. As the Global health cluster lead agency, WHO coordinated with non-traditional partners and developed innovative approaches to target hard-to-reach and vulnerable populations. However, the contracting and funding of CSOs proved to be challenging, as was the effective deployment of health clusters. These challenges inform the recommendation to enhance partner engagement for future pandemic response.

The partner coordination and engagement pillar conducted the following types of activities (*note: examples are illustrative and not exhaustive):*

- **Information sharing:** WHO provided regular updates to country-level partners through different platforms such as the Africa Partners Forum.

- **Activity coordination:** WHO led coordination mechanisms at the regional and subregional levels through the Dakar and Nairobi hubs and the three intercountry support teams (ISTs) in Harare, Libreville and Ouagadougou to ensure the coordination of activities.
• **Technical and operational partnerships:** WHO worked with partner agencies to co-deliver activities in the response.

• **Relationship-building:** WHO built and strengthened relationships with MoHs, donors, partners and other bodies to co-deliver in the COVID-19 response.

### Successes

**WHO’s engagement with partner agencies and MoHs was critical to delivering coordinated activities during the response.** For instance, WHO co-led the RCCE Collective Service, a large-scale platform to coordinate all RCCE activities with the United Nations Children’s Fund (UNICEF). It brought together 38 partners and 98 members, distributed into RCCE technical working groups and sub-working groups, to develop harmonized messages. By leading this platform in partnership with UNICEF, WHO contributed its health expertise to provide a tailored RCCE support to countries. WHO also led the Africa Partners Forum that provided updates on the status of COVID-19 vaccination in the Region. The platform included several partners such as Gavi, the Vaccine Alliance (GAVI), the United States Agency for International Development, the World Bank, the Bill & Melinda Gates Foundation, the British Foreign, Commonwealth and Development Office, Africa CDC, the United States Centers for Disease Control and Prevention (CDC), Médecins sans Frontières and the African Union (AU).

**WHO cooperated closely with country MoHs to activate the health clusters in 13 Member States in the African Region and played a central role as the lead agency coordinating across partners.** In the Democratic Republic of the Congo, the health cluster was activated from the very first confirmed case, uniting all partners via weekly meetings, during which WHO made presentations on the pillars of surveillance, IPC and case management – facilitating discussions with partners regarding issues hampering the response and ensuring strong role clarification.28 In Chad, the health cluster was established prior to the pandemic to deal with the humanitarian crisis and provided a platform for efficient coordination with the MoH and partners and facilitated the involvement of local CSOs in the response.29 In Burkina Faso, the health cluster developed tools to assess the impact and monitor attacks on HCWs, including with the Burkinabé Red Cross, through joint actions that made it possible to adapt the training provided to HCWs and health security agents in vulnerable settings.30

**WHO also developed innovative approaches to effectively partner with CSOs to deploy health services in hard-to-reach areas.** WHO provided technical and financial support to 23 CSOs in 12 Member States of the Region.31 Through WHO’s support, CSOs effectively responded to the COVID-19 pandemic at the community level with key interventions in surveillance, IPC and RCCE. For example, in Mali, WHO partnered with Association of Deans of Faculties of Medicine of African French Speaking Countries to deploy RCCE activities and IPC for HCWs. Similarly, in the Democratic Republic of the Congo, WHO worked with the Central African network of national NGO platforms, REPONGAC, to distribute COVID-19 prevention kits, provide RCCE and promote vaccination.32 CSOs also managed to reach vulnerable population such as internally displaced populations in humanitarian settings and people living with disabilities. In Burkina Faso and Nigeria, the Burkinabé Red Cross and GOALPrime Nigeria worked on the Attacks on Health Care (AHC) Initiative, successfully targeting internally displaced populations and population with disabilities.33

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28 Dalberg stakeholder interviews, 2023.
29 Ibid.
33 Ibid.
Box 1: WHO African Region Initiative on Engaging civil society organizations in Responding to the COVID-19 Pandemic

WHO AFRO implemented an initiative to work with community leaders by engaging CSOs. WHO launched a call for proposals for CSOs to participate in the 47 Member States.

The CSOs were selected using criteria that included over 2 years of existence, legal recognition at the national and community levels, the ability to develop health interventions and the quality of the proposal. CSOs also had to follow WHO’s legal, administrative and financial processes under the framework of engagement with non-State actors.34

WHO selected 23 CSOs in 12 Member States to support surveillance and contact tracing, IPC at health facilities, RCCE, community case referral, vaccination promotion, research and water, sanitation and hygiene (WASH).

WHO’s approach to engagement involved the 3 “Es” of Engage, Enable and Empower with emphasis on enabling and empowering CSO members. As part of the intervention, CSOs have been able to respond efficiently and quickly to health emergencies, demonstrating technical and operational capacities. CSOs played a key role in supporting access to health care by linking the community and the wider health system. Thanks to the programme, the CSOs reached over 3.8 million direct beneficiaries.35

At the subregional level, WHO set up technical working groups in the Nairobi and Dakar hubs and dedicated teams in ISTs in Harare, Libreville and Ouagadougou that were critical in coordinating with partners during the response. Following the engagement of the Regional Directors of partner agencies, four technical working groups were set up in the Nairobi hub covering surveillance, epidemiology and points of entry (PoEs), RCCE, case management, IPC, continuity of essential health services and logistics. WHO was the lead technical agency coordinating with partners such as UNICEF, the United Nations Population Fund (UNFPA), the UN World Food Programme (WFP), Africa CDC, the International Federation of Red Cross & Red Crescent Societies (IFRC), Save the Children and other NGOs. These technical working groups still operate, leaving legacy infrastructure for partner coordination. Similarly, a dedicated team was also established in the three ISTs in Harare, Libreville and Ouagadougou to provide close operational support to countries and coordinate partner support for the COVID-19 response.

The COVID-19 pandemic catalysed the Africa CDC-WHO institutional relationship on several critical areas of the response, such as genomic sequencing and surveillance. COVID-19 was the first major crisis in which WHO worked with Africa CDC on several areas of the response, including genomic sequencing with the launch of 12 genomic surveillance laboratories to track, identify and bolster the response to COVID-19 variants.36 Africa CDC was the co-chair of the technical working group on surveillance, epidemiology and PoEs in the Nairobi hub.37 Interviewees noted that the institutional links and experiences will shape the relationship in the future.

Challenges

While WHO developed innovative approaches to partner with CSOs, implementation difficulties arose owing to contracting processes and the time they consume. Interviewees mentioned that the administrative procedures to engage CSOs were sometimes dated and could be improved to enhance

34 WHO, 2020, *WHO’s engagement with Non-State Actors*.
36 Baldé et al., 2022, *Framing the future of the COVID-19 response operations in 2022 in the WHO African region*.
37 Dalberg stakeholder interviews, 2023.
coordination with CSOs. They also considered it imperative for WHO staff and CSOs to have a good understanding of contracting procedures to help streamline the process. Simplifying the procedures would help to improve the inclusion of CSOs. Additionally, partner agencies followed different funding timelines and administrative processes, which created some burden for CSOs.

Health clusters provided essential mechanisms for coordination in Member States but were not always equipped to respond to the pandemic. Interviewees mentioned several factors that affected the full operationalization and transition of the health clusters. The first was the missing link at the regional level in the deployment of health clusters. Secondly, the limited human resources for health cluster coordination affected the response. Moreover, the four essential roles in a health cluster, that is, health cluster coordination, public health analyst, communication, data and information managers, were not always filled. Finally, health clusters are deployed for a limited period and the transition to the country authorities when a health cluster is deployed for a long time could have been better planned.

Recommendations

1. Strengthen the partnership coordination capacities by hiring full-time staff to fill core positions in the Dakar, Nairobi and Pretoria hubs. Interviewees mentioned that core functions in Nairobi and Dakar were filled by consultant positions during the response. Several areas would benefit from full-time positions including IPC, laboratories, risk communication and case management. Additionally, interviewees mentioned the need to strengthen partnership capacities with a clear alignment of roles and responsibilities between the regional and subregional levels.

2. Establish a partnership team within WHO AFRO to build on the institutional relationships forged during the pandemic. A team should be established within WHO AFRO, dedicated to partner collaboration and engagement to ensure that partners receive information timely and to continue to build a culture of trust among partners.

3. Streamline the administrative procedures and contracting timelines for engaging with CSOs in coordination with partner agencies. CSOs are central to responding efficiently and quickly to health emergencies. The experience with the COVID-19 pandemic highlighted the need to streamline administrative procedures and contracting timelines in emergency response, especially with the different processes in place among partner agencies.

4. Engage with a consortium/federation of CSOs to facilitate the timely and coordinated deployment of activities. WHO should continue to build on innovative approaches to facilitate the disbursement of funds to CSOs. Such approaches should include working with a consortium/federation of CSOs with relevant technical capacities, in which the more firmly established CSOs can support fledgling ones. WHO should also continue to map CSOs with their relative structures and capacities to coordinate effectively with partners.

Information and planning

WHO served as a trusted source of information during the COVID-19 pandemic for Member States, and information and planning was consistently mentioned as a top contribution of the Regional Office. Information and planning was cited by 52% of survey correspondents (n=195) as the primary positive contribution of WHO AFRO’s response as compared to other functions and pillars.

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40 Ibid.
41 Dalberg Advisors, 2023, Survey: Documentation of WHO’S COVID-19 Response in the African Region. Note: Information and planning was cited by 52% of survey correspondents (n=195) as the primary positive contribution of WHO AFRO’s response as compared to other functions and pillars.
specific to COVID-19 in the Region. WHO AFRO accelerated adoption of IARs across countries to foster continuous improvement and documentation throughout the response, with the first regional IAR conducted in South Africa. However, the sheer volume of inbound information regarding COVID-19 was difficult to parse and integrate into guidance in real time. This caused delays in disseminating up to date guidance and emerging research on COVID-19 to countries and the public.

The information and planning pillar conducted the following types of activities (note: examples are illustrative and not exhaustive):

- **developed strategic guidance documents, training materials, standard protocols, information on vaccines and other information assets** for dissemination to government actors and health care professionals, among others;
- **adapted and tailored technical guidelines** from WHO Headquarters in order to disseminate guidance to Member States of the African Region;
- **conducted initial capacity assessment and risk analysis** by country, including mapping of vulnerable populations;
- **established metrics and M&E systems** to assess the effectiveness and impact of planned measures;
- **monitored implementation of COVID-19 preparedness and response plans across countries** based on KPIs within the M&E framework and produced regular situation reports (weekly bulletins and periodic emergency response updates);
- **conducted and documented IARs** to assess implementation success, challenges and the epidemiological situation and adjust operational plans as necessary; and
- **conducted knowledge-sharing sessions between WCOs** to share findings and lessons learned on a weekly basis.

**Successes**

**WHO AFRO successfully deployed various pillar-specific technical guidelines and protocols tailored to country needs.** WHO AFRO was able to quickly adapt materials shared by WHO Headquarters to the context of Member States and disseminate guidance. Examples of these region-specific guidance documents included guidance on detecting and reporting deaths at the community level, safe Ramadan practices in the context of COVID-19 and technical guidance on building operational national emergency medical teams in Africa. Similarly, WHO AFRO leveraged lessons learned at the country level to develop novel regional guidance. For example, the South Africa WCO developed resurgence guidance as soon as the first global variant was detected within the country, which WHO AFRO later developed into regional-level guidance for resurgences.

**WHO AFRO monitored the COVID-19 response against a robust M&E framework tailored to COVID-19 to ensure accountability.** Monitoring was crucial and incorporated indicators with the support of multiple partners and publications. As part of the M&E framework for COVID-19 in the WHO African Region, WHO AFRO distributed guidance on a long-list of KPIs (originally 56 in total) from which countries were encouraged to pick a limited listing of 20-30 KPIs for frequent monitoring, such as daily or weekly, allowing individual WCOs to tailor their M&E strategy to their country’s context. Impact data such as reduction of COVID-19 mortality and case fatality rate were reported in the M&E framework. Through financial monitoring, the monthly utilization of funds as compared to the initial costing of plans was tracked. WHO AFRO instituted a network of M&E focal points producing reports both regionally and globally regarding the pandemic response; however, it may be expanded to global indicators given its internal success. WHO developed an online system to track KPIs from countries via an online portal; throughout 2020, 45 of the 47 Member States submitted regular situation reports based on guidance provided by WHO AFRO.

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42 WHO, 2018, Thirteenth General Programme of Work 2019-2023: promote health, keep the world safe, serve the vulnerable.
46 Ibid.
As countries adopted guidance and implemented national COVID-19 responses, the majority of WCOs conducted several national IARs, including some subnational reviews, to assess progress, successes and challenges in WHO’s responses and inform best practices. The IARs effectively informed the best practices and challenges, with recommendations being implemented, and allowed for countries to reflect on their response strategy with an opportunity to reprogramme for the future. Certain countries even implemented use of subnational IARs where appropriate, such as in South Africa, Tanzania and the Democratic Republic of the Congo. As of March 2023, the African Region had conducted 95 IARs in 43 Member States for the COVID-19 response. The first AFRO IAR was conducted in South Africa and proved to be a critical information tool for WCOs. It has since been adapted for use in all six WHO global regions in documenting their COVID-19 responses.

Challenges

WHO AFRO sometimes faced challenges in providing or adjusting guidance in real-time due to the rapidly evolving nature of the pandemic. WHO AFRO struggled with the continuous flow of new information regarding COVID-19 and needing to adjust guidelines accordingly. Any changes to guidance were subject to multiple layers of review and decision-making before changes could be implemented; as a result, the Regional Office experienced delays with issuing and adjusting up to date guidance for WCOs.

From an M&E perspective, previous SPRPs executed by WHO AFRO in response to outbreaks contained often underdeveloped M&E components. Given the scale of the COVID-19 pandemic – where all 47 Member States experienced the outbreak simultaneously – the M&E framework from past responses was inadequate. As a result, WHO AFRO developed the stand-alone M&E framework for COVID-19 in the WHO African Region, building on lessons learned from past outbreaks such as EVD and HIV. As a lesson learned, institutionalizing an adaptable and robust M&E framework for future PHEs will be critical, rather than the challenge of reactively creating a framework during a response.

Recommendations

- Enable knowledge management and exchange for peer-to-peer learnings across countries on case management, IPC, RCCE and surveillance and continue to use webinars to disseminate best practices across countries. WHO AFRO should continue to invite WCOs to share their findings via weekly teleconference meetings for information sharing and coordination and continue using this avenue to share relevant information for Member States on useful tools, such as those for surveillance or laboratory testing.

- Increase adoption and institutionalization of IARs in Member States and scale implementation of subnational IARs. IARs were a major success of the WHO AFRO response, but not ultimately conducted by every Member State; some WCOs conducted zero (for example, Algeria, Cabo Verde, Equatorial Guinea, and Eritrea) while others conducted multiple (for example, the Democratic Republic of the Congo and South Africa conducted eight each). WHO AFRO can further institutionalize this best practice and encourage Member States with multiple states or provinces (for example, Nigeria) to consider implementing IARs at the subnational level, as South Africa pioneered.

- Facilitate the adoption of up to date guidance by WHO Country offices (WCO). Interviewees mentioned that the simplification of the multiple guidelines was beneficial, but continuous coordination and sharing of updates was essential.

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49Baldé et al., 2023, A step towards reinvigorating the COVID-19 response: an intra-action review of the WHO Regional Office for Africa Incident Management Support Team.
50Baldé et al., 2023, A step towards reinvigorating the COVID-19 response: an intra-action review of the WHO Regional Office for Africa Incident Management Support Team.
Review of WHO’s response to Covid-19 in the WHO African Region

layers of review and decision-making could accelerate the timely adoption of guidance by WCOs.

- **Develop technical guidance for protracted emergencies.** As of 2023, the COVID-19 pandemic has transitioned to a protracted phase. However, WHO has not published a protracted emergency framework specific to COVID-19, which risks resources being shifted or not sustained due to extended timelines. As future outbreaks transition from graded to protracted emergencies, WHO can establish clear guidance on how resources will be reallocated over time.

# Health operations and technical expertise

**WHO provided support in health operations and technical expertise across the following sub-functions:**

- risk communication and community engagement;
- surveillance, investigation, and contact tracing;
- case management and clinical operations;
- COVID-19 vaccination;
- IPC;
- PoEs and mass gatherings;
- laboratories and diagnostics;
- research, innovation and evidence; and
- continuity of essential services (CES).

## Risk communication and community engagement

**WHO played a central role in the design and implementation of the RCCE strategy in the Region, coordinating closely with other partners.** The EVD outbreak emphasized the importance of RCCE in the effective response to PHEs, leading WHO to institutionalize and continuously strengthen this area since 2014. In 2020, WHO quickly mobilized the leadership and organized a meeting in the Dakar and Nairobi hubs with key technical groups to design and launch the RCCE strategy for the COVID-19 response. The strong emphasis on RCCE at the onset of the pandemic facilitated the establishment of dedicated working groups at regional and national levels, including the RCCE Collective Service, which was critical to regroup key partners and define a clear and shared vision. The RCCE Collective Service provided a platform to exchange information and best practices, coordinate the response and provide technical guidance to partners on the collection and utilization of social and behavioural data, as well as community feedback. WHO also built a strong network of CSOs to provide direct support to communities. WHO worked with other partners such as Africa CDC, UNICEF, Gavi, and fact-checking media to establish the Africa Infodemics Response Alliance (AIRA) for collective action against misinformation, which was the most prominent challenge in the Region.

The RCCE & infodemics management pillar conducted the following types of activities (note: examples are illustrative and not exhaustive):

- **Co-ordination of the RCCE Collective Service with UNICEF,** which brought together 38 partners, including the IFRC and the Global outbreak alert and response network, and 98 members distributed into RCCE technical working groups and community feedback sub-working groups to provide tailored support to countries, including the adaptation of messages to specific contexts and creation of repositories for streamlined communication and rumour management.

- **Implementation of campaigns and dialogues to engage community leaders** including religious and traditional leaders, journalists, women, young people and teachers to enhance the reach of RCCE messages in the Region.

- **Capacity-building** for a wide range of stakeholders, including doctors, emergency directors and political, administrative and community leaders, leveraging the virtual platform established by the RCCE working groups, to ensure harmonized communication throughout the pandemic.

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• Establishment of AIRA to lead a collective action with partners against false information, especially regarding vaccines, complementing on-the-ground public health awareness-raising and community engagement efforts.

• Facilitation of experience-sharing between countries in several languages through a virtual platform launched by the RCCE Collective Service.

• Development, adaptation, and dissemination of several plans and procedures to guide countries on the development of RCCE strategies to prepare the response.

• Assessment of RCCE capacities to ensure effective integration of RCCE into COVID-19 national plans.

• Large-scale dissemination of precautionary measures to be adopted in all the countries, especially in high-risk villages and other vulnerable regions.

These activities were delivered in the context of several external challenges, including:

• Limited access to real-time data on RCCE due to the inability to deploy staff on the ground after borders were closed, leading to data backlogs preventing the close monitoring of RCCE activities in countries.

• Cultural, social, and religious resistance leading to the spread of fake news and rumours and limiting the efficiency of messages and the adoption of protective measures.\(^5^5\)

• Instauration of lockdowns and other security measures, coupled with the humanitarian crises and conflict prevailing in some countries, reducing the capacity to undertake awareness-raising activities on the ground.\(^5^6\)

• Limited access to online platforms from countries (for example, Zoom), limiting the capacity of key decision-makers, HCWs and community leaders to attend the online information and training sessions.

• Proliferation of infodemics disseminated by large groups and influential stakeholders limiting the ability to identify and discern essential information about COVID-19, downplaying the magnitude of the disease and spurring the adoption of risky behaviours.

The creation of AIRA was critical to drive a collective action for social listening and address the negative

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57 Baldé et al., 2022, *Transitioning the COVID-19 response in the WHO African region: a proposed framework for rethinking and rebuilding health systems.*

58 Dalberg stakeholder interviews, 2023.

effects of infodemics regarding COVID-19 and other health emergencies. Initiated by WHO in collaboration with partners such as UNICEF, Africa CDC and Gavi, AIRA is a regional effort to counteract health misinformation and promote communication grounded in scientific evidence. Discerning factual information was increasingly difficult throughout the pandemic, owing to the inundation of communication channels with unchecked content. Between February and November 2020, information about COVID-19 had been viewed over 270 billion times online in the 47 Member States of the African Region, with no guarantee of accuracy and credibility. In response, AIRA led several initiatives, working closely with governments and media professionals to debunk misinformation and increase access to fact-based communication resources.

**Box 2: AIRA – A unified response to combat infodemics in Africa**

AIRA leverages a network of 13 international and regional organizations and fact-checking groups with expertise in data and behavioural science, epidemiology, research and communications to detect and counter damaging misinformation on public health issues in the Region, putting into practice recommendations developed by over 1300 experts under the auspices of WHO’s global Information Network for Epidemics. The organization emphasizes the need for collaboration to ensure social listening and the deployment of strategies to counter infodemics and disseminate fact-based content, through regular exchanges, training and mutual support.

AIRA primarily helped eight priority countries, including Angola, Guinea, Kenya and Niger, to set up platforms to apply infodemic response methods. By July 2021, AIRA had shared 150 videos on 70 social media channels, earning more than 100 million views, and launched targeted campaigns and new content formats in five countries including the Democratic Republic of the Congo, Cameroon and South Africa, to reach more specific audiences and increase engagement with local communities.

The initiatives allowed WHO to address several rumours in countries and debunk conspiracy theories promoted by some religious leaders in some countries and mitigating the negative impacts of the claims. The content created by the Viral Facts Africa initiative of AIRA is also increasingly used by African media to counter false claims, fill information gaps and pre-empt possible spikes in disinformation. The impact of AIRA also extends to other diseases, including poliomyelitis (polio), cholera and malaria, creating a legacy from the COVID-19 pandemic.

In health emergencies, misinformation can kill and ensure diseases continue to spread. People need proven, science-based facts to make informed decisions about their health and well-being, and a glut of information – an infodemic – with misinformation in the mix makes it hard to know what is right and real. This crucial new alliance brings unique reach, knowledge and skills to help stop the impact of dangerous misinformation, said Dr Matshidiso Moeti, WHO Regional Director for Africa.

WHO relied on an extensive network of CSOs to lead community engagement and foster understanding and acceptance of public health response measures, especially targeting vulnerable people. WHO launched an initiative to mobilize CSOs in 15 countries and support them directly through WCOs to facilitate their close collaboration with national health authorities and enhance their RCCE, in addition to IPC and vaccination. This support allowed CSOs to reach more than 3.5 million direct beneficiaries in

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60 WHO Regional Office for Africa, 2020, Landmark alliance launches in Africa to fight COVID-19 misinformation.
63 Baldé et al., 2022, Framing the future of the COVID-19 response operations in 2022 in the WHO African region.
65 Ibid.
66 Ibid.
2021, impacting not only RCCE, but also other critical areas of the response. This impact was emphasized in countries such as Algeria, where the work with the Algerian Muslim Scouts Association (SMA) allowed WHO to provide social services to communities, through the training of 70 supervisors and 650 volunteers on RCCE. In Kinshasa and Yaounde, the training of community relays and volunteers and their deployment to the key hotspots of the cities facilitated the organization of mass campaigns and focus group discussions, which allowed them to reach 24 000 and 40 000 individuals respectively.

In addition to the close collaboration with CSOs, the RCCE team prepared short success stories shared with WHO leadership to support the engagement strategy with MoHs in several countries. The narratives conveyed several best practices, such as conversations with religious and other community leaders on COVID-19 vaccination in six countries, contributing to increase the vaccination rate in Guinea by 300% in 3 weeks. In general, the successes achieved by WHO and supported CSOs were rooted in an inclusive approach to RCCE, targeting migrants, youth, women and people with disabilities.

Challenges

WHO was not always able to deploy the necessary technical capacities to countries in good time. A limited number of experts were directly involved in the response within the African Region and were in charge of coordinating interventions across the 47 countries of the Region. A pool of experts was available for deployment in countries, but they were mobilized late and could not travel because of the lockdowns. This situation affected the ability to work with partners and governments in the implementation of activities and affected the capacity to directly collect, share and analyse data to monitor RCCE interventions led by countries according to the plans and procedures for further tailoring of the support.

The limited documentation of RCCE efforts did not provide enough evidence of and visibility on the progress accomplished to continuously improve the response. WHO could have improved the documentation of RCCE activities during the response, with periodic reports and regular updates to capture the achievements and challenges related to the implementation of the RCCE strategy. This prevented review and adaptation of the approach, building on the key successes to further expand the support and define clear mitigation strategies to address the risks and challenges. Ongoing documentation could have made it possible to track the efficiency of activities, including the actual reach of information and the adoption of preventive measures.

Recommendations

1. **Leverage CSOs for a more effective RCCE.** The support provided to CSOs during the response significantly increased the capacity to reach communities on the ground and convey critical information and guidance, with major impact achieved across several countries. WHO can leverage CSOs in the Region to further increase its network. This will entail mapping existing CSOs and assessing their potential to reach communities in the most remote and vulnerable areas and widening the scale of capacity-building to reach more people in the Region.

2. **Build a repository of RCCE experts in the Region to ensure that WHO AFRO can deploy the necessary technical capacities timely.** Only a limited number of experts were directly involved in the response in the African Region and oversaw the coordination of interventions across the 47 Member States. WHO AFRO can build a roster of RCCE experts for future response to ensure timely deployment.

3. **Define clear strategies for the documentation of future responses in RCCE.** WHO has played a major role in the design and implementation of the RCCE response, undertaking several activities. However, the actual impact of these interventions can only be discovered through an M&E framework, which would allow learning from successes and challenges. WHO could mainstream these lessons into IARs and AARs to assess successes, challenges and define best practices for future response.

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Surveillance, investigation and contact tracing

WHO AFRO aimed to increase both epidemiological and genomic surveillance capacity across Member States to ensure effective centralized tracking and tracing of COVID-19 cases. The Regional Office developed, scaled and trained colleagues on the use of digital dashboards, such as Go.Data, for monitoring COVID-19 cases, which was critical in determining the regional support needed at the country level. However, this initiative faced significant challenges due to the high technological infrastructure and resource requirements for COVID-19 surveillance, far exceeding those for typical outbreaks. The severity of COVID-19 and pre-pandemic infrastructure weaknesses across the Region further exacerbated these issues. Consequently, epidemiological surveillance was often limited to reporting case counts and deaths at the country level, lacking a comprehensive assessment of risk factors such as detailed demographic characteristics, comorbidities and immunization status.

The surveillance, investigation and contact tracing pillar conducted the following key activities (examples are illustrative and not exhaustive):

- supported epidemiological surveillance of COVID-19 in the Region by detecting, verifying, and conducting risk assessment for outbreaks.
- invested in training HCWs on surveillance SOPs, tools and guidelines enhancing regional capacity.
- developed a centralized regional database of COVID-19 to receive daily epidemiological data from countries, integrating it with the District Health Information System 2 (DHIS2) software platform for streamline data management.
- established a monitoring framework across all 47 Member States, with a tiered alert system (No alert or alert of low concern, alert of resurgence concern, and alert of critical concern) to continuously monitor local situations and deploy surge human resources as needed.
- produced comprehensive guidance documents for contact tracing and public health and social measures to standardised practices.
- introduced a standard case definition for COVID-19 into the existing integrated disease surveillance and response (IDSR) guidelines, ensuring consistency in reporting and response.
- produced weekly situation reports to provide a transparent overview of the epidemiological situation at both country and regional levels, informing response activities.

These activities were delivered in the context of several external challenges, including:

- The unprecedented scale of the outbreak
  The scale of the COVID-19 pandemic posed a significant challenge due to the lack of initial immunity in the population, with multiple countries experiencing epidemics for a novel pathogen and thus, overwhelming the pre-pandemic infrastructure designed for routine outbreak surveillance. The severity profile of the COVID-19 required surveillance systems to consider underlying risk factors for the disease, necessitating more rigorous information collection and management.

- Varied capacity in countries for epidemiological surveillance
  The regional surveillance efforts were hampered by varying standards and capacities for data collection among Member States. For example, a subset of countries implemented DHIS2 for COVID-19 surveillance, while other countries relied on bespoke legacy systems.\(^{69}\) However, interviewees noted that countries with a history of outbreaks were able to rely on their experiences to implement a successful surveillance system. For example, South Africa, Nigeria and the Democratic Republic of the Congo had pre-existing surveillance capacity on which they were able to rely owing to their experience in dealing with polio outbreaks, while small island states like the Seychelles and Mauritius had to develop this infrastructure from the ground up.\(^{70}\)

\(^{69}\) Note: DHIS2 is an open-source software platform used for the collection, management, analysis and visualization of health data. WHO collaborated with DHIS2 to roll out a COVID-19 surveillance toolkit, including a series of trackers that incorporated WHO’s technical guidance on COVID-19 surveillance and case definition

\(^{70}\) Dalberg stakeholder interview, 2023.
• **Integration of surveillance systems**
  Emergency and everyday surveillance systems were often not well integrated. COVID-19 surveillance systems in countries did not seamlessly feed into pre-existing systems, leading to data silos and inefficiencies.

• **Data submission challenges**
  Regular data submission was a struggle for some countries due to insufficient network infrastructure, resistance to sharing sensitive data, and a lack of human resource capacity for data capture and technical expertise for case detection and monitoring.

**Successes**

WHO AFRO contributed significantly to enhancing epidemiological surveillance capacity across Member States in the Region. The organization provided technical support to boost rapid testing and investigation, contact tracing and monitoring, and reporting capacities, facilitating early case detection at the community level.

WHO AFRO launched a **community-based response initiative** (CBRI) in September 2021, which ultimately scaled to 21 Member States and led to the detection of over 6800 additional laboratory confirmed cases within communities by the end of 2022.

In a demonstration of the Region’s agility, WHO AFRO also pivoted the Global Influenza Programme for testing and characterizing influenza variants towards coronavirus surveillance. The effectiveness of these interventions was noted when, after the initial pilot of eight countries, the number of COVID-19 cases suggested greater population exposure to SARS-CoV-2 than previously indicated by surveillance data.

A major success of WHO AFRO’s response in the Region was the expansion of genomic surveillance capacity on the continent, a legacy impact of the COVID-19 response. Regional Director Dr Moeti described this capacity-building as an “enormous leap” for the Region. Genomic surveillance was a critical component of the emergency response given that the first recognized variant of COVID-19 globally was identified in South Africa, the corresponding global awareness and response was owing in large part to South Africa’s rapid identification and characterization of the SARS-CoV-2 Omicron variant.

Increasing genomic surveillance capacity within the Region also helped reprogramme the regional vaccine strategy as variants emerged. The CBRI was also instrumental in collecting positive COVID-19 samples from communities and allowing countries to submit them for genomic sequencing, to avoid surveillance “blind spots”. In Tanzania, WHO helped augment community surveillance efforts via COVID-19 call centres in Zanzibar.

In addition to enhancing holistic surveillance capacity, WHO AFRO developed a strong, centralized monitoring system for the COVID-19 situation across all 47 Member States. This system, supported by **digital tools**, featured a **three-tiered alert system** (No alert or alert of low concern, alert of resurgence concern, and alert of critical concern).

This framework allowed the Regional Office to:

- **rapidly evaluate and respond**: Quickly assess different country situations, identify needs, and inform pandemic response actions, including vaccination campaigns, RCCE and other protective measures accordingly.
- **share data daily**: Countries shared epidemiological data daily through a WHO-created database. The high response rate was facilitated by a streamlined process and simple data entry template, showcasing WHO AFRO’s ability to tailor technical support based on existing countries capacities.
- **anticipating resurgence**: Despite occasional delays in data receipt, WHO AFRO could anticipate resurgences using this composite indicator. The weekly situation of concern (SOC) analysis based on this data helped relieve the strain on resources – particularly during surges, such as with the Delta variant – through weekly categorization and prioritization of countries needing the most support.

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71 WHO AFRO, 2022.
73 Africa CDC, 2022.
74 NIDC, 2021.
This centralized system was critical in informing and targeting regional support at the country level, ensuring a coordinated and effective pandemic response.

**The urgency of the pandemic accelerated the digital transformation for WCOs; by the end of 2020, 80% of countries had established digital dashboards to track case and mortality counts.** This transformation had a broader impact beyond the COVID-19 response:

- establishment of digital dashboards led WCOs to integrate internal and external data, such as from the Open Data Kit used in the polio eradication programme, into their digital country dashboard. This integration marked a significant advance in information-sharing capacity for routine surveillance.
- collaboration with laboratories was crucial in rapidly building capacity and routinely procuring reports for use in the surveillance system.
- addressing gaps in surveillance through community-based initiatives and enhanced surveillance in clinical settings. These efforts ensured more comprehensive data collection and monitoring at the community level.

**Challenges**

**The collection and availability of data was the biggest challenge faced by WHO at all levels.** The data collected was skewed in part as it was only feasible to collect basic epidemiological information on the number of cases, deaths and recoveries for most of the pandemic; at some point, data on hospitalizations was also introduced. However, important epidemiological and case management data such as age, sex, immunization status and comorbidities were lacking. This challenge originated from the need to collect more comprehensive data than that typically required for routine surveillance, where COVID-19 was novel, not yet characterized and had a high severity profile, meaning that the underlying risk factors for the disease had to be investigated via surveillance efforts. While some countries had pre-existing infrastructure to collect basic epidemiological information, they were not robust enough for the gamut of information requested.

The situation in which multiple Member States faced epidemics at the same time with no initial immunity was unprecedented and placed a disproportionate burden on both the staff collecting data and on the electronic tools being used, such as the technological infrastructure, digital dashboards, technical expertise and software licenses required to execute a more comprehensive surveillance effort. The magnitude of the data also impeded data transmission to response teams, leading to delays in deploying the appropriate resources to countries. From a surveillance perspective, the type of data collected was highly disaggregated and left information gaps with respect to discrete, patient-specific details, such as age, gender, environment and predispositions.

**The centralized surveillance that WHO AFRO developed for COVID-19 was not well integrated with routine systems or standardized across Member States.** The parallel nature of the routine and event-based systems impeded surveillance efforts, as resources were redirected and the continuity of routine surveillance was hampered. For example, much of the information from the parallel COVID-19 surveillance system did not feed directly into the routine system (for example, IDSR), and in tandem, many resources were pulled from those routine systems. A particular example of where this affected other routine monitoring is with influenza data; resources were significantly repurposed towards COVID-19 in comparison to those dedicated to influenza prior to and during the pandemic. This siloed approach was aggravated by the variation in tools across countries: prior to the pandemic there was no systematic suite of electronic tools. While national reporting tools existed, there was no standardized approach in the Region. At the beginning of the pandemic, the surveillance pillar was not perceived as well integrated with other pillars within the IMST, specifically case management and PoEs. WHO is currently amending the IDSR strategy to institute a regional surveillance system which can be used for both routine and event-based surveillance in order to mitigate pain points experienced during the pandemic.

**WHO AFRO could also have mitigated “surveillance blind spots” by continuously updating the standard case definition for COVID-19 in the IDSR technical**
guidelines as understanding of the disease evolved. The standard case definition for COVID-19 helped clinicians examine patients prior to lab testing and perform an initial preliminary surveillance diagnosis. However, this case definition in the African Region did not evolve as additional characteristics of COVID-19 emerged, making it less relevant and useful for clinical diagnosis. If iterated, this categorization would have more easily helped clinicians diagnose COVID-19 via symptoms, in the absence of testing capacity.

Recommendations

1. **Strengthen surveillance at the animal-human interface using the One Health approach.** The COVID-19 pandemic brought the hitherto theoretical “One Health” concept into wide use, raising awareness around the linkages between environmental, human and animal health. WHO should continue to strengthen surveillance using the One Health approach.

2. **Accelerate and enhance IDSR efforts to establish a regional surveillance system and integrate COVID-19 surveillance into the IDSR system.** Given the fragmentation of epidemiological surveillance systems across Member States, a major recommendation emerging from the COVID-19 response was the need to establish an integrated surveillance system at the regional level. The standardization of data collection and metadata structures across Member States will mitigate data fragmentation issues experienced during the COVID-19 pandemic and allow centralized surveillance to take place for both future outbreaks and routine surveillance. While a parallel system of surveillance was used for COVID-19, the Regional Office can now endeavour to integrate this system into a single routine surveillance system and invest in strengthening the system with the appropriate functionality (that is, data fields) for a future public health emergency.

3. **Provide technical support to countries to continue regional DHIS2 implementation.** Currently, only 26 Member States have implemented DHIS2 for COVID-19 surveillance. To continue the regional implementation of DHIS2, WHO AFRO can continue to tailor support for countries based on their level of need and continue its collaboration with DHIS2.

4. **Continue to facilitate CBRI and share learning via webinars to disseminate best practices on surveillance.** To continue the momentum of the CBRI, WHO AFRO can continue to share lessons across the community-based surveillance programmes of countries; this can create the infrastructure for community based surveillance to be implemented earlier and yield more benefits in a future PHE.

Case management and clinical operations

**WHO concentrated its efforts on improving access to equipment and resources, while also strengthening human capacity for critical care to address health system deficiencies.** WHO led an assessment of case management capacities at the onset of the pandemic to identify needs in the Region and tailor its support accordingly. This assessment revealed several gaps in the health care system, especially regarding the availability of equipped intensive care units (ICUs), with only 8 ICU beds available for one million people. In response, WHO focused its support on increasing access to resources for critical care, including treatment equipment, therapeutics and oxygen, while developing and disseminating guidelines for case management and building the capacities of HCWs. This tailored support contributed to reduce the severity of the disease in Africa, which only accounted for 2% and 3% of the global cases and deaths respectively, as of October 2022.

The activities led throughout the response were designed to build the necessary capacities across the health care system and increase access to essential resources for case management. These activities included, but were not limited to:

- mapping of existing resources, capacities and needs to understand the readiness of health systems in countries in the Region to efficiently manage COVID-19 cases;

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76 DHIS2, [WHO Health Data Toolkit](https://www.who.int/data/dhis/dhis2).
77 Baldé et al., 2022, *Framing the future of the COVID-19 response operations in 2022 in the WHO African region*.
78 Ibid.
• development of plans and procedures to standardize case management across the Region and provide adapted guidance as new findings emerged, taking into consideration the specific context of each country;

• design, adaptation and dissemination of several training modules dedicated to HCWs, covering essential areas of case management;

• implementation of a mentorship programme to complement the training provided by deploying experts on the ground, collaborating closely with HCWs and ensuring application of best practices;

• ensuring access to essential resources, including therapeutics, oxygen concentrators, oxygen cylinders and pulse oximeters; and

• building oxygen plants to ensure sustainable oxygen production and delivery across the Region and enhanced ICU capacities.

The implementation of these activities was hampered by a range of challenges, mainly relating to the limited capacities across the health system:

• Inadequate health infrastructure and supplies, with existing tertiary facilities being ill-equipped in intensive care units (ICUs). The pandemic revealed the limited preparedness of the health system owing to inequities and several additional gaps, including the absence of medical oxygen and other treatment materials, as well as insufficient ICU beds. A survey conducted in late January 2020 aimed at identifying potential vulnerabilities in COVID-19 preparedness and response among Member States highlighted case management as an area of particular concern.

• Limited technical capacity across countries, especially in terms of critical care, HCWs having limited prior exposure to and capacity for the provision of critical care, especially regarding the management and delivery of oxygen and operation and maintenance of related equipment such as concentrators, cylinders and ventilators. Assessments also unveiled major gaps in terms of the understanding of case definition and capacity to identify high-risk patients.

• Issues with the overall quality of care and patient safety in health facilities. Quality of care and safety were affected by the rapidly accelerating COVID-19 transmission. The surge in COVID-19 patients led to shortage in space and staffing, resulting in disruption in patient safety. Many routine, non-COVID-19 patients failed to receive appropriate care during the pandemic.

• Limited access to critical data owing to the lack of willingness of some countries to provide transparent information such as discrete patient data, even when disidentified, as the fear of being stigmatized prevailed at the onset of the pandemic. This limited access to data hampered WHO’s ability to understand the actual scale of the outbreak and calibrate its support and complicated potential collaboration with countries.

Successes

WHO provided swift and tailored support to countries to address the urgent need to improve technical capacities and access to therapeutics. The mapping exercise was conducted prior to the registration of the first case in the Region, facilitating the timely identification of prevailing needs and planning for an adequate response in each country. WHO adapted its support to match the existing gaps, allowing the organization to tailor the plans and procedures to specific country needs, deploy surge capacity as required and provide adequate resources and assistance to scale up capacities at all levels. Specific attention was paid to building adequate capacity. As of October 2022, WHO and its partners had trained over 12 000 medical officers and 44 000 nurses throughout the Region on COVID-19 treatment, surveillance SOPs and relevant tools and guidelines.

WHO AFRO supported Member States to integrate the therapeutic platform and procure adequate treatments for COVID-19. The mentorship programme brought additional support to ensure continuous capacity-building for an enhanced

79 Baldé et al., 2022, Transitioning the COVID-19 response in the WHO African region: a proposed framework for rethinking and rebuilding health systems.

80 Baldé et al., 2022, Framing the future of the COVID-19 response operations in 2022 in the WHO African region.

81 Neelam Dhingra-Kumar, 2022, Implications of the COVID-19 pandemic for patient safety, a rapid review.

82 Jeffrey Braithwaite, 2021, Quality of care in the COVID-19 era: a global perspective.

83 Baldé et al., 2022, Framing the future of the COVID-19 response operations in 2022 in the WHO African region.

84 Baldé et al., 2022, Framing the future of the COVID-19 response operations in 2022 in the WHO African region.
understanding and application of treatment procedures and requirements. The timely deployment of experts on the ground strongly contributed to enhancing case detection and early management of cases to reduce mortality.85

The support provided to scale oxygen production and delivery was essential to ensure adequate critical care and reduce morbidity and mortality, especially during peak periods. The results of the mapping exercise conducted in the early stages of the pandemic raised concerns about the gaps in infrastructure, equipment and human resources for intensive care among Member States.86 With the support of donors such as the World Bank, WHO mobilized substantial resources and collaborated with partners to improve ICU capacities, reduce the burden on the health system and mitigate the risks of high morbidity and mortality. WHO worked with partners to establish a regional stockpile of 800 oxygen concentrators, 3800 oxygen cylinders and 595 pulse oximeters, to help scale up the capacity of countries for the treatment of severe and critical cases.87 WHO also distributed 1517 oxygen concentrators to 22 Member States between September and December 2022,88 as well as 344 ventilators to more than 40 countries.89 Furthermore, WHO conducted extensive capacity-building to improve the management of oxygen systems, which targeted 130 biomedical engineers and logisticians across the continent. This training focused on critical aspects of oxygen delivery, including calculation of oxygen requirements, mapping oxygen resources before an influx of cases and ensuring the maintenance of various oxygen devices.90

The most prominent success in case management is the legacy infrastructure resulting from this enhanced assistance, which has the potential to streamline the provision of critical care in the Region. The support provided by WHO and partners has contributed to significantly improving clinical case management capacities across the Region. This support has been provided by upgrading the existing infrastructure. The number of oxygen plants in the Region increased from 68 in 2020 to 363 as of October 2022 through the repair, maintenance and procurement of new oxygen plants, reducing the cost of oxygen by 40% in countries where new installations occurred.91 In countries such as Chad, WHO facilitated the construction of new oxygen facilities and repair of 54 oxygen concentrators, with 103 technicians trained across 23 provinces to ensure maintenance and repair in case of breakdown.92 The number of ICU beds in the Region has also almost tripled in two years, growing from 8 per 1 million people in 2020 to 20 per 1 million in 2022.93 These major improvements stemming from the COVID-19 response will lay the foundation for better case management in the future if countries succeed in harnessing their potential.

Challenges

At the start of the pandemic, the training mainly targeted senior leadership in MoHs, which were not always directly leading the frontline response. As a result, the expected outcomes were not initially achieved. The impact of online training, which was prioritized in the context of lockdowns, was also limited owing to the weak capacity to convey technical skills without physical interaction. Significant capacity gaps were discovered at the hospital level when experts were sent on the ground, highlighting the urgency of reviewing the training strategy to increase inclusivity and upfront engagement on-site.

Limited capacity at both the regional and country level considerably reduced the scale of interventions, limiting scope to major cities and districts. The case management pillar was only established during and in response to COVID-19, despite the clear need during other outbreaks in the Region, such as EVD, preventing WHO from building institutional capacity prior to the pandemic. This resulted in a lack of prior integration of capacity-building in case management across the Region,

85 Baldé et al., 2023, A step towards reinvigorating the COVID-19 response: an intra-action review of the WHO AFRO Incident Management team support.
86 Baldé et al., 2022, Framing the future of the COVID-19 response operations in 2022 in the WHO African region.
87 Baldé et al., 2022, Framing the future of the COVID-19 response operations in 2022 in the WHO African region.
88 Ibid.
89 Dalberg stakeholder interviews, 2023.
90 Dalberg stakeholder interviews, 2023.
91 Baldé et al., 2022, Framing the future of the COVID-19 response operations in 2022 in the WHO African region.
92 Maombi E. and Ndhokubwayo JB, 2023, Oxygen needs to be met in Chad: Resilience, lessons learned, challenges and perspectives.
93 Baldé et al., 2022, Framing the future of the COVID-19 response operations in 2022 in the WHO African region.
especially for critical care, leading to major gaps in human resources and the need to rely on international experts, who could not be sent on the ground because of the lockdown. Consequently, online training was the only viable solution at the beginning of the outbreak. The case management team was understaffed during the response and was supported by consultants for a long time, which led to a high attrition rate and instability. These elements combined led to limited capacity to provide support to countries on a large scale. The interventions were mainly implemented at the central level, with limited coverage of the decentralized level.

Procurement procedures were not always set up to efficiently source and allocate equipment to countries in time. Procurement processes are centralized to maximize economies of scale through the acquisition of equipment in larger volumes. Requests from countries were processed by the case management team within the Regional Office before being submitted to Headquarters, which oversaw procurement of the equipment. This complexity and the associated administrative burden led to delays in the procurement and distribution of adequate equipment to countries.

Recommendations

1. **Increase investment in oxygen production and delivery and improve the physical infrastructure in health facilities to facilitate isolation and appropriate flow of patients.** Despite substantial growth resulting from the COVID-19 support, oxygen production and delivery is still limited in the Region in terms of infrastructure, institutional capacity and human capital. This shows the need to reassess emergency and critical care and to improve health facilities to facilitate the appropriate flow of patients and isolation. Emphasizing knowledge sharing between countries to learn from innovative methods and strategies across the Region will be a strong catalyst of this institutional capacity-building. Member States such as South Africa have shown several improvements and best practices in terms of emergency piping and the establishment of public-private partnerships for enhanced production of oxygen, which can be useful lessons for the Region.

2. **Institutionalize capacity-building by supporting the development of curriculum support and standardized training pools of community health workers to address the gaps related to case management in the Region.** It is necessary to embed capacity-building within educational platforms and institutions such as universities and technical schools to ensure that a pool of regional experts is established in the long term and continuously improved with new talent. These regional experts will be a reliable asset that countries can leverage to improve their case management capacities and increase their potential to leverage innovative technologies. WHO can also provide further training to HCWs to enhance quality and safety of care.

3. **Maintain an emergency stockpile of essential case management equipment.** To address the challenges posed by centralized procurement procedures, WHO should consider expanding the regional reserve established during COVID-19, ensuring a constant emergency supply of critical care equipment, including oxygen concentrators, cylinders, ventilators and pulse oximeters. These emergency supplies could be housed within the designated storage areas in the Dakar and Nairobi hubs, facilitating quicker equipment distribution to Member States by reducing extensive administrative procedures.

4. **Incorporate patient safety practices in future emergencies preparedness and response.** Quality of care and safety were affected by the rapidly accelerating COVID-19 transmission. In line with the WHO Global Patient Safety Action Plan 2021–2030, there is an opportunity to institutionalize mechanisms to ensure quality and safety of care during emergencies.
COVID-19 vaccination

WHO provided extensive support to Member States for the introduction and rollout of vaccines in the Region. To support the introduction of vaccines in the Region, WHO deployed several tools and developed technical guidelines and protocols. WHO AFRO leadership played a critical role by promoting the equitable distribution of vaccines, facilitating the timely approval of vaccines via the Emergency Use Listing Procedure (EUL) as well as by strengthening vaccine safety and surveillance. WHO effectively coordinated with partners to avoid duplication of activities. It also ensured that information on vaccines introduction and deployment was shared as appropriate. However, the delayed integration of the vaccination pillar into the IMST structure and leadership changes within the pillar delayed the deployment of technical staff. Despite efforts deployed by WHO and partners, the rollout of vaccines has been slower in most African countries than in other parts of the world.

WHO AFRO conducted the following types of activities within the vaccination pillar (note: examples are illustrative and not exhaustive):

- support to countries to develop and roll out national deployment and vaccination plans, including the assessment of existing capacities, gaps, and requirements for effective deployment of vaccines (for example, costing through the COVID-19 vaccine introduction and deployment costing tool);
- deployment of over 80 consultants to provide technical support and facilitate monitoring and evaluation of COVID-19 vaccination strategies;
- development of technical guidance and protocol documents, supported by the WHO Strategic Advisory Group of Experts on Immunization;
- monitoring and evaluation, including the facilitation of COVID-19 vaccination programme IARs across over 32 countries, identifying best practices, shortcomings and areas of improvement while providing an opportunity to review target groups and adapt strategies accordingly;
- establishment of a dashboard and associated logistics monitoring team by WHO AFRO to monitor data regarding COVID-19 vaccine usage;
- coordination with the Africa Vaccines Regulatory Forum (AVAREF) to enable the timely approval of COVID-19 vaccines under the WHO EUL;
- coordination, including through COVID-19 vaccines delivery partnership; and
- research and documentation activities, including leading vaccines effectiveness studies through the African Region Monitoring Vaccine Effectiveness (AFRO-MoVE) in 13 countries.

The successful implementation of these activities was hampered by a range of challenges:

- Limited availability of COVID-19 vaccines, notably during the first rollout phase from initiation in December 2020 to July 2021, owing to high uptake in high-income countries.94
- Limited absorptive capacities of countries during the second rollout phase from August 2021 to June 2022, resulting in the administration of only 62% of received COVID-19 vaccine doses by the end of that period.95
- Major vaccine delivery bottlenecks owing to insufficient cold chain and ultra-cold chain equipment, despite funding by Gavi and the World Bank – particularly impactful for mRNA vaccines requiring an ultra-cold supply chain.96
- Limited time frame within which to operate between the reception and expiry of vaccines, with a short shelf life of typically three to six months,97 putting pressure on WHO to deploy doses rapidly and inevitably resulting in the expiry of COVID-19 vaccines.
- Limited visibility of the funding available for vaccines delivery across partners, especially when the vaccines started becoming available in the African Region.

94 WHO AFRO, 2022, Update on the rollout of COVID-19 vaccines in AFRO as of 30 June 2022.
95 Ibid.
96 Ibid.
97 Dalberg stakeholder interviews, 2023.
• Mixed political support across the African Region, where some countries were reluctant to coordinate high-level support for COVID-19 vaccination activities.

• Limited availability of data on adult populations, with different definition of adult populations among Member States.

• Misinformation hindering the demand for, and uptake of, COVID-19 vaccines.

Successes

WHO deployed several tools to support the introduction of vaccines in the African Region and developed technical guidelines and protocols.

WHO deployed the Vaccines Introduction Readiness Assessment Tools tool to assess the readiness to introduce COVID-19 vaccines, identify gaps and prioritize actions. In addition, WHO AFRO deployed a team of 34 consultants to support Member States with the preparation of the NDVPs and their reviews through a multi-partner Regional Review Committee. Out of the 47 Member States, 45 completed their NDVPs, which served to guide Member States to plan for a phased rollout of vaccines.

To facilitate implementation, costing was performed via the COVID-19 vaccine introduction and deployment costing tool. WHO also deployed over 80 consultants to facilitate the COVID-19 vaccine deployment and support the development technical guidance.

Several guidelines and protocols were developed by WHO AFRO such as the guidance on developing an NDVP, the guidance on operational microplanning for COVID-19 vaccinations and the guideline developed jointly with UNICEF on integrating COVID-19 vaccination into immunization programmes and PHC.

WHO AFRO leadership led several critical initiatives to promote equitable distribution of vaccines, expedite the approval process of the COVID-19 vaccines and strengthen vaccine safety and surveillance across Member States. WHO AFRO leadership advocated during the response to ensure the equitable distribution of vaccines to the region. Additionally, WHO AFRO collaborated with AVAREF by convening the national regulatory authorities of Member States to enable the timely approval of COVID-19 vaccines under the WHO EUL. More than 1000 applications were processed and a dedicated three-person team was created to coordinate with partners and governments to this end. The Regional Director also led the launch of multiple initiatives, including the African Advisory Committee on Vaccine Safety to provide independent advice and make recommendations on how to strengthen vaccines safety and surveillance across Member States.

WHO effectively coordinated with partners to avoid duplications of activities and ensured information were shared on vaccines introduction and deployment. by WHO AFRO established the Africa Partner Forum in January 2021, enabling the contribution of all partners and offering an opportunity to present the work they had undertaken, aligning all partners in a successful coordination. Additionally, WHO introduced a COVID-19 vaccine dashboard to monitor the rollout of vaccines, tracking the risk of expiry. The dashboard was used to coordinate with partners such as MoHs, UNICEF, Gavi and Africa CDC and was perceived as the most reliable source of information. WHO also joined the COVID-19 vaccines delivery partnership that included UNICEF, Gavi, Africa CDC, MoHs, the World Bank and other partners and was instrumental in the coordination of COVID-19 vaccines delivery and uptake following the “one plan, one team, one budget” approach.

Our collective advocacy is needed to ensure the equitable distribution of the vaccines to the Region. Equity and solidarity must be at the forefront of the discussions on vaccine availability and delivery.

Dr. Moeti, WHO African Regional Director

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98 WHO AFRO, 2022, Update on the rollout of COVID-19 vaccines in AFRO as of 30 June 2022.
99 Ibid.
100 Ibid.
101 WHO AFRO, 2021, Guidance on developing national deployment vaccination plan.
103 WHO/UNICEF, 2023, Considerations for integrating COVID-19 vaccination into immunization programmes and primary healthcare for 2022 and Beyond.
104 Dalberg stakeholder interviews, 2023.
WHO led research and documentation activities on the effectiveness of COVID-19 vaccines in the Region. AFRO-MoVE launched 22 research studies across 13 Member States on the nine vaccine types deployed in the Region to provide evidence on the performance of the vaccines. AFRO-MoVE also provided a platform for strengthening scientific knowledge and research on COVID-19. The platform further contributed to national and regional preparedness and response capacities for COVID-19 and future PHEs.106 Four studies have been published to date, showing that vaccines provided greater protection against severe outcomes and illustrated the different level of protection by products and by variants.107

Challenges

The delayed integration of the vaccination pillar into the IMST structure and the change of leadership of the pillar led to delays in the deployment in some Member States. Interviewees mentioned that variability in the leadership of the pillar during the response and the vaccination pillar being moved between clusters affected the timely deployment of technical staff during the response.

While WHO produced research on vaccine effectiveness, research on modelling scenarios for vaccination and boosters was limited. The lack of scientific updates on modelling scenarios for vaccination and boosters limited regional context-specific information on COVID-19 vaccination. The report shows that this area should be strengthened for future pandemic preparedness and response.108

Infection prevention and control

WHO’s support empowered most Member States to meet essential requirements related to IPC, safeguarding HCWs and the public given the limited knowledge and expertise in the Region. As the pandemic emerged, many Member States had little awareness of, or resources allocated to, IPC. This situation raised several concerns regarding the ability to ensure the safety of medical staff and contain the spread of the virus. By July 2020, more than 10 000 HCWS had been infected with COVID-19.

Recommendations

1. **Maintain a vaccination-plus strategy that combines vaccination as part of routine immunization in PHC programmes, availability and affordability of testing, treatment for new infections and post COVID-19 condition.** The vaccination strategy should complement public health and social measures, including the wearing of masks in some contexts, promotion of safe workplaces and economic and social support for self-isolation.

2. **Continue to support Member States to recognize WHO as the primordial regulatory authority for quality, safety and efficacy in the regulatory review of vaccines.** WHO AFRO should continue to collaborate with AVAREF, convening the national regulatory authorities of Member States to enable the timely approval of vaccines under the WHO EUL.

3. **Continue to support Member States to align on the definition of high-risk populations, collect data and monitor the COVID-19 vaccination rollout.** The COVID-19 response illustrated the limited availability of data on adult populations and varying definitions among Member States. WHO should continue to work with MoHS to align on definition, map the target population to be vaccinated and monitor the COVID-19 vaccination rollout.

4. **Increase investments to strengthen research on vaccination.** While WHO produced research on vaccines effectiveness during the response, it could allocate additional funding to conduct research on modelling scenarios, vaccination and boosters to add regional context-specific information.

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107 WHO AFRO's role in supporting the rollout of COVID-19 vaccines, as of June 2022.
To improve the adoption of safety measures and suppress transmission through SPRP 2021–2022, WHO disseminated a combination of guidelines, procedures, equipment and tools to the region, supplemented with ongoing advice and capacity-building initiatives. This proactive approach enabled Member States to take ownership of global and regional IPC standards, crafting strategies that were tailored to the local context. The emphasis shifted towards ensuring consistent adherence to IPC guidelines, prioritizing the safety of frontline HCWs and minimizing community exposure, especially in contamination-vulnerable settings, such as refugee camps.

The successful implementation of these activities was hampered by a range of challenges, mainly relating to limited capacities across the health system:

- limited availability of resources such as personal protective equipment (PPE) for IPC, especially at the onset of the pandemic, owing to the lack of sufficient stocks within Member States and difficulty in procuring equipment on the international market, given the high demand and limited supply;
- challenges in the adoption of protocols owing to the misalignment between COVID-19 requirements and pre-existing plans and procedures in some Member States, alongside multiple guidelines from different sources with varying recommendations;
- limited commitment from some Member States to enforce the implementation of regional IPC guidelines, including plans and procedures, mainly stemming from the limited awareness of the benefits of a functional IPC framework;
- limited knowledge of and expertise on IPC, leading to delays in the implementation of activities. Most Member States did not have IPC programmes or dedicated human, financial, or technical resources before COVID-19;
- border closures prevented the timely deployment of experts on the ground to support the implementation of activities;
- insufficiency of WASH infrastructure at the national level, coupled with social resistance, hindering the adoption of safety measures; and

The activities led throughout the response were designed to build the necessary IPC capacities. These activities included, but were not limited to:

- developing and updating regional IPC guidelines by adapting global recommendations to the local context;
- organizing briefing meetings and online training sessions and leading advocacy to foster understanding and adoption of IPC plans and procedures;
- designating IPC focal points in WCOs and deploying experts to provide guidance to the country, oversee training and support the development and implementation of national strategies for IPC;
- designing and disseminating tools such as the IPC scorecard and rapid evaluation tool to help countries digitize data collection and analysis, monitor systems in health facilities and develop recommendations to improve IPC;
- providing IPC equipment to Member States to improve safety of HCWs and rapid response teams;
- promoting health safety measures and distributing WASH equipment in partnership with RCCE teams to reduce the spread of the virus among communities;
- supporting local production of nonmedical masks, hand sanitizer, soap and other commodities mainly through the development of production guidelines and provision of technical assistance; and
- assessing health facilities and other public places and communities such as refugee camps to ensure compliance with minimal IPC requirements and the availability of protective equipment.

One infection among health workers is one too many, “said Dr Moeti. “Doctors, nurses, and other health professionals are our mothers, brothers, and sisters. They are helping to save lives endangered by COVID-19. We must make sure that they have the equipment, skills, and information they need to keep themselves, their patients, and colleagues safe.”

• lack of compliance with IPC norms within health facilities improving the risk of contamination and uncontrolled spread of the virus within treatment centres.

Successes

Understanding the unique challenges in the African Region, WHO led tailored initiatives to ensure that Members States met the essential IPC standards. The combination of context awareness, scientific knowledge and enhanced communication allowed WHO to foster development of national IPC strategies in line with sociocultural considerations. The development of tailored plans and procedures was supplemented with technical and financial support, as well as large-scale communication efforts to enhance their implementation. While advocacy sessions provided a platform to emphasize the importance of IPC among Member States, the IPC team collaborated closely with the RCCE pillar to turn scientific guidelines into public-friendly messages to raise awareness in communities. Thanks to this support, more than 20 Member States have now developed a national IPC strategy with a dedicated M&E framework and most countries in the Region were able to integrate IPC measures in their response, addressing culturally sensitive issues such as devising protocols for safe burials in line with tradition. Several Member States, including Tanzania, Lesotho, Ethiopia, Nigeria and South Africa, rolled out guidelines related to health and security measures, including the use of nonmedical masks in public places and the development of community based strategic activities to enhance IPC/WASH. Amid the festivities in 2020, countries like Senegal, Cameroon and Chad actively promoted IPC protocols, such as Senegal’s tailored messages during the Maouloud Islamic holiday and Cameroon’s “Christmas without COVID-19” initiative. The designation of focal points in all countries was critical for easier collaboration between WHO and Member States.

The training deployed during the response provided a better understanding of IPC protocols from HCWs, facilitating the adoption of practices compliant with official guidelines. WHO leveraged several platforms to build capacities, mainly relying on virtual training and a train-the-trainers approach, providing training material to national teams and consultants. The modules aimed to strengthen competencies in several critical areas to achieve compliance with international standards, including the use of PPE and IPC methods such as donning and doffing protocols. WHO adapted the modules to reflect needs in each of the countries. In Seychelles, which was experiencing its first major outbreak, WHO sent an expert in IPC to provide training and guidance on adequate implementation of protocols. The training targeted a range of stakeholders, including HCWs, social workers, teachers, students and transport employees. Concurrently in Namibia, the WCO introduced two online courses focused on managing ill travellers and addressing COVID-19 outbreaks on maritime vessels. Through these capacity-building opportunities, WHO and partners reached more than 90,000 HCWs across the Region. Some examples in Member States include more than 1200 health care professionals trained on IPC in South Africa, 7000 in DRC, 8000 in Côte d’Ivoire and more than 7500 in Mauritius. The number of HCWs trained in Mauritius represented 75% of doctors, nurses and other HCWs directly in contact with patients, accounting for 50% of the staff of the MoH. In addition to improving the understanding of IPC procedures, the knowledge received through the training allowed HCWs to review the standards previously established at health care facilities for the management of COVID-19 and ensure alignment with international protocols. Mauritius reinforced an IPC culture by implementing relevant guidelines, establishing an MoH-level IPC committee, and ensuring stringent sanitary measures in hospitals and PHC settings.

110 Dalberg stakeholder interviews, 2023.
112 Ibid.
113 Ibid.
115 Dalberg Advisors, 2023, stakeholder interview notes.
117 Ibid.
119 WHO, 2023, After-Action Review for IPC.
120 WHO Regional Office for Africa, 2020, Equipping Tanzanian health workers with skills for critical care.
WHO implemented several tools to assess the IPC capacities of the health care system, identify potential risks and develop solutions. Nearly all 47 Member States adopted the IPC scorecard, developed for the response to EVD, enabling them to assess the availability of several parameters in health facilities such as the existence of an IPC coordinator, IPC team, isolation areas, triage, hand hygiene stations, security of patients and families, PPE utilization and waste management. Member States were also able to find solutions for specific measures such as self-isolation, evaluating their effectiveness and adapting strategies accordingly. WHO further supported the adaptation of these tools to assess capacities in refugee camps, schools, etc. and to ensure the safety of vulnerable populations by using an evidence-based approach. During the pandemic, WHO led the assessment of more than 4000 health facilities and supported Member States to conduct additional evaluations. Countries such as Seychelles were able to successfully use the IPC scorecard and IPC practice audit tool to conduct supervisory visits in health care facilities and strengthen IPC protocols, assess exposure of HCWs and infections and improve their safety. In South Africa, WHO assessed and supported over 400 public and private health facilities for adherence to IPC measures and deployed over 100 experts to eight provinces to provide technical assistance. Other Member States facing humanitarian crises, such as Chad, led holistic assessments of refugee camps to ensure implementation of IPC protocols. In Chad, the WCO led the assessment of more than 400 facilities, including refugee camps, to bolster the safety of high-risk population, especially migrants, refugees and displaced populations.

Challenges

The shortage of human resources and challenges in sourcing relevant expertise in the Region reduced the capacity to ensure comprehensive coverage and supervision of health care facilities. The IPC pillar only had four staff members, of which two were in the Regional Office and the other two at the Dakar and Nairobi hubs, coordinating the response across the 47 Member States. Recruitments were also complex because of the limited existing expertise in the Region and the long contracting procedures for external consultants. While focal points were deployed in all WCOs to facilitate coordination with Member States, most of them had limited expertise in IPC. In Angola, neither the WCO nor the rapid response teams included IPC specialists and there was no plan to maintain continuity of IPC activities after the contract ended for the IPC consultant assisting the response. These shortages affected the capacity to respond to an outbreak of the scale of COVID-19. The team was unable to cover all health care facilities across the Region, especially at a disaggregated level, adversely impairing the scale and scope of the support received by countries.

This limited availability of human resources, compounded by lockdowns and travel restrictions, forced the team to resort mainly to online support, which proved less effective than physical presence. Owing to travel restrictions, the IPC team had limited capacity to send external experts on the ground to support the implementation of activities. In a few instances, some Member States sent requests for technical support which WHO was not able to provide. Most training at the regional level was provided through online platforms, fostering a good understanding of procedures but providing limited capacity to improve technical skills in IPC. This further impacted the support provided to communities for the uptake of IPC measures. For example, in Botswana, the limited number of trained IPC liaisons impaired the implementation of guidelines, suggesting the need for additional training to increase the efficiency of activities aimed at communities.

Recommendations

1. Accelerate the development and execution of national IPC strategies, prioritizing Member States without current plans and reinforcing the implementation of established strategies.

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121 Baldé et al., 2022, Framing the future of the COVID-19 response operations in 2022 in the WHO African region.
124 Dalberg stakeholder interviews, 2023.
125 Baldé et al., 2022, Transitioning the COVID-19 response in the WHO African region: a proposed framework for rethinking and rebuilding health systems.
126 Dalberg stakeholder interviews, 2023.
127 Dalberg stakeholder interviews, 2023.
128 Ibid.
Given the limited preparedness in IPC across the Region at the onset of the pandemic, building on the legacy developed through the response is critical for future emergencies. Countries with prior experience in IPC, such as the Democratic Republic of the Congo, required less capacity-building to roll out activities. WHO can utilize the knowledge gained from supporting countries with existing plans to expedite the creation of national strategies for other Member States. In countries that have already developed these plans, WHO can streamline their execution by emphasizing advocacy towards government authorities, intensifying support on resource mobilization and enhancing the capabilities of WCOs in IPC, making them a more reliable asset in the implementation of plans and procedures.

2. **Identify partnerships with regional experts and academic institutions to build IPC expertise.**

The limited availability of experts in IPC both at the regional and country level presents a risk for the successful response to future outbreaks. Recognizing this gap, WHO should actively seek and strengthen collaboration with regional experts and a diverse range of institutions, including development partners, universities, research centres and specialized training institutes. The collaboration with the University of Sciences, Techniques and Technologies of Bamako, resulting in an online IPC course, showcases the potential achievements from such partnerships. By strengthening these collaborations and capitalizing on its influence, WHO can drive the institutionalization of the IPC curriculum across the Region, thereby fostering a more resilient and informed regional expertise.

### Points of entry

**WHO provided tailored guidance and large-scale capacity-building for efficient PoE management, but some external challenges, such as the difficulty in effectively managing land borders, complicated the response.** WHO swiftly responded to the pandemic by leveraging internal expertise, closely collaborating with external partners, and by drawing on the knowledge gained during the EVD outbreak. Timely initiation of screening and patient care proved critical, particularly for Member States experiencing resource constraints. WHO tailored global guidelines to fit local contexts and ensured close monitoring of capacities to identify gaps, partnering for this purpose with UN partners such as UNICEF, Africa CDC, and Regional Economic Communities. These partnerships bolstered cross-border cooperation and enhanced response capacities through simulation exercises (SimExes) and extensive training, garnering successes in PoE management, especially at airports and seaports. However, land borders posed distinct challenges owing to the large number of informal crossings, which led to uncontrolled movements of populations and contributed to the influx of undetected imported cases.

The PoEs pillar conducted the following types of activities (*note: examples are illustrative and not exhaustive*):

- **Development of plans and procedures** compliant with IHR 2005 to facilitate a coordinated approach between the wide range of stakeholders working at PoEs and avoid duplication of efforts and resources.
- **Development and adaptation of guidelines and implementation of mechanisms and tools** for travel regulations, public health and social measures, screening, patient tracking, monitoring of border status (opening and closure) and several other critical areas for PoE management.
- **Design and implementation** of SimExes to ensure operationality and adaptability of plans and procedures.
- **Capacity-building at both regional and country level** to enhance the understanding of and capacity to conduct activities according to existing regulations, tools, plans and procedures, leveraging multiple channels. These included deploying experts on the ground through a train-the-trainers approach and using online platforms to extend the reach to larger groups of stakeholders.
- **Ongoing monitoring of capacities in-country through the IHR** to capture the progress made in the implementation of plans and procedures and adapt support accordingly.
Facilitation of technical collaboration and knowledge sharing between neighbouring countries in critical areas such as international contact tracing, isolation and treatment at borders. These activities were delivered in the context of several external challenges, including:

- **Limited capacity to manage land borders** since most ground crossings are informal, allowing uncontrolled movements of populations and exacerbating the surge of undetected imported cases.

- **Disparities in the capacities and level of preparedness of countries** requiring further tailoring of guidance and support to address the specific needs and risks at the national level, sometimes leading to the prioritization of Member States with a higher level of vulnerability.

- **Limited ability to leverage the knowledge and capacities built during previous outbreaks** owing to the different nature of COVID-19, leading to the mobilization of additional resources to update the training provided to PoE staff despite the equipment being predominantly the same.

- **Limited existence of collaboration frameworks among countries specifically on PoE management at the onset of the pandemic,** with minimal clarity on roles and responsibilities at land borders.

Successes

**WHO capitalized on the experience and knowledge from previous responses to provide adapted guidance to Member States for the development and implementation of country strategies for PoE management.** Drawing on experience with the EVD response, WHO swiftly established plans and procedures, and critical activities such as screening and patient care at PoEs. Thanks to WHO support in previous outbreaks, many Member States had already set up PoEs, aligned with IHR (2005) standards. Using this foundation, WHO refined guidance for countries, adjusting global strategies to fit regional needs after close assessment. Some examples include the recommendation to emphasize rapid testing to maintain safe travel and streamlined management of transportation hubs. Furthermore, WHO collaborated with the Food and Agriculture Organization of the United Nations to devise safety protocols for the seasonal movements of pastoral communities, preventing potential transmission between humans and animals. WHO also provided support to small island states, developing innovative strategies to improve PoE management. For instance, in Seychelles, the WCO established case detection points at hotels and introduced an electronic system to track symptoms of incoming travellers.

**WHO championed cross-border strategies in Africa by fostering collaboration between neighbouring countries and adopting mutual agreements to address transmission risks.** WHO worked with Member States to address emerging threats stemming from limited coordination, leading to travellers commuting through borders without clear roles and responsibilities for their management. These uncontrolled movements were notably frequent in East Africa, where truck drivers were travelling between several Member States to deliver essential goods, exacerbating the risk of disease transmission. In Uganda, 72% of positive cases between 22 March 2020 and 29 May 2020 were truck drivers. In response, WHO partnered with the AU, the International Organization for Migration and UNICEF to facilitate dialogue among East African nations. This collaborative effort yielded a subregional strategy, harmonizing PoE interventions and providing specific roles and responsibilities for surveillance, IPC, testing and information sharing.

Similar outcomes emerged in other subregions, such as West Africa, where WHO partnered with the Economic Community of West African States, the African Field Epidemiology Network and the United States CDC to organize dialogues in several countries including Ghana, Nigeria, Togo, Benin, Senegal and Sierra Leone. During cross-border discussions between Sierra Leone and Liberia, the WCOs’ technical and financial contributions were...
crucial to reaching consensus on mutual guidelines for managing their shared land boundaries.\textsuperscript{135}

\textbf{WHO led comprehensive PoE training and SimExes to build strategic and operational capacities both at the regional and country level.} WHO initiated large-scale training for the staff at PoEs across the Region to improve their understanding of the guidance and regulations provided and foster efficient border movement monitoring. The dissemination of these modules, specifically tailored for COVID-19, was strengthened by collaborations with partners such as Africa CDC, United States CDC and the International Civil Aviation Authority. The training was designed to include all relevant stakeholders, including airlines, facilitating the adoption of guidance in critical areas of PoE management, such as travel requirements and guidelines.\textsuperscript{136} Beyond training, WHO led several SimExes, which proved particularly effective at the onset of the pandemic, pinpointing system gaps and informing improvements. A notable simulation, jointly facilitated with the German Development Agency, brought together over 60 emergency management experts from several Member States of the East Africa Community, including Burundi, Kenya and Uganda, enhancing disease monitoring and strengthening compliance with essential PoE protocols and IHR standards.\textsuperscript{137}

\textbf{Challenges}

The rapid evolution of global guidelines and country regulations for international travels affected the capacity to quickly tailor and disseminate guidance to countries. While WHO globally set guidelines based on the pandemic’s overall trajectory, individual countries, experiencing varying severity levels, adjusted their travel requirement according to their local context. The Regional Office for Africa faced the complex task of rapidly adapting to these changes. This continuous evolution sometimes resulted in delays in communicating new guidelines to Member States. Moreover, the urgency to update meant that new directives occasionally conflicted with prior ones. This variation posed challenges for stakeholders who were still adapting to older guidelines, potentially leading to confusion in their implementation.

\textbf{Recommendations}

1. \textbf{Increase investments to strengthen cross-border collaboration and PoE management capacities.} The COVID-19 pandemic highlighted the urgency of improving preparedness to respond effectively to emergencies. WHO can continue its efforts to bolster countries’ abilities to plan for and independently address outbreaks. In the specific case of PoE management, this will entail extending and strengthening existing collaboration frameworks between countries and facilitating the development of new agreements where relevant, conducting more frequent and larger-scale SimExes and intensifying training for all stakeholders involved in the oversight and daily management of PoEs.

2. \textbf{Enhance coordination with countries to improve understanding of new guidelines.} WHO could streamline communication with countries by establishing clear channels dedicated to PoEs to continuously map and share changes in guidelines. This can be achieved by conducting regular information sessions with key stakeholders and enhancing the train-the-trainers approach through the development of a mentorship system on the ground, to ensure that new directives are both understood and effectively implemented.

\textbf{Laboratories and diagnostics}

\textbf{WHO and its partners significantly increased diagnostic capacity for Member States during the pandemic via targeted technical assistance and training.} At the beginning of the pandemic, 30 Member States had laboratory capacities but only Senegal and South Africa had reagents to perform diagnostics. WHO mobilized the influenza laboratory networks to provide capacity-building and worked...
Review of WHO’s response to Covid-19 in the WHO African Region

with partners to deliver reagents to expand diagnostic capacity. As a result, all 47 Member States had the capacity for Polymerase Chain Reaction (PCR) testing. However, there were shortages of specialized staff to support genomic sequencing and of staff well trained in laboratory testing.

Key activities

The laboratory and diagnostics pillar conducted the following types of activities (examples are illustrative and not exhaustive):

- procurement, distribution and allocation of essential laboratories consumables to Member States, such as reagents for testing capacity;
- provision of guidelines on laboratories and diagnostics to Member States on nested PCR, GeneXpert machines, procurement, rapid antigen tests and genomic sequencing;
- technical assistance to Member States and their laboratories, sending international laboratories experts on-site to support in-country staff with PCR detection of SARS-CoV-2 and antigen detection rapid diagnostic tests;
- regular bulletins shared with laboratories and information notes;
- launch of the WHO laboratory community of practice that hosted seminars on topics related to COVID-19 testing;
- launch of a network of 12 genomic laboratories with Africa CDC to track, identify and bolster response to COVID-19 variants and other emerging pathogens;
- training of personnel by WHO and partners to expand the human resources capacity in genomic sequencing experts via a hybrid approach, through both virtual training modules and practical laboratory sessions;
- establishment of a Regional Centre of Excellence for Genomic Surveillance and Bioinformatics with the South African National Bioinformatics Institute in Cape Town to support southern countries; and
- establishment of hubs in Cape Town, Dakar and Nairobi, strategically covering the entire Region, to support Member States in developing their national genomic sequencing capacity.

These activities were delivered in the context of several external challenges, including:

- lock downs impacting the transportation of reagents and laboratory supplies to countries;
- limited availability and high competition globally for laboratory reagents and consumables, affecting the ability to furnish laboratories with the necessary supplies; and
- limited surge capacity for qualified and well-trained staff in laboratory testing, affecting the operationalization of laboratories and contributing to delays in results.

Successes

WHO AFRO mobilized the influenza laboratory networks to build capacity and rapidly scaled laboratory and diagnostic testing capacity in the Region, building testing networks to supporting all 47 Member States. The influenza networks were critical in the first six months of the pandemic to build the capacity in detection and were the backbone for SARS-CoV-2 detection in countries. WHO AFRO helped procure, deliver and allocate the essential laboratories consumables and scaled the laboratory network rapidly; as a result of this strategy, all 47 Member States had the capacity for PCR testing by June 2020. Support was deployed via WHO experts and regional influenza laboratories experts for Member States with no PCR testing. Twenty international experts were deployed, as were laboratory experts from regional networks including the antimicrobial resistance, HIV-1 TB, influenza and polio laboratory networks, to provide support to 13 countries. Small island states, such as Sao Tome and Principe and Comoros, saw distinct progress in establishing testing capacity. WHO AFRO supported countries in decentralizing their testing capacities to the local or district level using antigen detection rapid diagnostic tests. The use of the antigen detection rapid diagnostics test made it possible to follow the diagnostic decentralization strategy through facilitated implementation and rapid results. WHO provided Member States with interim guidance on the use of the tests, supported the development of testing strategies and facilitated the training of laboratorians on the quality and use of the tests. With the support

141 Dalberg stakeholder interview, 2023.
of WHO, 39 Member States successfully decentralized their testing, with over 790 laboratories operational in the Region. To quickly scale up decentralization, countries repurposed the GeneXpert machines network in the African Region. At the country level, Nigeria had the largest increase in laboratory capacity in the Region, from one to 59 laboratories in less than six months.

In addition to increasing diagnostic capacity via laboratories, the CBRI launched across select Member States scaled diagnostic testing, making it timely and cost-effective. Both WHO AFRO and WCO interviewees flagged the CBRI as a valuable form of WHO support to deploy Antigen-Rapid Diagnostic Tests in hotspot communities, resulting in the performance of over 1.4 million these tests, yielding 3361 positive cases. The success of this project facilitated the identification of asymptomatic cases and thus the interruption of community transmission. The programme is retained and adapted to other diseases that can be easily detected by Ag-RDT administered at community level as a legacy mechanism that will continue to present benefits to both routine services and a future response to an epidemic or pandemic outbreak.

WHO AFRO worked with key partners to support the effective scaling of genomic surveillance and sequencing capacities. WHO established a genomic surveillance and bioinformatics centre of excellence in collaboration with the South Africa National Bioinformatics Institute (SANBI) based in Western Cape University in Cape Town that contributed to the detection of the Delta variants in South Africa in May 2021. WHO and partners established further hubs in Dakar and Nairobi; this presence supported Member States across the Southern, Western and Eastern and Central subregions in their aim to attain genomic sequencing capacity. As part of the laboratory technical group leading the African response, WHO AFRO coordinated with partners including Africa CDC, the Clinton Health Access Initiative, the African Society for Laboratory Medicine and others to invest in developing laboratory capacities, often via joint implementation efforts.

Challenges

The laboratory and diagnostics pillar faced shortages in specialized staff to support genomic sequencing and well-trained staff in laboratory testing. Many Member States had limited surge staff capacity, further hampered by COVID-19 border restrictions that limited both the deployment and training of staff. Often, staff shortages were exacerbated by the competing priorities of expert staff, who could not easily be repurposed or dedicated to the pandemic response, intensifying delays in reporting results. When staff were repurposed, redirected efforts consequently impacted the routine diagnostic efforts. Laboratories working on HIV or influenza diagnostics were affected by reduced human resources owing to repurposing towards the COVID-19 response, as observed when comparing the data from influenza laboratories between pre- and intra-pandemic periods.

Recommendations

1. Ensure the post-pandemic sustainability of laboratory equipment and infrastructure. WHO should continue working with the Africa CDC and with Member States to promote comprehensive resourcing – in terms of human resources, supply of commodities and reagents and financing to ensure continued momentum for building better laboratory capacities in Member States.

2. Establish regional resourcing and manufacturing of specialized laboratory items critical to laboratories for pandemic preparedness. WHO should work with relevant partners to establish regional resourcing and manufacturing of commonly used specialized laboratory items critical for pandemic preparedness to mitigate any instances of global market shortages.

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148 WHO Zimbabwe, 2022, Zimbabwe moves to strengthen genomic surveillance.
Research, innovation and evidence

WHO championed research and innovation in collaboration with several partners; however, the allocated human and financial resources limited the scale of interventions. In collaboration with key partners, including Africa CDC and research laboratories such as Institut Pasteur, WHO took the lead in research, offering Member States evidence-based guidance for their COVID-19 strategies. By disseminating clear protocols and offering both technical and financial support, WHO empowered countries to deepen their understanding of the virus, receive essential guidance and refine their response strategies. At the same time, research was not a high priority both regionally and nationally, affecting availability of funding and leading to a shortage of dedicated experts. This resulted in unaddressed questions, especially in critical areas like epidemiology and vaccination, prompting some Member States to seek alternative information sources.

The research, innovation and evidence pillar conducted the following types of activities (note: examples are illustrative and not exhaustive):

- **disseminating the WHO Unity Studies** to drive consistent scientific research through the adoption of standardized protocols developed to enhance surveillance and research, especially in low- and middle-income countries;
- **completing seroprevalence studies** in collaboration with research laboratories such as Institut Pasteur to investigate infection and severity among Member States;
- **providing technical and financial assistance** to Member States and regional experts to undertake research activities;
- **developing research materials, including technical documents and policy briefs** to guide countries in the design and update of COVID-19 strategies;
- **undertaking on-demand research** to enable Member States to comprehend specific drivers of the outbreak, such as investigating the reluctance of communities to seek treatment in research centres;
- **creating dedicated platforms and organizing spotlight events** such as webinars and hackathons; and
- **establishing the Regional Expert Advisory Committee on Traditional Medicine for COVID-19 (REAT)** in partnership with Africa CDC and the Africa Union to investigate and promote local medicines.

Successes

**WHO AFRO supported the dissemination of the Unity Studies to standardize epidemiological research in the Region and foster a better-informed management of the outbreak.** WHO and its partners established the Unity Studies, a set of research protocols designed to inform an evidence-based approach to the COVID-19 response.149 These protocols allowed for standardized data collection.150 The Unity Studies comprise 10 protocols, covering topics such as household transmission, initial case investigations, population-level seroprevalence, transmission within health care facilities, vaccine effectiveness, pregnancy-related outcomes and transmission, school-related transmission and surface contamination.151 These tools enable countries to assess disease transmission, estimate population susceptibility or immunity, evaluate infection and disease severity, identify high-risk populations necessitating targeted interventions and monitor the effectiveness of various measures, including vaccines.152 Member States in the African Region conducted studies on seroprevalence, transmission and vaccine effectiveness.153 As early as February 2020, WHO collaborated with Institut Pasteur and five Member States to implement synchronized COVID-19 sero-epidemiology studies of 1000 health workers.154 By February 2023, over 30 Member States, including Burkina Faso, Ghana, Mali, South Africa and South Sudan, had conducted 179 seroprevalence studies.155 This research allowed countries to assess the actual scale of the pandemic and design the

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150 Farley et al., 2023, *Lessons learnt during the implementation of Unity-aligned SARS-CoV-2 seroprevalence studies in Africa*.
151 Ibid.
152 WHO, *Unity Studies: Respiratory investigations and studies*.
153 Farley et al., 2023, *Lessons learnt during the implementation of Unity-aligned SARS-CoV-2 seroprevalence studies in Africa*.
155 Farley et al., 2023, *Lessons learnt during the implementation of Unity-aligned SARS-CoV-2 seroprevalence studies in Africa*. 
response accordingly. For instance, estimates led by WHO on seroprevalence studies revealed that by September 2021, an average of up to 65% of the population had some conferred immunity, making it possible to assess the risk of subsequent waves with the same amplitude and severity as the second and third waves.  

From the outset of the pandemic, WHO started developing research materials and provided guidance to Member States. These research materials not only deepened the understanding of the virus but also equipped Member States to navigate the pandemic’s uncertainties. In collaboration with partners such as Africa CDC, WHO provided Member States with scientific insights, creating technical documents, policy briefs and regional guidelines on critical areas, including COVID-19 therapeutics. The research mirrored the pandemic’s phases, beginning with efforts to understand and identify COVID-19 and later pivoting to focus on prevention and containment of new variants. This dynamic approach helped Member States in refining and updating their strategies. Recognizing the unique challenges faced by individual countries, WHO also undertook research projects on demand. A notable example is Guinea, where WHO explored the reasons behind people’s hesitancy to visit treatment centres, subsequently recommending actionable interventions. Additionally, some WCOs, such as in Chad, amplified research efforts, aiding experts in deriving scientific insights and formulating recommendations. By 2022, WHO had assisted 27 Member States in launching studies to understand and respond to community concerns and update their strategies accordingly.

WHO collaborated closely with partners, including research laboratories and technical organizations in the Region to foster innovation in response to the COVID-19 pandemic. In March 2020, WHO launched a series of spotlight events, which encompassed hackathons and innovation webinars. These events revealed innovative tools such as VaxiGlobal, which detects fake COVID-19 certificates in Southern Africa, mSafari, a contact tracing tool in Kenya for public transport and NextGenCovAI, a system in Uganda for fast COVID-19 test results. WHO also championed the investigation and promotion of local medicines in partnership with Africa CDC leading to the initiation of the Regional Expert Advisory Committee on Traditional Medicine for COVID-19 (REACT). Comprising members from diverse sectors such as research, universities, public health and civil society, this initiative aimed to support countries in conducting clinical trials of traditional medicines, ensuring compliance with international standards.

Challenges

The relative lower priority given to research and the dependence on external funding led to the late allocation of resources, delaying the implementation of research activities. Despite the need to build evidence for policy guidance and regional strategies for the response, the leadership at the regional and country level prioritized other pillars. This lower prioritization was reflected through a late allocation of funds to the pillar, which was highly dependent on external funding. Additionally, WCOs and countries sometimes redirected research funds to other response areas or left them unused, despite specific donor allocations.

Furthermore, WHO had a limited number of trained staff to conduct extensive research. The research pillar had limited human resources to conduct extensive research and disseminate findings, operating with a reduced team of three dedicated experts, as most of the remaining personnel had been redeployed to other response areas. Additionally, while some

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158 Bergeri et al., 2021, Global epidemiology of SARS-CoV-2 infection: a systematic review and meta-analysis of standardised population-based seroprevalence studies.  
160 Baldé et al., 2022, Framing the future of the COVID-19 response operations in 2022 in the WHO African Region.  
162 Ibid.  
166 Dalberg stakeholder interviews, 2023.
other staff not specifically attached to the research pillar possess the skills to conduct research, they often lack familiarity with WHO’s specific protocols. This shortage of technical capacity, combined with budgetary constraints, impeded the establishment of empowered scientific communities capable of driving research and innovation as part of the response in most Member States.\(^\text{169}\)

**Owing to these challenges, WHO was unable to develop enough scientific updates, especially regarding modelling scenarios, vaccination and boosters.** The lack of integrative analytics often left many critical questions unanswered, such as hotspot locations and reasons for their emergence. In certain situations, WHO deployed teams on the ground to investigate anomalies, such as the surge in cases in South Africa, but these initiatives were sporadic. The gaps left by WHO led some Member States and the public sometimes to rely on other sources of information. For instance, WCOs procured and disseminated data through other sources, with limited top-down guidance from WHO AFRO.\(^\text{170}\) However, a positive shift emerged in September 2022 when WHO, through its Research for Health Department, introduced a policy endorsing transparency. This policy mandates the sharing of data from any research funded or undertaken by WHO.\(^\text{171}\)

### Recommendations

1. **Strengthen research capacities at the regional and country levels.** WHO AFRO should enhance collaboration with partners and build on a coordinated approach to strengthen research capacities. For instance, it could adapt the model of the WHO Hub for Pandemic and Epidemic Intelligence\(^\text{172}\) in Berlin to the needs and capacities of the Region, capitalizing on the regional hubs in Dakar and Nairobi to centralize activities in partnership with local research institutes. This will provide convening platforms for Member States and partners in the Region to drive research and increase the availability of tools and predictive models for better and faster decisions to address emergencies at the regional and country levels.

2. **Boost the research portfolio at the regional level with more staff and funding.** The limited human and financial resources affected the capacity of WHO to develop thought leadership and create evidence-based guidance. WHO should review its budget allocation to grant higher priority to the research pillar and ensure the timely availability of funds. Moreover, WHO can provide trainings to eligible staff to improve their capacity to conduct and disseminate research, building on internal protocols. Establishing research focal points within WCO could also facilitate coordination, supervision and implementation of research activities at the country level.

3. **Invest in research in behavioural and social sciences to develop and implement more interventions.** Research in behavioural and social sciences is critical for ensuring effective response to PHEs. WHO should continue to invest in these areas to continue to strengthen its RCCE interventions.

### Continuity of essential services

**WHO AFRO did not introduce CES as a stand-alone pillar for IMST until 2022.** The delayed introduction of CES resulted in the challenges to monitor the interruption of essential services and to ensure mechanisms to ensure its continuity. Once established, the CES pillar included assessing capacity across Member States and supporting the development and implementation of strategic plans for health service continuity at the country-level via technical assistance. The pillar included activities to continue essential services in an emergency context and to support overall health systems strengthening and resilience against shocks.

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171 WHO, 2022, *New WHO policy requires sharing of all research data*.

172 WHO, 2023, *The WHO Hub for Pandemic and Epidemic Intelligence*.
WHO AFRO conducted the following activities in its response within the CES pillar (note: examples are illustrative and not exhaustive):

- conducted capacity assessments in 47 Member States and mapped the identified needs to inform the required support from WHO AFRO;
- contributed to four rounds of global pulse surveys led by WHO Headquarters to document disruptions in essential services during COVID-19 as the pandemic progressed;
- provided technical support to countries in the implementation of their National health service continuity strategic plans;
- sustained and strengthened the real-time monitoring of health service continuity in Member States and established a protocol for investigating and addressing identified disruptions;
- facilitated training and capacity-building for national and subnational level health managers and HCWs for the implementation of their plans;
- supported Member States to resume new vaccine introduction and supplemental immunization activities that were postponed owing to COVID-19;
- provided support for Member States to develop programme-specific strategies to strengthen health services and core programme activities based on national priorities and emergent trends (mental health, reproductive, maternal, newborn and child health, nutrition, etc.);
- supported Member States to improve immunization data quality and use for decision-making with the implementation of programme reviews, data quality review and capability building interventions;
- strengthened supply chains for medicine and medical products within the Region;
- established and strengthened national policies for health workforce protection in the context of emergencies;
- published policy briefs regarding the continuity of essential oral and sexual health and reproductive services within the African Region; and
- conducted capacity assessments in 47 Member States and mapped the identified needs to inform AFRO support required.

Once the pillar was established, WHO AFRO was confronted with a series of external challenges in implementing its response, including:

- High level of service disruption: In its first pulse survey to assess the disruption of essential services across countries during COVID-19, WHO noted that the average Member State in the African Region experienced at least a partial disruption of 55% of essential services during the onset of COVID-19, as compared to 40% in Europe and the Western Pacific.173
- Supply-side resource constraints: The pandemic necessitated the repurposing of health facilities and HCWs to COVID-19 case management and led to increased outages by HCWs due to infections, fear of infection or inadequate access to PPE, reducing the resources available for routine health services.174
- Reduced physical access to services: The main cause of routine service disruption in the African Region, cited by 81% of Member States, was a decrease in outpatient volume owing to patients not presenting, presumably as a result of COVID-19 infection, fear of infection or quarantine or lockdown restrictions.175 For example, within a rapid assessment completed for the continuity of essential sexual health and reproductive health services in Member States of the African Region, 70.1% of Member States cited the fear of patients or clients going to health facilities as the main reason for essential service disruption.176 In some cases, WHO adapted by supporting the community-level delivery of services, rather than

173 WHO, 2020, Pulse survey on continuity of essential health services during the COVID-19 pandemic.
requiring patients to travel to a facility. However, this intervention required transportation, additional PPE and time to plan.\textsuperscript{177}

- **Competing outbreaks:** In some cases, health systems within the country were already strained by outbreaks of other epidemic-prone diseases such as cholera (experienced in Ethiopia, Kenya, Uganda and Nigeria, among others), measles (experienced in Angola, Ethiopia and Kenya, among others) and yellow fever (experienced in South Sudan and Uganda, among others).\textsuperscript{178}

### Successes

**WHO AFRO provided technical assistance to Member States by supporting the development of CES guidelines and providing expertise and catalytic funding.** WHO AFRO provided technical assistance to develop continuity of essential health services (CES) guidelines in Eswatini, Ghana and Kenya and catalytic funding to Member States including Ethiopia, Ghana, Liberia and Uganda.\textsuperscript{179} In Ghana specifically, WHO AFRO provided both technical and financial assistance to the MoH to support the continuity of service provision for mothers and children. In Uganda, WHO provided $50,000 to fund the CES. It also developed and disseminated guidelines with a focus on performance tracking and responding to disruptions in service.\textsuperscript{180} The Regional Office further supported Member States with restarting mass routine immunization campaigns which had been postponed at the beginning of the pandemic, such as in South Africa and Ghana.\textsuperscript{181}

**WHO AFRO exhibited strong leadership and coordination with Member States and across clusters to ensure CES and manage neglected conditions.** Coordination and collaboration across clusters involved with routine services was described as a “one team” approach; for example, prior to the COVID-19 pandemic, the UCN routinely analysed data to identify high-risk districts for malaria, creating a lesson learned for the EPR cluster to stratify areas based on risk during the COVID-19 response.\textsuperscript{182} The Regional Office also prioritized coordination with WCOs, holding standing monthly meetings with WCOs regarding health systems strengthening and guidance needed from WHO AFRO; in certain WCOs, all staff were involved in these meetings, while others included only senior leadership – the former was considered more successful as a model for internal coordination.\textsuperscript{183}

**WHO AFRO established a set of M&E indicators to monitor the trends of routine service uptake across Member States.** For example, by August 2020, WHO AFRO had clearly delineated monthly KPIs to measure the continuity of essential health services.\textsuperscript{184} Additionally, it had the highest response rate across all WHO regions for the fourth and most recent round of the global pulse survey on continuity of essential health services, with 94% (45 of 47) of Member States responding. On average, 91% of Member States have responded to all four rounds of the global analysis.\textsuperscript{185} As a result of all this inbound data, WHO AFRO was able to determine the most frequently disrupted services by the percentage of Member States reporting at least partial disruptions in service: routine immunization services for both outreach-based delivery (72%) and facility-based delivery (63%), family planning and contraception (67%), antenatal care (67%) and treatment for mental health disorders (67%).\textsuperscript{186} Access to this data at the regional level allowed WHO AFRO to appropriately target and tailor its technical assistance to countries.

\textsuperscript{177} Dalberg stakeholder interviews, 2023.
\textsuperscript{179} WHO Regional Office for Africa, 2022, *Africa’s response to the COVID-19 pandemic*.
\textsuperscript{180} Ibid.
\textsuperscript{181} Ibid.
\textsuperscript{182} Dalberg stakeholder interviews, 2023.
\textsuperscript{183} Ibid.
\textsuperscript{185} WHO, 2023, *Global pulse survey on continuity of essential health services during the COVID-19 pandemic*.
Challenges

The primary challenge of WHO AFRO’s response for the CES was the delayed formal introduction of the pillar into the emergency response for the COVID-19 IMST. As early as March 2020, Member States of the African Region were encouraged via WHO guidelines to include CES considerations in their responses, but this was not substantiated with clear guidance on how to develop strategies, or how routine services would be prioritized as compared to the core COVID-19 response. CES had been recognized as a critical component of the emergency response during past epidemics, such as EVD and cholera, where significant decreases in service uptake were observed, substantiating the need for resources to be allocated explicitly at the regional level. Other WHO regions included CES in their IMST structures before WHO AFRO; this happened after other Regions observed the continuous drop in routine service uptake during the early stage of the COVID-19 response, attributed to demand concerns such as population hesitancy and reluctance to visit hospitals, and supply concerns such as supply chain disruption.

Recommendations

1. Institutionalize CES earlier in the IMST structure. The CES pillar is only represented by one leadership position and ad-hoc support from other WHO AFRO/WCO staff. The gap between introducing CES as a pillar in the SPRP for 2021 and mobilizing it as a pillar in the IMST in 2022 demonstrates the need to ensure that the pillar is included in the IMST from the beginning of the pandemic. In a future outbreak, CES should be prioritized with designated resources at the beginning of the response, accompanied by clear M&E indicators to measure its success.

Operations, support and logistics

WHO made significant progress in operations support and logistics (OSL), delivering essential supplies worth over US$ 500 million to Member States amid global market disruptions. The onset of COVID-19 led to a surge in global demand for critical medical supplies such as PPE and diagnostic tools. Compounding the challenges, travel bans enacted by...
many countries intensified supply chain disruptions in the African Region. In response, WHO collaborated with UN partners, including WFP and UNICEF, and with Africa CDC to create the UN COVID-19 Supply Chain System (CSCS). This system, which included the UN Supply Portal and Solidarity Flights, enabled Member States to request essential medical supplies, tapping into the combined resources of WHO and its partners. In addition, WHO utilized the Dakar and Nairobi hubs for supply distribution and introduced tools for better supply chain management in countries. The leadership of WHO AFRO was instrumental in these achievements, advocating for equitable equipment access on a global scale and emphasizing the significance of OSL within the IMST structure.

The OSL pillar conducted the following types of activities (note: examples are illustrative and not exhaustive):

- **establishment of the UN CSCS in collaboration with UN Partners** such as WFP, UNICEF, Africa CDC, the UN Office for the Coordination of Humanitarian Affairs and other agencies to allow equitable access to biomedical, diagnostic and protective equipment;
- **assessment of capacities and needs** to provide operational and technical assistance to countries, including training, deployment of experts and dissemination of guidelines;
- **procurement and distribution of essential medical supplies** to Member States, such as PPE, test kits, screening equipment, oxygen concentrators, ventilators and pulse oximeters, coordinating closely with other IMST pillars;
- **establishment of key infrastructure in Member States**, including treatment centres, cold chain and waste management systems; and
- **development and dissemination of supply management tools** such as the COVID-19 Essential Supplies Forecasting Tool (ESFT) and Stock Management Tool.

These activities were delivered in the context of several external challenges, including:

- **a shortage of supplies at the onset of the pandemic**, owing to disruption of the global supply chain, further exacerbated by lockdowns and restrictions on imports and exports;
- **limited access to information at the country level** to forecast needs, leading OSL country support teams to screen incoming requests from Member States using epidemiological data;
- **lack of required logistics** in some Member States, such as sufficient cars to ensure timely delivery of supply; and
- **The limited number of trained logisticians** in some Member States.

**Successes**

WHO collaborated closely with UN partners and Africa CDC to deploy solutions for emergency supply deliveries to Member States. In response to the unprecedented demand for medical supplies owing to COVID-19, and the subsequent market shortages intensified by import and export restrictions, WHO aligned closely with UN partners and Africa CDC to devise strategies to address these supply chain disruptions.\(^\text{189}\) The African Region alone represented 48% of the global demand, highlighting the need to develop solutions for access to supplies in the Region.\(^\text{190}\) WHO collaborated with partners such as WFP, UNICEF and Africa CDC, to pool resources and establish a variety of emergency supply solutions, including the CSCS. This system facilitated country requests for essential health care supplies.\(^\text{191}\) WHO and its UN partners ensured effective coordination, aligning their strategies and interventions to prevent duplication of efforts and resource allocation.\(^\text{192}\)

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\(^\text{190}\) Ibid.


Box 3: UN CSCS – A collaborative approach for equitable access to essential supplies

WHO and partners, including UNICEF, WFP, Africa CDC, the International Committee of the Red Cross and Red Crescent, other UN agencies and the World Bank developed the UN CSCS to bridge market gaps for low and middle-income countries during the pandemic and streamline access to essential supplies. The CSCS, co-chaired by WHO and WFP, had three purchasing consortia, each focusing on key product areas, notably PPE, diagnostics and clinical management. Several supply systems were attached to the CSCS to increase efficiency. These mechanisms included the online Supply Portal; humanitarian corridors and Solidarity Flights; and regional logistics platforms.

The UN COVID-19 Supply Portal was designed specifically to help national authorities and other partners involved in the COVID-19 National Action Plans to access a centralized online catalogue of essential supplies. In collaboration with the WFP, the portal also offered a complimentary air service for the supplies. From May to December 2020, the combined efforts of the UN portal and WHO’s procurement processes successfully met 897 requests, distributing supplies valued at US$ 88.5 million, including PPE, biomedical equipment and diagnostic tools, across the 47 Member States.

To enhance the reach of the Supply Portal, WHO launched humanitarian corridors and Solidarity Flights. These initiatives, in collaboration with national governments, WFP, Africa CDC and donors like the Jack Ma Foundation, aimed to ensure equitable access to essential supplies throughout the African Region. By December 2020, these flights had successfully dispatched 1 million facial masks, PPE sufficient for 30,000 patients, ventilators and 20,000 laboratory test kits. Furthermore, a contribution from the Government of Korea facilitated the delivery of 548,064 PCR tests and extraction kits to 24 Member States.

In partnership with Ethiopian Airlines, WHO and UN Partners established Addis Ababa as a pivotal hub for receiving international shipments and distributing them across the African Region. This central hub became a cornerstone of the broader UN supply chain approach, effectively addressing potential shortages due to the high demand for essential supplies.

WHO introduced a suite of tools, combined with capacity-building initiatives, to assess needs and offer guidance to Member States during the pandemic. WHO rolled out several tools, including the COVID-19 ESFT and a Stock Management Tool. These instruments provided helpful insights into the evolving requirements and capabilities of countries, helping to streamline logistics. WHO conducted large-scale training of stakeholders to leverage these tools to the best effect. Over 500 individuals from all 47 Member States received training on the UN Supply Portal, the EFST, Stock Management Tool and other essential areas such as waste management and the establishment of COVID-19 treatment centres and quarantine zones. This capacity-building initiative was extended further at the country level. Specific examples of the impact include Nigeria, where the quantification tool enabled local stakeholders to formulate a logistics budget and secure government procurement approval. In Angola, a specially designed platform simplified supply planning and streamlined the acceptance of donations. Concurrently, in Botswana, WHO’s assessment of cold storage facilities led to improved vaccine stock.

194 Ibid.
196 Ibid.
197 Ibid.
198 Ibid.
199 Ibid.
201 Ibid.
202 Ibid.
management. Furthermore, the training provided on cold chain management made it possible to streamline distribution of vaccines to remote communities.

WHO’s efforts were instrumental in ensuring that Member States, particularly small island nations, had access to vital supplies during the pandemic. The leadership of WHO AFRO took proactive measures, negotiating equitable access to essential equipment. They highlighted the significance of the OSL by making it an independent pillar within the IMST, fostering close collaboration with other pillars to determine equipment needs and liaising with Headquarters for procurements. WHO AFRO closely coordinated with WFP, which managed the regional reserve in Ghana, and the WHO Regional Office for the Eastern Mediterranean, which oversaw the Dubai hub, with 25–30% of the stock allocated to the African Region. In September 2021, Ethiopia received 85 metric tonnes of medical supplies from the Dubai hub to address the humanitarian crisis. By January 2022, WHO had already distributed more than US$ 500 million worth of supplies to Member States, including over 13 million PCR tests, 105 million PPE components and 15 000 pulse oximeters. WHO paid special attention to smaller island countries like Comoros, Cabo Verde and Seychelles, which faced logistic challenges. For instance, Seychelles, which is dependent on sea and air logistics, faced challenges owing to pandemic-related restrictions, affecting its connection to other countries. Despite the willingness of suppliers, shipping to Seychelles was hampered by reduced volumes and limited cost-effectiveness. To overcome these obstacles, WHO facilitated the procurement of essential supplies through commercial flights.

Challenges

The primary challenge in OSL is related to the limited availability of human resources. When the pandemic began, the OSL pillar had just one staff member, and three more staff members were subsequently assigned from the Dakar and Nairobi hubs to assist with the response. Since Member States encountered difficulties in submitting requests through the UN portal, the Regional Office directly received multiple requests from the 47 countries.

The team was responsible for parsing and prioritizing all the requests, a difficult task given the significant volume and limited number of staff. Owing to this limited capacity to ensure upfront prioritization and the competing tasks for the team, which also had to urgently ensure procurement, all requests were deemed urgent, significantly increasing the workload for the staff.

WHO also faced challenges in establishing and maintaining significant stock within the Nairobi and Dakar hubs. Limited funds were allocated for stockpiling and pre-positioning critical items at the regional and country levels. As a result, WHO was able to hold only minimal equipment quantities in the Nairobi and Dakar hubs, insufficient for prompt distribution to Member States. Extended deployment time for supplies from the Ghana hub further affected WHO’s ability to distribute stock promptly. To address these challenges, WHO is establishing a storage capacity of 7500 m² in the Dakar hub.

Recommendations

2. Establish robust medical supply chains by accelerating the implementation of the flagship project and broaden access to qualified suppliers. The scarcity of supplies, particularly during the early stages of the pandemic, and dependence on global markets for essential equipment underscored the urgency of seeking regional supply solutions. With its objective of maintaining stockpiles of medical and logistic resources, the flagship project presents an opportunity. WHO should expedite the establishment of regional storage facilities in the Dakar and Nairobi hubs and work with Member States to set up national stockpiles. As this approach demands significant investment, WHO will need to enhance collaboration with Member States to fulfil resource needs, emphasizing local production for sustainable procurement at lower costs.

3. Continue to enhance collaboration with UN partners in OSL through a “One UN approach”. Partnering with other UN entities was pivotal in ensuring a steady supply chain, particularly

203 WHO, 2023, WHO Global Logistics Center.
204 WHO, 2021, WHO logistics hub airlifts its largest single shipment of humanitarian cargo to Ethiopia.
206 This will also include the Pretoria hub when established.
during the early days of the pandemic. Leveraging these established partnerships, WHO and its UN counterparts could further consolidate efforts, championing a unified One UN strategy for the procurement and dissemination of medical resources. This approach could lead to cost efficiencies and streamline operations. A reinforced collaboration framework between WHO and other UN bodies will ensure more consistent and timely delivery of essential supplies.

Finance, administration and resource mobilization

WHO played a pivotal role in supporting the COVID-19 response efforts by securing both human and financial resources for Member States. Despite lockdowns and travel bans at the onset of the pandemic, WHO deployed over 300 international and local experts to deliver on-the-ground activities. Beyond human resources, WHO mobilized unprecedented resources from donors to implement its COVID-19 response. WHO also used its “no regrets” policy that contributed to a faster disbursement of funds from WCOs and monitoring framework that provided guidance to Member States. Overall, delivery funding was perceived as one of the strongest areas in the African Region, where 52% of respondents highlighted WHO’s financial support as a primary success, making it the second most frequently cited achievement.

The finance, administration and resource mobilization pillar conducted the following types of activities (note: examples are illustrative and not exhaustive):

- **Surge capacity**: Deployment of local and international experts, including emergency medical teams, to provide technical guidance and training.

- **Finance and budgets management**: WHO deployed fundings from Headquarters, WHO AFRO and WCOs, including flexible and earmarked funding from donors. WHO coordinated with countries and donors to assess the financial needs and mobilize resources accordingly.

- **Resource mobilization**: WHO mobilized funds at all levels from donors to implement the COVID-19 response activities.

- **Implementation of an M&E framework to track the use of funds**: Both at the regional and country level.

These activities were delivered in the context of several external challenges, including:

- **limited recruitment capacity during emergencies**, due to low availability of experts in the Region, especially in IPC;

- **lockdowns and travel restrictions**, preventing the timely deployment of experts on the ground;

- **unprecedented scale of emergency funding flowing into WHO at all levels**, creating difficulties in managing funds;

- **limited flexibility of funding**, with resources being predominantly earmarked to specific activities or equipment; and

- **lack of full visibility of funds mobilized at country level**.

Human resources

Successes

WHO deployed significant surge capacity to support Member States, despite initial challenges resulting from lockdowns and border closures. Early in the pandemic, travel restrictions limited WHO’s ability to provide immediate support on the ground. However, through engagement with decision-makers across Member States, the leadership advocated for the reopening of borders to facilitate movement of essential resources. This led to the deployment of both local and international experts across multiple IMST pillars, providing technical assistance. By July 2021, WHO had deployed 302 experts, to support Member States in technical areas including surveillance, coordination, treatment, IPC and testing. WHO was also quick to respond to urgent requests; for example, when Comoros needed personnel urgently, WHO chartered a plane to deliver a laboratory expert within a day.

Challenges

The limited human resources and the long contracting timelines affected WHO’s ability to provide fast and comprehensive support to all Member States. As highlighted in the respective sections, several pillars, including IPC, case management, research and OSL, were understaffed. This resulted in inadequate support in some areas (such as the inability to cater to all health facilities for IPC) and increased the burden on existing staff in others (for example, the OSL team managing a large number of requests owing to limited capacity for prioritization). Moreover, the long contracting timelines affected the capacity to recruit new staff.

Recommendation

1. Improve surge recruitment capabilities during emergencies by building a roster of consultants and enabling quicker recruitment. WHO should continue to build rosters of surge staff based on the technical expertise required for emergency responses and continue to streamline the contracting processes for surge staff to enable quicker recruitment during emergencies.

Funding and resource mobilization

Successes

WHO was at the forefront of resource mobilization for the implementation of COVID-19 activities. WHO mobilized an unprecedented scale of emergency funds from donors to implement COVID-19 activities at all levels of the organization. More than US$ 596 million was committed in 2021 and 2022. The direct support provided to countries also yielded results. In Seychelles, with funding from WHO AFRO, the WCO mobilized over four times its biennial budget, supporting its emergency response activities, such as capacity-building, operational support and logistics. In Tanzania, WHO collaborated with multiple in-country partners to pool resources, ensuring the provision of essential reagents, supplies and logistic support.

WHO adopted a “no regrets” policy to optimize the use of resources and implemented systems to monitor funding, as guided by the Transformative Agenda. The “no regrets policy” gave the WCO autonomy to use flexible funding for rapid procurement. The policy also empowered leadership, particularly incident managers, with the discretion to allocate resources where they anticipated maximum impact. This approach enabled a dynamic reallocation of funding priorities based on real-time data insights. WHO also instituted a comprehensive monitoring framework to assess monthly fund utilization. Insights from this monitoring informed strategic adjustments, aiding in budget planning for 2022 and the subsequent years.

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209 Baldé et al., 2022, Framing the future of the COVID-19 response operations in 2022 in the WHO African region.
212 The budget allocated to the WCO in Seychelles was approximately US$ 2 million in 2020.
Challenges

WHO faced several challenges in timely reporting of funds utilization, especially owing to delays at the country level. Given the scale of the response, country teams had several awards of funds to report on and monitor. The situation was further strained by a shortage of human resources for this task. Country teams prioritized awards with strict reporting criteria, including set milestones and deadlines, de-prioritizing awards with less stringent reporting conditions. This led to delays from the regional M&E team, which struggled to consolidate reports from WCOs, especially when some awards covered all 47 Member States.

Several Member States had limited capacity to fully utilize the funds allocated to them, owing to the unprecedented flux of resources and most of them being earmarked to specific activities or equipment. While the regional utilization of funds was around 80%, most Member States faced absorption issues. A combination of earmarked funding and volume, often surpassing what countries typically handle in a year, made absorption difficult. Additionally, some WCOs were not always fully equipped to promptly use funds, lacking clarity and capability to activate necessary emergency procedures. Furthermore, certain funds were earmarked for specific resources. When such resources were unavailable, the funds could not be redirected to other urgent needs.

Recommendations

1. Advocate for more flexible funding from donors and mobilize more funding for preparedness. WHO could advocate to donors for more flexible funding, especially at the country level. WHO could also advocate for donors to allocate more funding for preparedness. By promoting mechanisms such as the Contingency Fund for Emergencies, WHO can rapidly channel resources to countries for immediate emergency responses, mitigating delays in execution.

2. Strengthen capacities for donor reporting at the country level. The significant flux of funding for COVID-19, coupled with the shortage of human resources, were the main challenges affecting the ability of WCOs to ensure timely reporting on funds. WHO could support WCOs to deploy emergency recruitment procedures to address specific challenges, including the surge of teams dedicated to monitoring reporting submission.

Gender, equity and human rights

While the GEHR considerations were not explicitly integrated into the SPRP for the WHO African Region, WHO was able to build on the capacities of other UN partners to promote initiatives. In a future outbreak, WHO AFRO should consider institutionalizing GEHR into its ERF, particularly as the WHO COVID-19 SPRP calls for a gender-responsive and equitable response based on respect for human rights.

Though not an explicit pillar of the ERF, WHO AFRO conducted the following activities in its response in relation to GEHR (note: examples are illustrative and not exhaustive):

- collaborated with and provided technical assistance to UN partner organizations with GEHR considerations in their mandate, including the United Nations Entity for Gender Equality and the Empowerment of Women, UNFPA and OCHA;
- published articles to raise awareness around GEHR issues in the context of the COVID-19 pandemic with quantitative insights from partners;
- developed policy and advocacy briefs regarding GEHR during the pandemic, in collaboration with partners and the GHC, which published a handbook of multisectoral guidance;
- leveraged disaggregated data from WHO Headquarters to determine that COVID-19 as a disease did not have a predilection for gender;

213 Dalberg stakeholder interviews, 2023.
• conducted training and capacity-building sessions for WCOs in the African Region and frontline HCWs to support prevention and response to sexual exploitation, abuse and harassment (PRSEAH) in line with WHO’s “zero tolerance policy”; training sessions on PRSEAH are mandatory for any WHO staff to be deployed as part of an emergency or country mission and HCWs are key to providing a first point of support and referral; and

• monitored internal KPIs regarding gender representation in the IMST and maintained gender balance across key leadership positions.

Successes

WHO AFRO was able to leverage data from WHO Headquarters and partners to drive impact for vulnerable populations in its COVID-19 response. The African Region experienced difficulties in collecting epidemiological data on COVID-19 prevalence that was disaggregated by gender or other characterizations. However, WHO requested Member States to routinely send retrospective line lists with detailed parameters and was thus able to procure a sample of gender disaggregated data at the global level, which confirmed that the virus did not have a predilection for gender. Nonetheless, given that women account for 70% of the global health workforce, WHO recognized that women were at an increased risk for SARS-CoV-2 infection, acknowledging the need for gender-sensitive approaches in its response.216 From an internal perspective, WHO AFRO monitored KPIs on gender representation for IMST leadership; gender balance was maintained across Incident Manager, Incident Team Lead and Pillar Lead positions.

WHO AFRO raised awareness of the economic and social impact of COVID-19 on women within the Region, partnering with organizations including United Nations Entity for Gender Equality and the Empowerment of Women, UNFPA and UN OCHA to raise awareness around gender-based violence, highlight disruptions in maternal health care due to COVID-19, and gender inequities in vaccine coverage.

WHO has been recognized for its progress in tackling sexual misconduct during the pandemic response, and AFRO has also taken on regional-level implementation of these activities. WHO was recognized at the 76th World Health Assembly Roundtable Event for both the three-year strategy to prevent and respond to sexual misconduct, and the Policy on Addressing Sexual Misconduct (PASM), both launched in 2023.217 On a regional level, WHO AFRO and WCO Uganda co-facilitated capacity-building sessions in April 2023 around Prevention and Response to Sexual Exploitation, Abuse, and Harassment (PRSEAH), training 26 colleagues with support from the Governments of the United Kingdom and Norway. Notably, the need for PRSEAH sensitization for the organization originated from a review of the WHO’s 10th EVD outbreak in the Democratic Republic of the Congo, demonstrating the reactivity and the ability of the organization to institutionalize lessons learned.218

In another example of institutionalizing lessons learned, the Nigeria WCO created its own gender-based violence (GBV) sub-pillar within its IMT. The Nigeria WCO instituted a dedicated GBV sub-pillar under CEHS. As part of this sub-pillar, the WCO advocated for the distribution of essential commodities including dignity kits, emergency contraceptive pills and post-exposure prophylaxis. The WCO worked in collaboration with partners, such as local actors and CSOs involved in the GBV space, to develop a clinical handbook for survivors of GBV. Both WHO Headquarters and WHO AFRO provided support to adapt the WHO clinical handbook for survivors and the Nigeria WCO had the opportunity to share lessons learned with other Member States via webinars regarding how best to incorporate the prevention of

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216 WHO Regional Office for Africa, 2022, Emergency teams train to prevent, respond to sexual exploitation, abuse and harassment.
218 WHO, 2023, World Health Assembly recognizes WHO’s work on PRSEAH, calls for continued action.
219 WHO Regional Office for Africa, 2023, WHO Uganda continues to build staff capacity in Prevention and Response to Sexual Exploitation, Abuse, and Harassment.
and response to GBV into an emergency response.\textsuperscript{221} The multisectoral approach proved key to the success of the WCO’s activities in this domain. It is applicable to humanitarian crises more generally. Adjustments based on both on-site data and concerns arising from humanitarian settings were transmitted to the country-level IMTs – across functions – for dedicated consideration in planning, in addition to operations reviews facilitated by the M&E team to inform the associated strategy defined.

**Challenges**

**WHO AFRO did not have dedicated resources for GEHR as part of its ERF** Even in Member States that have incorporated elements of GEHR into their IMT structure, such as in the Nigeria WCO, GEHR issues were not a specific pillar, but were included under CES. This resulted in difficulties in incorporating GEHR issues more comprehensively into the COVID-19 response.

**In WHO AFRO, information on the predilection of the virus was missing.** Although WHO AFRO was able to leverage global data to understand gender predilection of COVID-19, it was unable to gather comprehensive datasets at the regional level. In submitting line lists to WHO Headquarters, variants affected the flow of information, where increased severity or propagation affected the line list activity; the epidemiological data available to provide information on the characteristics of the virus and who it was affecting was limited, particularly from a gender perspective. This arose from the lack of human and financial resources for the collection of disaggregated data.

**Recommendations**

1. **Mainstream GEHR considerations in all pillars of the ERF.** Dedicate technical assistance, staff and research to areas including training and advocacy on the prevention of gender-based violence, stigma and discrimination, and support for vulnerable populations via the distribution of resources such as dignity kits, and mental health and psychosocial support. Consider formalizing a partnership structure with organizations including GEHR considerations in their mandate, as so to continue success with awareness campaigns during the pandemic response.

2. **Conduct a gender, equity and inclusion analysis as part of preparedness efforts.** To promote a fair and equitable response in the case of a future outbreak, the most recent SPRP for WHO Headquarters has recommended this analysis to inform baseline assessment, design, planning and implementation for Member States; it should be adopted by AFRO.

3. **Prioritize prevention activities around GBV, as opposed to response alone.** In the Nigeria WCO case study, the team learned that responding to GBV was a more costly intervention than ensuring mitigation and preventive measures. WHO AFRO can partner with and provide resources to organizations that provide advocacy, continued training and resources for enhanced preparedness around GBV prevention in the context of an emergency.

\textsuperscript{221} Dalberg stakeholder interviews, 2023.
## IV. Synthesis of recommendations

<table>
<thead>
<tr>
<th>Summary of recommendations by functions</th>
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<tbody>
<tr>
<td><strong>Overarching</strong></td>
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<tr>
<td>• Support Member States to expand national pandemic preparedness plans to prevent and respond to newly emerging infectious diseases.</td>
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<tr>
<td>• Enhance the resilience of health systems by supporting countries to develop comprehensive health systems with synergies among health security, health promotion and UHC.</td>
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<tr>
<td>• Support Member States to strengthen national health systems that include strong relationships with local communities and organizations.</td>
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<tr>
<td><strong>Leadership and internal coordination</strong></td>
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<tr>
<td>• Promote and support Member States to improve access to mental health services and psychosocial support.</td>
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<tr>
<td>• Train WRs to build capabilities to respond to PHEs.</td>
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<tr>
<td>• Communicate the structure of the IMST and the ERF to all staff at the beginning of any pandemic.</td>
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<tr>
<td>• Support Member States to deploy timely and well-functioning PHEOCs.</td>
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<tr>
<td><strong>Partner coordination and engagement</strong></td>
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<tr>
<td>• Strengthen partnership coordination capacities by hiring full-time staff to fill core positions in the Dakar, Nairobi and Pretoria hubs.</td>
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<tr>
<td>• Establish a partnership team within WHO AFRO to build on the institutional relationships forged during the pandemic.</td>
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<tr>
<td>• Streamline administrative procedures and contracting timelines for engaging with CSOs in coordination with partner agencies.</td>
</tr>
<tr>
<td>• Engage with a consortium/federation of CSOs to facilitate the timely and coordinated deployment of activities.</td>
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<tr>
<td><strong>Information and planning</strong></td>
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<tr>
<td>• Enable knowledge management and exchange for peer-to-peer learnings.</td>
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<tr>
<td>• Increase adoption and institutionalization of IARs in Member States and scale implementation of subnational IARs.</td>
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<tr>
<td>• Facilitate the adoption of up to date and timely guidance by WCOs.</td>
</tr>
<tr>
<td>• Develop technical guidance for protracted emergencies.</td>
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<tr>
<td><strong>Health operations and technical expertise</strong></td>
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</table>
Risk communication and community engagement:

- Leverage CSOs for a more effective RCCE.
- Build a repository of RCCE experts in the Region to ensure WHO AFRO can deploy the necessary technical capacities in good time.
- Define clear strategies for the documentation of future responses in RCCE.

Surveillance, investigation and contact tracing:

- Strengthen surveillance at the animal-human interface using the One Health approach.
- Accelerate and enhance IDSR efforts to establish a regional surveillance system and integrate COVID-19 surveillance into the IDSR system.
- Provide technical support to countries to continue regional DHIS2 implementation.
- Continue to facilitate CBRIIs and share learning via webinars to disseminate best practices on surveillance.

Case management and clinical operations:

- Increase investment in oxygen production and delivery and improve the physical infrastructure in health facilities to facilitate isolation and appropriate flow of patients.
- Institutionalize capacity-building by supporting the development of curriculum support and standardized training pools of community health workers to address gaps related to case management in the Region.
- Maintain an emergency stockpile of essential case management equipment.
- Incorporate patient safety practices in future EPR.

Vaccination:

- Maintain a vaccination-plus strategy that combines vaccination as part of routine immunization in PHC programmes, availability and affordability of testing, treatment for new infections and post COVID-19 condition.
- Continue to support Member States to recognize WHO as the primordial key regulatory authority for quality, safety and efficacy in its process of regulatory review of vaccines.
- to support Member States to align on the definition of high-risk populations, collect data and monitor the COVID-19 vaccination rollout.
- Increase investments to strengthen research on vaccination.

Infection, prevention, and control:

- Accelerate the development and execution of national IPC strategies, prioritizing Member States without current plans and reinforcing the implementation of established strategies.
- Identify partnerships with regional experts and academic institutions to build the IPC expertise.

Operations Support and Logistics

- Establish robust medical supply chains by accelerating the implementation of the flagship project and broaden access to qualified suppliers.
- Continue to enhance collaboration with UN partners in OSL through a “One UN approach”.

Review of WHO’s response to Covid-19 in the WHO African Region

### Finance, Administration and Resource Mobilization
- Improve surge recruitment capabilities during emergencies by building a roster of consultants and enabling quicker recruitment.
- Advocate for more flexible funding from donors and mobilize more funding for preparedness.
- Strengthen the capacity for donor reporting at the country level.

### Gender, Equity and Human Rights
- Mainstream GEHR considerations in all pillars of the ERF.
- Conduct a gender, equity and inclusion analysis as part of preparedness efforts.
- Prioritize prevention activities around GBV, as opposed to response alone.
V. Conclusion

As demonstrated by the results of this study, important lessons are emerging from WHO’s response to COVID-19 in the African Region. We have observed that many of the lessons have or are already being taken on board in plans and activities for the Region and it will be important to maintain this momentum and work alongside partners to ensure that the African Region is better prepared and able to respond rapidly and effectively to a future PHE.

In addition to the lessons learned across the functions and pillar analyses, WHO articulated a set of specific guiding questions at the beginning of this study. This chapter aims to provide answers to these questions based on the analysis conducted at both the regional and the country level.

Reflections on guiding questions

How prepared were the national health systems in the African Region to handle the pandemic at its debut?

While all national health systems were not resilient enough to withstand the shocks resulting from the COVID-19 pandemic, those with prior health emergency experiences were more geared towards coordinating responses and were thus more rapid and effective in their response. Health systems in all Member States in the African Region were not resilient enough to withstand the shocks to respond to a pandemic of the magnitude of COVID-19 across all dimensions, including service delivery, health workforce readiness, information management, availability of critical medical and technological supplies and financing. For example, hospitals and health centres had insufficient facilities to manage COVID-19 patients, including a limited number of ICUs and low oxygen production capabilities. The regional average for ICU beds was 8 per one million people and the Region had only 68 oxygen plants in 2020. However, Member States that faced prior health emergencies such as EVD, TB and HIV had strengthened capacities for preparedness that were built on lessons from past experiences.

How did the health systems in the WHO African Region adapt to handle the pandemic?

Member States had to act quickly to strengthen national health systems to keep pace with the growing number of COVID-19 cases and patients. While most Member States took similar steps to control and manage COVID-19 globally, including border closures and instituting social distancing measures, they also took innovative steps to strengthen the ability of national health systems to respond to the pandemic and scale their infrastructure. Member States with extensive CHW networks responded more robustly to the pandemic. For example, the Democratic Republic of the Congo mobilized over 47 000 community animation cells (CACs) to serve as community relays to facilitate emergency response.

How did WHO’s support for the health systems of Member States evolve throughout the pandemic?

WHO’s support was tailored to the needs and priorities of each Member State, covering operational and technical support. WHO supported Member States across the entire spectrum of the COVID-19 response in alignment with its ERF.

222 Arush Lal et al., 2021, Fragmented health systems in COVID-19: rectifying the misalignment between global health security and universal health coverage.
223 Baldé et al., 2022, Framing the future of the COVID-19 response operations in 2022 in the WHO African region.
224 Arush Lal et al., 2021, Fragmented health systems in COVID-19: rectifying the misalignment between global health security and universal health coverage.
including technical assistance, capacity-building and infrastructure investments. For example, in South Africa, one of the hardest-hit countries on the continent, the WHO Regional Director for Africa led a country mission to understand how WHO could best support the response, which resulted, among other things, in the training of 1200 HCWs and the deployment of 100 experts to eight provinces. In Botswana, a landlocked country, the support of the WHO leadership at the beginning of the pandemic was critical to negotiating open borders to facilitate the flow of essential supplies into and through the country.

**WHO’s support evolved as the pandemic progressed to accommodate the needs of Member States.** Some areas where WHO’s evolving support was evident included needs assessments, development of plans and procedures, capacity-building and the forms of WHO support for Member States. In most pillars, WHO conducted assessments at the beginning of the pandemic to establish an understanding of the need to inform support requirements. The initial assessments allowed WHO to develop plans and guidelines, including adapting global guidelines to the local context. Capacity-building support also evolved to include training on understanding plans and procedures; building technical capacities at the beginning of the pandemic; and deploying experts to support the implementation of plans and procedures. The way in which WHO supported Member States also evolved, including the deployment of staff when there were no travel restrictions and providing online support when lockdowns were instituted.

How did the COVID-19 pandemic affect how WHO operates in response to pandemics?

**WHO operates in response to a pandemic in line with its responsibilities for emergency operations under IHR (2005).** The core functions of WHO related to pandemics include supporting Member States in developing national capacities to respond to pandemics, supporting training programmes, coordinating Member States for pandemic and seasonal influenza preparedness and response, developing guidelines and strengthening biosafety and biosecurity. The report reviews how WHO as the custodian of the IHR operated in line with its responsibilities in emergency response, including by undertaking a risk assessment and situational analysis, deploying expert staff and materials, establishing a management structure for the in-country response and coordinating with partners.

COVID-19 impacted how WHO responds to pandemics, including the enhancement of some critical areas of pandemic response. While the response to COVID-19 delivered many successes, some areas required improvement, particularly at the beginning of the response. Some of the issues that affected the WHO COVID-19 response at the beginning include the lack of clarity on the scope of the response, which contributed to the late integration of some pillars, the vertical structure of the IMST, which affected cross-pillar interaction and the shortage of human resources. To bolster its support for the COVID-19 response, WHO accelerated efforts to enhance internal operations in line with...
its Transformation Agenda (2019–2025).\textsuperscript{227} Some core areas impacted include leadership, resource mobilization, monitoring and evaluation. WHO's enhanced leadership was critical in setting up the IMST at the global and regional levels and the IMT at the country level. WHO stepped up its leadership at all levels of the COVID-19 response, providing strategic direction and advocating for a national response. WHO strengthened its role to mobilize financial resources at the global, regional and country levels. WHO enhanced its capability to measure its impact on COVID-19, including the acceleration of the adoption of IARs in countries to foster continuous improvement and documentation throughout the response.

To what extent did WHO AFRO engage with other partners to fulfil its mandate and how well did it perform its coordination role as the lead agency of the Global Health Cluster?

WHO was central in coordinating partners as the lead agency of the GHC, presenting a unified front against COVID-19. WHO provided regular updates to MoHs and set up technical and operational partnerships with UN agencies, the AU, the regional economic communities (RECs) and the UN Economic Commission for Africa. In addition to traditional partners, WHO effectively worked with CSOs during the COVID-19 response. WHO provided financial and technical support to CSOs in 12 countries of the African Region.\textsuperscript{228} Through partnerships with CSOs, WHO reached vulnerable populations and last-mile communities. Regionally, WHO set up technical working groups in the Nairobi and Dakar hubs that were critical to coordinating with partners. As the GHC lead agency, WHO activated the health clusters in 13 countries. Health clusters provided essential mechanisms for coordination in Member States but were not always equipped to respond to the pandemic owing to the limited human resources available.

How did WHO AFRO deliver on its responsibility for WHO staff health, well-being and security during the response?

Internally, WHO senior leadership took the necessary measures to ensure that staff well-being and security were prioritized, given the burden of COVID-19. The senior leadership of WHO AFRO provided support to ensure staff health, well-being and security, including through rotating responsibilities for incident managers to address the risk of burn-out. Additionally, WHO AFRO recruited psychologists to support staff and their family members. WHO also capacitated all WRs with resources to ensure staff had access to psychosocial support. To support staff, WHO AFRO provided Internet access for people to work virtually and instituted flexible working hours, promoted access to vaccination for staff and identified and managed high-risk staff.

What lessons have been learned from this response?

This study has identified several key lessons for consideration in preparation for future health emergencies. These lessons learned informed several recommendations on leadership and internal coordination, partner coordination and engagement, health operations and technical expertise, operations, supply and logistics, resource mobilization and the incorporation of gender, equity and human rights in a pandemic response.

\textsuperscript{227} WHO, 2018, Thirteenth General Programme of Work 2019–2023: promote health, keep the world safe, serve the vulnerable.
\textsuperscript{228} Baldé et al., 2023, The WHO African Region Initiative on Engaging Civil Society Organizations in Responding to the COVID-19 Pandemic: Best Practices and Lessons Learned for a More Effective Engagement of Communities in Responding to Public Health Emergencies.
VI. Annexes

Annex 1: Country deep dives

Angola

The Government in Angola took decisive action against COVID-19, but infrastructure and human resources challenges in the health system reduced the effectiveness of the response; WHO’s technical and financial support to the MoH was critical to addressing challenges in the health system in the COVID-19 response

Context of the response

- **Angola started to prepare its national contingency plan to manage COVID-19 in February 2020, even before the pandemic reached the country.** The Angolan Government began quarantining returnees from COVID-19-affected countries before the first cases were detected.\(^{229}\) Angola’s quick response to COVID-19 was partly guided by its experience with pandemics.

- **Angola coordinated the COVID-19 response from the national level, which was critical to ensuring a multisectoral response.** The country leadership established a high-level multidisciplinary task force for the COVID-19 response that instituted a multisectoral response plan involving 23 key institutions co-chaired by the State and the ministers of health and the interior.\(^{230}\)

- **Angola quickly developed and mobilized COVID-19 response plans, with the support of partners.** These plans helped to minimize the caseload at the onset of the pandemic, including implementing the national contingency plan to manage the pandemic.\(^{231}\)

- **Angola also mobilized public health specialists from Luanda to support the subnational COVID-19 emergency response.** Shortly after the first cases were reported in the country, the MoH, in partnership with WHO, deployed health specialists in the regions to bolster the capacity of provincial administrative and health authorities.\(^{232}\)

- **As of 6 September 2023, Angola had recorded 105,384 confirmed cases and 1934 deaths for the period starting on 3 January 2020, according to WHO.**\(^{233}\)

Challenges at the country level

- **When COVID-19 broke out, Angola, an oil-dependent economy, faced a global decline in oil prices, which created health and economic crises.** While the country took timely measures to respond to COVID-19, the overall impact was reduced in part by the economic shock from the fall in oil prices, which reduced Government revenue.\(^{234}\)

- **Angola was also in the midst of a polio campaign when COVID-19 broke out.** The polio outbreak started in May 2019.\(^{235}\)

- **The EOC was not set up at the beginning of the pandemic.** The absence of the EOC was a result of several factors, including a limited understanding of the role and management of the facility.

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\(^{230}\) Ibid.


\(^{235}\) WHO, 2019, *WHO supports Angola’s Government efforts to end polio outbreak.*
The Government in Angola took decisive action against COVID-19, but infrastructure and human resources challenges in the health system reduced the effectiveness of the response; WHO’s technical and financial support to the MoH was critical to addressing challenges in the health system in the COVID-19 response.

Successes achieved by WHO

- **Leadership and internal coordination:** Starting from the beginning of the pandemic, WHO worked closely with the MoH to build capacity for local health professionals involved in the subnational response in five key areas: case management, risk communication, epidemiological surveillance, logistics and biosafety.\(^{236}\)

- **Information and planning:** WHO helped the MoH to develop and update guidelines and bulletins on COVID-19 and emergency response. WHO also helped to develop the contingency plan for the continuation of essential health services.

- **Partner coordination and engagement:** WHO created a platform for health-related partners and NGOs to meet regularly and plan for the COVID-19 response. WHO also worked closely with implementing partners, including UNICEF, on RCCE and on vaccine delivery, where WHO provided technical assistance.

- **Health operations and technical expertise – RCCE and infodemics management:** WHO helped the MoH to create the COVID-19 Alliance Project to protect the population against misinformation through the Factos Saúde platform.\(^{237}\)

- **Health operations and technical expertise – PoEs and mass gatherings:** WHO, alongside the MoH, trained health workers and security officers at PoEs. WHO also provided equipment to monitor infections at PoEs.

- **Health operations and technical expertise – Laboratories and diagnostics:** WHO helped to strengthen national laboratory capacity by supplying reagents and training technicians, including on safe collection and handling of samples. Three technicians from Angola went to South Africa for training at the regional laboratory for diagnostics and they, in turn, trained other trainers.

- **Health operations and technical expertise – surveillance, investigation, contact tracing and PHSM:** WHO helped to train technicians on COVID-19 surveillance and deployed them across the health system in the country. WHO also helped to set up 18 epidemiological centres, which the World Bank now supports.

- **Health operations and technical expertise – Vaccination:** WHO provided training and vaccination for HCWs and technical staff. WHO also supported planning for vaccinations, including designs for vaccine centres, even before vaccines became available. WHO also played a critical role in vaccine procurement through COVAX.

- **Operations support and logistics:** WHO and the United Nations Development Programme (UNDP) created a platform that helped in planning for the acquisition of supplies. The platform helped with logistics for donations, including from China.

- **Finance, administration and resource mobilization:** WHO successfully mobilized financial resources from development partners into different COVID-19 response projects managed by the MoH.

- **Gender, equity and human rights:** WHO helped to establish mobile teams of technical experts that reached remote areas to ensure equitable access to vaccines.


\(^{237}\) WHO, 2022, Angola bolsters fight against COVID-19 misinformation.
The Government in Angola took decisive action against COVID-19, but infrastructure and human resources challenges in the health system reduced the effectiveness of the response; WHO’s technical and financial support to the MoH was critical to addressing challenges in the health system in the COVID-19 response

<table>
<thead>
<tr>
<th>Challenges faced by WHO</th>
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<tbody>
<tr>
<td><strong>Leadership and internal coordination:</strong></td>
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<tr>
<td>o Angola did not have a WR during the pandemic response. As such, the incident manager had to double as the interim WR.</td>
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<tr>
<td>o Limited coordination between WHO AFRO and the WCO in Angola. WHO AFRO did not have a Portuguese-speaking coordinator to liaise with lusophone countries.</td>
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<tr>
<td>o In Angola, information is highly centralized. As the lead technical adviser on health, WHO could have played a bigger role in advocating for the Government to share information with partners and the public in good time.</td>
</tr>
<tr>
<td>o WHO had limited technical staff at the WCO, which affected delivery across pillars, including surveillance, IPC and vaccination. Even when WHO AFRO sent consultants, they only supported a few pillars, such as RCCE and IPC.</td>
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<tr>
<td><strong>Information and planning:</strong> WHO guides needed to be translated into Portuguese, which impacted useability and caused delays in the emergency response.</td>
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<tr>
<td><strong>Finance, administration and resource mobilization:</strong> There were delays in accessing funds owing to administrative constraints.</td>
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<tr>
<td><strong>PoEs and mass gatherings:</strong> At the beginning of the pandemic, there was a gap in contingency plans and SOPs for COVID-19 in most of the designated PoEs.(^\text{238}) This affected screening of suspected cases. WHO’s support could have ensured that the MoH had the guidelines on monitoring cases at PoEs as part of preparedness efforts.</td>
</tr>
<tr>
<td><strong>Laboratories and diagnostics:</strong> There was a gap in a quality control assessment system for public and private laboratories.(^\text{239}) This limited the number of validated laboratories. WHO could have supported in developing assessment tools and conducting assessments of public and private laboratories to expand testing capacity.</td>
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<tr>
<td><strong>Surveillance, investigation, contact tracing and PHSM:</strong></td>
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<tr>
<td>o There were insufficient technicians trained in COVID-19 surveillance.</td>
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<tr>
<td>o At the beginning there was collection of surveillance data through paper-based tools, which contributed to loss of information in the general database.(^\text{240}) WHO’s support could have helped to equip health experts with digital tools, including tablets for surveillance to manage data effectively.</td>
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<thead>
<tr>
<th>Lessons learned</th>
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<tr>
<td><strong>There is a need for an intercountry coordination effort, particularly for diseases that cross-borders.</strong> For example, Angola was able to procure early doses of vaccines from the Democratic Republic of the Congo.</td>
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<tr>
<td><strong>WHO needs to be able to rapidly contract and train professionals for emergency response across all major languages.</strong> Lengthy contracting processes and language barriers create delays in emergency responses.</td>
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<tr>
<td><strong>Documents and tools should be available in all major languages.</strong> Translations create delays in the emergency response.</td>
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\(^{238}\) WHO, 2021, COVID-19 intra-action review (IAR) report at country level – Angola.

\(^{239}\) Ibid.

\(^{240}\) WHO, 2021, COVID-19 intra-action review (IAR) report at country level – Angola.
Botswana

As a landlocked country, it was critical for Botswana to maintain open borders, particularly with South Africa, for procurement of supplies. WHO played a critical role in influencing the Government.

Context of the response

- Botswana initiated COVID-19 preparedness measures even before the first case was reported in the country, including the closure of borders on 24 March 2020, six days before the first positive case was reported.241
- Political commitment, including the enactment of the Public Emergencies Law to complement the Public Health Act which limited entry into the country to citizens and residents, was key to the national COVID-19 response.242
- Early preparedness actions and the “All of Government and All of Society” multisectoral approach ensured Botswana had a coordinated and effective COVID-19 response.243
- Botswana’s experience with the HIV epidemic aided its readiness for the COVID-19 response. The HIV epidemic response helped the country to develop a multisectoral approach, which was critical in the COVID-19 response.
- Botswana rapidly expanded its testing capacity in response to COVID-19. The first few case samples were sent to the National Institute for Communicable Diseases in South Africa. The country later built molecular testing capacity at the national laboratory and subsequent COVID-19 tests were done locally. With the investment in the national laboratory, the country was the first to isolate and do genomic sequencing of the omicron variant of COVID-19.244

Challenges at the country level

- Being a landlocked country, Botswana is heavily dependent on neighbouring countries, especially South Africa, for the supply of some essential goods. This became challenging as countries moved to close borders to minimize the spread of COVID-19 infections.
- There was duplication of efforts in the national leadership for the COVID-19 response at the beginning of the pandemic. In the beginning, there were two sources of COVID-19 data, the presidential (COVID-19) task force and the MoH. These two sources were not always aligned. It created confusion, including for development partners.245

243 WHO, 2020, Botswana - Bordering Africa’s Epicenter: How early action and careful border control policies have so far contained COVID-19 to clusters.
244 Harvard T.H. Chan School of Public Health, 2023, Botswana lab known for identifying Omicron variant receives new recognition.
245 Dalberg stakeholder interviews, 2023.
As a landlocked country, it was critical for Botswana to maintain open borders, particularly with South Africa, for procurement of supplies. WHO played a critical role in influencing the Government

Successes achieved by WHO

- **Leadership and internal coordination**: The Regional Director for Africa and WHO AFRO leadership successfully advocated for the Botswana leadership to open borders, which was critical to ensuring the supply of essential goods into and across the country, particularly from South Africa.

- **Information and planning**: The WCO worked closely with government experts to contextualize guidelines from WHO AFRO and Headquarters. The WCO also supported the adaptation of existing guidelines, including on IPC.

- **Health operations and technical expertise – RCCE and infodemics management**: WHO and other stakeholders supported national RCCE efforts, particularly with vaccine awareness. This helped Botswana attain one of the highest vaccination rates in the African Region.

- **Health operations and technical expertise – laboratories and diagnostics**: WHO deployed a specialist who supported the training of laboratory staff and assessment of the capacity of laboratories in the country.

- **Health operations and technical expertise – surveillance, investigation, contact tracing and PHSM**: WHO provided tools that helped to manage the pandemic at the subnational level. These included the resurgence tool, which monitored disease burden and suggested appropriate levels of response.

- **Health operations and technical expertise – case management and clinical operations**: WHO provided technical assistance on clinical care, including deployment of an EMT from the United Kingdom to train local EMTs on critical care for COVID-19 patients.

- **Health operations and technical expertise – vaccination**: WHO helped to develop Botswana’s vaccination plan. Botswana had one of the highest vaccination rates in the Region. By May 2022, the national vaccination coverage was 79.3%.\(^{246}\)

- **Operations support and logistics**: WHO assessed cold storage capacity across the country, which helped with the management of vaccine stocks.

- **Continuity of essential health services**: WHO developed a report on the impact of COVID-19 on essential health services for the MoH. The MoH used the report to effectively triage COVID-19 cases and other essential health services.

Challenges faced by WHO

- **Leadership and internal coordination**: Some experts deployed by WHO as part of the international surge team, such as for RCCE, did not have the requisite expertise relative to the needs of the local response. WHO should consult the countries on the expertise needs (“pull strategy”).

- **Surveillance, investigation, contact tracing and PHSM**: Contact tracers were not well-equipped to provide psychosocial support to communities. The WCO did not have guidelines for psychosocial support, including for HCWs.

- **Infection prevention and control**: The WCO was not able to effectively collect data on HCW infections and was therefore unable to provide tailored support to curb health workers infections. IPC efforts excluded environmental health officers and focused predominantly on health facilities. Within communities, there was a limited number of trained IPC liaisons, which affected the implementation of IPC guidelines. WHO could have made plans to train more IPC liaisons.

\(^{246}\) FHI360, 2023, *Increasing COVID-19 vaccine uptake in Botswana through community outreach and door-to-door vaccination*. 
As a landlocked country, it was critical for Botswana to maintain open borders, particularly with South Africa, for procurement of supplies. WHO played a critical role in influencing the Government.

Lessons learned

- **Advocacy for a multisectoral approach for pandemics, spearheaded by the MoH:** A multisectoral approach means countries have access to a broader pool of resources and knowledge.

- **Advocacy and support for building an emergency response in “peace time”**: Now that COVID-19 is not a PHEIC, countries should look to building capacity for emergency response, starting with lessons from COVID-19.
Chad

Chad was already experiencing a prolonged humanitarian crisis when COVID-19 struck, hindering the nation’s capacity to mobilize sufficient resources and develop an effectively plan for the response. WHO, through the WCO, supported the MoH to coordinate and lead the response.

**Context of the response**

- **In Chad, COVID-19 emerged as the country was already facing a prolonged humanitarian crisis.** There was a refugee crisis resulting from ongoing conflicts in some regions within the country and in neighbouring countries such as Sudan. As of December 2019, Chad had registered over 400,000 refugees from Sudan and over 170,000 displaced people.

- **Chad was also experiencing political instability**, which was exacerbated by the death of the Head of State, leading to the transfer of power in April 2021. This and other factors placed additional stress on the national health system in responding to COVID-19.

- **Nonetheless, Chad reacted swiftly to the first COVID-19 case, closing all air and land borders** the day after the PCR notification of the first local case, making an exception for the transport of merchandise to continue essential supply.

- **Chad’s health system was underprepared at the onset of COVID-19.** Chad had limited essential resources to support the pandemic response, with only two oxygen production facilities and three hospital beds per 10,000 civilians, compared to the WHO recommendation of 25 per 10,000, and insufficient HCW with 2.74 professionals per 10,000 civilians compared to the WHO recommendation of 23 per 10,000. Also, at the onset of the pandemic, Chad had no evidence of national plans and legislation concerning antimicrobial resistance, biosafety or emergency outbreak engagement mechanisms with the private sector. In addition, most emergency management structures were not fully operational, constraining the preparedness for large-scale emergencies. The Global Health Security Index score, which assesses global health security capabilities, ranked Chad at 150 of 195 countries.

- **The country had insufficient financial resources to implement a national PHE response plan in anticipation of any potential health emergency.** Chad had instead developed single disease strategic response plans to contain past outbreaks (cholera in 2014 and meningitis in 2017).

- **The country lacked the infrastructure that WHO needed to implement a “test, treat and trace” strategy**, with only one laboratory in N’Djamena of a capacity of 200 tests per day. That situation persisted until June 2020, when further laboratory capacities were developed.

- **WHO helped to establish the IMT within the MoH**, which was leading the COVID-19 response under the oversight of the President of the Republic of Chad.

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247 UNHCR, 2020, Chad Country Operations - Populations.
250 WHO Regional Office for Africa, 2022, Deux (2) centrales à oxygène pour sauver des vies dans le sud du Tchad.
252 Dalberg stakeholder interviews, 2023.
253 GHS Index, 2019, GHS Index – Global Health Security Index – Building Collective Action and Accountability.
254 GHS Index, 2021, Country Score Justifications and references – Chad.
Chad was already experiencing a prolonged humanitarian crisis when COVID-19 struck, hindering the nation’s capacity to mobilize sufficient resources and develop an effectively plan for the response. WHO, through the WCO, supported the MoH to coordinate and lead the response.

- WHO supported training of HCWs throughout the pandemic, notably on areas of PHEs that were novel to the country, such as IPC and COVID-19 vaccination. For instance, 300 health and community outreach workers were trained on IPC. More were trained to support vaccination campaigns, while separately 190 medical students were trained to boost contact tracing and alleviate the pressure on the health workforce.

- Between the first cases in March 2020 and September 2023, Chad had recorded 7698 confirmed cases of COVID-19 and 194 deaths. Over 9 million vaccine doses have already been administered (September 2023) and 29% of the population have received at least one dose of vaccine.

Challenges faced by the country

- Most partners, including NGOs and CSOs, had limited financial resources and did not receive funding after 2020, which limited their ability to support the COVID-19 response. This placed a heavier burden on WHO, which was the main stakeholder, along with the MoH, leading the implementation of activities during the outbreak.

- The humanitarian crises and subsequent displacements and movements of refugees across the borders hampered the capacity to efficiently plan and implement activities, especially in terms of surveillance and IPC. The prevailing insecurity also prevented the WCO from reaching and supporting some areas of the country.

- There was confusion surrounding roles and responsibilities in the COVID-19 response which created delays. Roles and responsibilities were not clearly defined in the leadership of the response. As a result, several ministries were in competition for supervision of some functions and pillars of the response.

- While the availability and quantity of PPE was sufficient, there were issues of access to these resources for personnel at all moments of need. The issue arose in the routing of resources to health care facilities, notably in small populations located in the periphery. WHO sometimes helped to relay requests from health facilities in last-mile communities to the capital.

Successes achieved by WHO AFRO

- Information and planning
  - WHO tailored its support to Chad, where the guidance and materials sent to the WCO took into consideration the specific context in Chad. This was evident in data collection: the templates shared with the WCO were well-suited to existing systems in the country. For IPC, WHO AFRO helped to formulate the prevention manual for COVID-19 that was tailored to Chad.
  - The WCO introduced tools that helped the MoH to adapt to the evolving pandemic. For example, the IPC scorecard tool proved useful in identifying issues and proposing informed corrective action, being easily used in supervision by almost all WCO IMST pillars.

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257 WHO Regional Office for Africa, 2023, *In Chad, mobile clinics bring COVID-19 vaccination to vulnerable groups.*
261 Ibid.
Chad was already experiencing a prolonged humanitarian crisis when COVID-19 struck, hindering the nation’s capacity to mobilize sufficient resources and develop an effectively plan for the response. WHO, through the WCO, supported the MoH to coordinate and lead the response.

- WHO deployed a data manager to support the MoH’s data management, enabling timely fulfilment of requests and harmonization of data with WHO by successfully aligning to the protocol whereby the MoH is the sole entity with the capability to publish official data.

- The data management team collaborated closely with the Incident Manager, fulfilling requests for information required to enable successful partner coordination (for example, in the coordination of WHO training).

- **Partner coordination and engagement**
  - The health cluster was established prior to the pandemic and led by WHO, with meetings convened by the WCO. The health cluster provided a platform for efficient collaboration with the MoH and partners and facilitated the involvement of local NGOs and CSOs in the response. Successes were institutionalized and sustainable, hence unaffected by the coordinator’s departure.
  - Some WCO staff were seconded to the MoH. These staff members, including the incident manager, were working directly from the MoH, enabling active and efficient collaboration.
  - The WCO assumed the leadership of the coalition of partners, facilitating the distribution of tasks to enable strong coordination and smooth collaboration of partners, extending to all Ministries within the Government.

- **Health operations and technical expertise – laboratories and diagnostics**
  - Genomic surveillance capacity was established by providing all provinces with GeneXpert machines, scaling from 14 prior to the pandemic to 31 in 2021. These machines are an example of long-term infrastructure with use beyond COVID-19.

- **Health operations and technical expertise – IPC**
  - The WCO assessed over 140 health care facilities, in addition to four refugee camps, during COVID-19 waves to address the significant displacements owing to floods observed during COVID-19 outbreaks. The IPC preparedness level was assessed to inform organization of IPC activities through targeted actions to identified challenges, ensuring that such facilities should not become incubation hotspots and thus curtailing transmission.

- **WHO conducted virtual sessions to raise awareness on the importance of IPC.** WHO also advocated for a national IPC programme.

- **Health operations and technical expertise – research, innovation and evidence**
  - The WR encouraged scientific publications by consultants and biomedical experts to promote sharing of experiences and practices with other countries.
Chad was already experiencing a prolonged humanitarian crisis when COVID-19 struck, hindering the nation’s capacity to mobilize sufficient resources and develop an effectively plan for the response. WHO, through the WCO, supported the MoH to coordinate and lead the response.

- **Health operations and technical expertise – case management and clinical operations**
  - WHO worked with other partners, such as the World Bank, to increase oxygen production capacity and delivery through well-defined and targeted provincial mapping, facilitating the construction of plants, repairing 54 concentrators and providing practical training of 103 technicians across 23 provinces on repairs.\(^{263}\) This infrastructure will continue to be used beyond COVID-19.

- **Health operations and technical expertise – vaccination**
  - WHO supported the efficient delivery of vaccines. WHO convened biweekly meetings to monitor the reinforcement of the cold chain and routine vaccination. WHO, through the COVAX national committee, addressed infodemics through community engagement, extending to nomads through advanced mobile strategies, notably anticipatory, to limit resistance ahead of campaigns.

- **Finance, administration and resource mobilization**
  - WHO’s provision and deployment of both national and international consultants to work with the MoH was critical to scale up capacities and improve the response.

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**Challenges faced by WHO AFRO**

- **Leadership and internal coordination**
  - WHO contracted consultants on a 3-month basis.\(^{264}\) This was deemed too short and resulted in a sense of employment instability among consultants, affecting work delivery.

- **Information and planning**
  - The frequency of changes of WHO documentation was a challenge. Documents were sometimes replaced without their previous iteration having been evaluated or implemented.
  - Partner coordination and engagement
    - The WCO lacked a systematic approach for sharing information with stakeholders, resulting in some delays in sharing of information with the MoH, thereby affecting the planning of activities.

- **Finance, administration and resource mobilization**
  - The WCO did not have sufficient funding to conduct training. While WHO provided specific tools for contact tracing, the WCO in Chad did not have sufficient funds to train enough local experts.
  - WHO AFRO’s distribution of funds to the WCO was occasionally delayed, impacting the timeliness of activities.
  - The deployment of human resources through the SURGE capacity was not sustainable. Initially, HR capacities were insufficient, notably in data management. While the issue was, to some extent, addressed through international support personnel, their departure created gaps that were often not filled.

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\(^{263}\) Maombi E and Ndihokubwayo JB, 2023, *Oxygen needs to be met in Chad: Resilience, lessons learned, challenges and perspectives*.

\(^{264}\) Dalberg stakeholder interviews, 2023.
Chad was already experiencing a prolonged humanitarian crisis when COVID-19 struck, hindering the nation’s capacity to mobilize sufficient resources and develop an effectively plan for the response. WHO, through the WCO, supported the MoH to coordinate and lead the response.

### Lessons learned

- **There is a need for enhanced support for emergency preparedness.** Continuous support is required to strengthen the capacity of Chad to autonomously respond to future emergencies, building on the achievements of the pandemic, notably in terms of oxygen production, genomic surveillance, operationalization of the emergency operations centre and implementation of the DHIS2 platform. Ensuring the transfer of skills between international and local experts will also be critical to strengthen existing capacities.

- **WCOs should be involved in the development of plans and procedures** to leverage their experience. This is critical to ensure contextualization of response strategies, which can have the added benefit of saving time and funds in the medium to long term.

- **Institutionalize partner coordination through the health cluster.** The health cluster provided a platform for efficient collaboration with the MoH and partners and facilitated the involvement of local NGOs and CSOs in the response.

- **Mapping existing partners** and meeting with them to understand their activities at the country level, would enable WHO to coordinate better with partners and improve the quality of interventions, notably in IPC where there are relatively fewer operational partners.

- **Visibility of WHO funding to the MoH** can benefit the response. Without visibility of WHO’s proposed funds, the MoH is likely to identify needs that exceed the funding capacity. Visibility would allow the MoH to more accurately estimate the needs of the country, to match the vision and expectations to the funds.

- **Establishing an emergency fund** with WHO’s support, given Chad’s fragility and exposure to humanitarian crises, would allow for a swifter deployment of resources in case of a PHE, beyond epidemics.

- **WHO AFRO and the WCO must align on ascertained priorities and activities,** prior to the WCO’s outreach to the MoH, involving political diplomacies. Otherwise, delays or alterations to decisions following the initiation of engagement with the MoH and consequent mobilization is detrimental.
Democratic Republic of the Congo

The country relied on a strong network of community relays to drive the national COVID-19 response in the complex context marked by a humanitarian crisis, ongoing outbreaks and a tense sociopolitical environment.

Context of the response

- The COVID-19 pandemic emerged during a complex period for DRC, which was already bearing the brunt of several emergencies, including a humanitarian crisis and an ongoing EVD outbreak in North Kivu.265
- Recurring armed conflicts hindered the capacity to access certain districts and increased the magnitude of displacements. To date, 6.3 million civilians have been displaced either by conflicts or by the volcanic eruption in May 2021 in Goma.266
- The disruption to the political environment enhanced infodemics, with the COVID-19 pandemic emerging at a time when political (including presidential) elections were scheduled.
- The GHC thus required a targeted approach and strategies for the affected districts and provinces, developing the COVID-19 humanitarian response plan and revising the humanitarian response plan (HRP) 2020.
- The country was prepared to reach communities through the CACs, which can serve as community relays to facilitate emergency response activities. CACs had been established in 2016 and numbered 47 000 in 2019.267 The pandemic saw a significant rise to approximately 92 000 CACs across 404 of 519 health zones of which at least 55 000 are active.268
- A legacy of IMS mobilization was also successfully built through the 10th EVD outbreak response prior to COVID-19, raising awareness of its success in the MoH.
- WHO rapidly supported the country in developing plans for the COVID-19 response, including a budgeted national preparation and response plan, alongside provincial-level plans, with subsequent support in the implementation of activities under the plan through funds mobilized from donors.
- WHO later organized a review of the work conducted, publishing reports on its support to the Government one and two years following the onset of COVID-19, alongside two IARs, to identify and document best practices, challenges faced and recommendations regarding both the general response and the deployment of COVID-19.
- Between the first cases in March 2020 and September 2023, the Democratic Republic of the Congo observed 97 697 confirmed cases of COVID-19 with 1468 deaths. In all, 18.8 million vaccine doses were administered (June 2023). By June 2023, 18% of the population had already received the first dose of the vaccine.269

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**Challenges faced by the country**

- **Inefficiencies in the information systems** impeded the capacity to effectively collect and analyse data, especially at a disaggregated level. Significant delays often prevailed for the cascade of information from community relays and sub-districts to the national level, mainly owing to administrative burdens and the reluctance of some private health care facilities to share patient data.\(^{270}\)

- **Recurring strikes among MoH personnel and health workers**\(^{271}\) during the pandemic severely hampered the capacity to respond. These strikes led to the reduction of response teams, adversely exacerbating COVID-19 cases and hampering monitoring capacities.

- **Infodemics were prevalent, with several nationwide rumours.** These were usually driven by major political figures, raising uncertainty in communities. The uncertainty was further heightened by conspiracies fuelled by affected political elections, as had occurred previously during EVD outbreaks.\(^{272}\) In the specific case of vaccination, the hesitancy of several health care workers strongly contributed to reducing the propensity for vaccine uptake. Hesitation and resistance also concerned testing and household disinfection.

- **Insecurity limited accessibility for the WHO**, notably in North Kivu,\(^{273}\) where the presence of armed groups and persistent insecurity resulted in the isolation of some districts within affected provinces. These became either inaccessible or required extensive planning and time to reach and provide support, at times requiring access through a neighbouring country.

**Successes achieved by WHO**

- **Leadership and internal coordination:**
  - **WHO and the MoH were able to quickly activate and mobilize the IMS** – which was well-capacitated and knowledgeable in confronting an epidemic, – while ensuring firm alignment on roles and responsibilities.
  - **The response was decentralized**, with WHO facilitating the establishment of an IMS at the district level to ensure the effective staffing of essential functions. This strategy is now fully adopted and integrated by the MoH.
  - **Strong WHO AFRO collaboration was ensured** through weekly meetings with the WCO to discuss and identify issues and subsequent solutions. WHO AFRO’s assistance for resource mobilization was complemented by subsequent meetings between the WCO and the Dakar hub to best materialize this mobilization.

- **Information and planning:** WHO promoted lateral information sharing between countries via sessions held with other countries to share positive experiences, such as the active research rapid diagnostic testing strategy and the CBRI. This initiative in the Democratic Republic of the Congo was coupled with the active search for cases of human African trypanosomiasis and COVID-19 vaccination campaigns. It has strengthened the partnership between the MoH and WHO by replicating the model with other donors.

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270 Hategeka et al., 2021, *Impact of the COVID-19 pandemic and response on the utilisation of health services in public facilities during the first wave in Kinshasa, the Democratic Republic of the Congo*.

271 Reuters, 2020, *Congo health workers reduce coronavirus services in pay protest*.

272 Sauter, M, 2023, *Politicized health emergencies and violent resistance against healthcare responders*.

The country relied on a strong network of community relays to drive the national COVID-19 response in the complex context marked by a humanitarian crisis, ongoing outbreaks and a tense sociopolitical environment.

**Successes achieved by WHO**

- **Partner coordination and engagement:**
  - WHO ensured partner coordination at the country level, playing a major role in the presidential-level advisory council uniting key partners and donors, where the main decisions in allocating tasks to the IMT were made.
  - The GHC was activated from the very first case notification, uniting all partners via weekly meetings during which WHO made presentations on the pillars of surveillance, IPC and case management, spurring discussions with partners regarding issues facing the response and ensuring clear role clarification.
  - WHO achieved an embedded presence within the MoH, deploying coordination and surveillance experts, who reinforced the preparation package and enabled the establishment of tools and definitions at the onset of the pandemic in the country. All pillars were represented in the coordination structure (experts in surveillance, IPC and RCCE) to support the technical secretariat of the COVID-19 response.

- **Health operations and technical expertise – RCCE and infodemics management:**
  - WHO led the management of infodemics, recruiting one national and one international consultant to rectify certain narratives – addressing low vaccination coverage through RCCE in the vaccination campaign and the upsurge of conspiracies fuelled by the political elections being affected by COVID-19. RCCE also contributed to the detection of positive cases of COVID-19 and to the enhancement of public health actions around these cases in the community, thanks to the quick tests facilitated in churches, markets and schools.

- **Health operations and technical expertise – laboratories and diagnostics:**
  - WHO proposed the decentralization of (and built) laboratories, successfully increasing from 1 to 5 COVID-19 testing laboratories and alleviating the long wait times.

- **Health operations and technical expertise – surveillance, investigation, contact tracing and PHSM:**
  - The CBRI was a key success owing to WHO, enabling the collection of testing data in provinces lacking laboratory infrastructure, thus detecting cases prematurely and interrupting transmission. It has also improved COVID-19 vaccination coverage and rapid detection of human African trypanosomiasis cases through activity linkage.

- **Health operations and technical expertise – case management and clinical operations:**
  - WHO provided strong technical support to MoH actors, deploying 61 experts alongside significant support in material resources and in building infrastructure such as laboratories and oxygen production units.
The country relied on a strong network of community relays to drive the national COVID-19 response in the complex context marked by a humanitarian crisis, ongoing outbreaks and a tense sociopolitical environment.

### Challenges faced by WHO

- **Leadership and internal coordination:** The WCO received multiple requests for information from WHO AFRO that could have been streamlined so as not to compound the WCO’s workload.

- **Information and planning:**
  - The data analysis tools implemented by WHO were not always interoperable. These tools could have been more in line with the data stemming from the MoH.
  - WHO provided some support to the DHIS2 platform that could have been extended. A broader scope of support was needed beyond digitization to include monitoring, tracing and treatment following detection alerts.

- **Health operations and technical expertise – RCCE and infodemics management:** Owing to limited capacity and funding compared to the size of the country, the support provided was mainly in hotspots and could not cover activities across all regions. For instance, the WCO has an RCCE and infodemics management presence in only five out of 26 existing provinces.

- **Operations support and logistics:** The MoH’s mobility depended on the WHO’s provision and funding of vehicles. The MoH’s mobility was reduced in line with funding reductions. With no vehicles dedicated to the emergency response, mobility was affected.

- **Finance, administration, and resource mobilization:** The WCO presented financial administrative impediments, which delayed payments to teams involved in the COVID-19 response.

### Lessons learned

- **Involving religious, youth and women leaders and partnering with community based organizations** played a critical role in the response to amplify communication to communities and raise community awareness of testing, vaccination and the COVID-19 response in general.

- **Emphasizing community based approaches (CACs)** has played a critical role in streamlining the response. Briefing CACs enabled them to leverage their extensive community presence to amplify communication to communities and raise awareness on testing, vaccination and COVID-19 response campaigns more generally. Some CACs even served as vaccination champions by undergoing vaccination to increase uptake.

- **The existence of a functioning IMS, with a clear definition of roles and responsibilities,** fostered a well-coordinated and efficient response. Building on the experience developed from the response to several emergencies, the country was able to quickly activate the IMS and set up clear collaboration between partners, including WHO and the MoH. The track record of emergency management made it possible to enhance the understanding and ownership of the IMS at the MoH, which was critical to lead a coordinated response.

- **Better alignment within the WHO AFRO team** can help improve coordination with the WCO. Streamlining communication channels between WHO AFRO and the WCO by identifying specific points of contact would eliminate redundant requests from AFRO and foster a more efficient collaboration.
**Review of WHO’s response to Covid-19 in the WHO African Region**

**Nigeria**

In **Nigeria**, WHO supported the rapid increase in testing capacity and leveraged strong pre-existing relationships with partners for coordination and collaboration

### Context of the response

- Nigeria’s health care system had previously **suffered through other health emergencies** (such as the 2014 EVD epidemic and annually recurring Lassa fever outbreaks) and was already considered “**under-resourced**” at the time of the pandemic.

- As a positive, the history of confronting epidemics such as EVD **raised awareness in the health system**, Government and communities for a **rapid and proactive emergency response**; it also strengthened the responsiveness and capacity of actors within the health system, such as the Nigeria Centre for Disease Control (NCDC).

### Challenges at the country level

- **Recurring health emergencies and outbreaks**: Nigeria’s low level of sanitation and hygiene and its propensity for frequent flooding contributes to regular outbreaks of Lassa fever, diphtheria, cholera and other diseases related to poor WASH.

- **Limited cold chain facilities**: States and zonal areas were each equipped with cold chain equipment for vaccine storage; however, not every facility was equipped owing to the sheer volumes of equipment needed and the size of the country (at least two facilities per 744 Local Government Areas across 36 states).

- **Continuity of essential health services**: With the simultaneous outbreaks of Lassa fever and COVID-19, the continuity of essential health services and resources for routine services was poor.
Successes achieved by WHO AFRO

- **Information and planning:** WHO provided technical expertise and guidance in line with the country’s needs.
- **Partner coordination and engagement:** WHO frequently coordinated with other partners including US CDC and UNICEF in weekly strategy meetings. The Nigeria IMT was well integrated into the national emergency operations centre (NEOC), given the country’s experience with epidemics.
- **Health operations and technical expertise – laboratories and diagnostics:** WHO produced guidelines for countries to support a decentralization of testing. Together with assistance from other partners, this strategy helped Nigeria to rapidly increase the number of laboratories from 1 to 59 between March and September 2020.
- **Health operations and technical expertise – surveillance, investigation, contact tracing & PHSM:** WHO drove increasing surveillance capacity through increasing rapid testing, investigation and contact tracing.
- **Health operations and technical expertise – IPC:** WHO supported training on IPC, piloted in Kaduna and cited as a best practice.
- **Health operations and technical expertise – vaccination:** WHO served as the technical lead for vaccine rollout, coordinating the capacities of individual partners (for example, UNICEF, which is key in vaccine supply and demand), and supported the development of the National Deployment and Vaccination Plan (NDVP), developed in collaboration with other partners, for implementation in Nigeria.

Challenges faced by WHO AFRO

- **Health operations and technical expertise – continuity of essential health services:** WHO is working with the MoH to integrate COVID-19 vaccination into primary health care (as envisaged in the NDVP), implementing guidelines and fine-tuning the logistics. Nigeria was one of the first countries to implement the integration.
- **Finance, administration and resource mobilization:**
  - **“No regrets” policy:** The “no regrets” policy as part of the emergency response allowed the rapid deployment of funds and resources to mitigate bureaucracy.
  - **Cross-pillar training:** The WCO expanded existing human resources available to respond to the outbreak by training in states across all response pillars (case management, surveillance IPC and laboratory services).
- **Leadership and internal coordination:** The WR for Nigeria was appointed in July 2020, meaning that the pandemic began with only interim leadership in the WCO, followed by a rapid transition; weakening the effectiveness of WHO’s response.
- **Health operations and technical expertise – RCCE:**
- **Subnational communication and coordination:** Despite strengths in coordination at the national level and a collective understanding of roles and responsibilities, agencies experienced confusion at the subnational level and were not always clear on the roles of partners (for example, CDC, UNICEF), leading to poor communication at lower levels.
- **Health operations and technical expertise – PoEs and mass gatherings:** Data collection at PoEs was limited to high temperature symptoms, which limited the efficacy of contact tracing and infection control.
- **Health operations and technical expertise – vaccination:** WHO and its partners lacked a deliberate strategy for targeting priority groups for vaccination (see lessons learned below), aggravated by overall vaccine hesitancy and inaccessibility of these groups.
Lessons learned

- **Building capacity for COVID-19 testing:** Nigeria built genomic surveillance and diagnostic capacity by scaling up laboratories for COVID-19 testing, which can now be leveraged for both routine surveillance and future health emergencies (it is currently being used for polio, for example).

- **Vaccination of priority groups:** Priority groups for the vaccine rollout, that is, pregnant women, elderly people and people in security-compromised or hard-to-reach communities, had low levels of vaccination owing to both vaccine hesitancy and accessibility issues. In a future emergency, strategies should be developed early to access these populations directly, such as through community-level interventions and advocacy, including data-gathering about the safety of vaccinations for pregnant women.

- **Mitigating vaccine dose expiry:** Nigeria has not had any expired vaccines since 2022 and ensures tracking from strategic stores at the regional and zonal levels to avoid waste; when vaccines were set to expire in 3 months, campaigns were organized to increase uptake.

- **Unified data management system:** WHO should advocate for Nigeria to have a unified data management tool, given that separate agencies within ministerial departments may have their own tools to collect and store data. As a result, many data systems for surveillance are not well integrated and this leads to the emergence of silos.
Seychelles

As a tourist destination and small island nation, Seychelles had to act quickly to contain the spread of COVID-19. WHO’s support was critical to strengthening the national emergency response capacity, including through training and strengthening of testing and critical care infrastructure.

**Context of the response**

- Seychelles had never experienced a significant outbreak before COVID-19, and thus, the health care system was underprepared.
- For an island nation heavily dependent on tourism, the main risk factor was importing COVID-19 cases from other countries. The first recorded COVID-19 cases in Seychelles were from travellers from Italy.274
- Seychelles took swift and strict measures to control the spread of COVID-19 and manage cases. The COVID-19 response was led by the President of Seychelles, who chaired the Platinum COVID-19 Committee meetings, which involved all Government ministries.275 This ensured that the country took a multisectoral approach to the COVID-19 response.
- As of May 2021, Seychelles had a vaccination rate of over 60%, one of the highest in the world, thanks to the swift measures.276

**Challenges at the country level**

- There are few links to other countries to procure supplies and transport samples. As an island nation, Seychelles depends on sea and air transport. COVID-19 control measures reduced access to other countries. Even when suppliers were willing to ship to Seychelles, the business case was not compelling given the reduced volumes and a lack of economies of scale.277
- Insufficient health information management infrastructure relative to the needs of the pandemic response. When the COVID-19 pandemic broke out, Seychelles was using relatively rudimentary information management systems, including paper-based surveillance, which were quickly overwhelmed.

**Successes achieved by WHO**

- Leadership and internal coordination: WHO AFRO deployed five consultants to support the emergency response across multiple pillars. The WHO consultants were integrated into the NEOC and seen as key contributors to the country’s pandemic response.
- Information and planning:
  - WHO supported the MoH with COVID-19 response guidelines. WHO also helped with updating existing emergency response guidelines.
  - The WCO adapted WHO AFRO guidelines to the local context, as Seychelles had a less hierarchical national emergency response structure.
  - WHO AFRO deployed a data manager and three epidemiologists to Seychelles to support the country’s data management challenges.
- Partner coordination and engagement: WHO worked closely with Africa CDC, particularly in strengthening laboratory capacity and procurement of supplies into the country.

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275 State House, 2021, President Ramkalawan chairs Platinum COVID-19 Committee meeting.
276 Hollingsworth, J, 2021, The Seychelles is 60% vaccinated, but still infections are rising. That’s not as bad as it sounds.
277 Dalberg stakeholder interviews, 2023.
As a tourist destination and small island nation, Seychelles had to act quickly to contain the spread of COVID-19. WHO’s support was critical to strengthening the national emergency response capacity, including through training and strengthening of testing and critical care infrastructure.

<table>
<thead>
<tr>
<th>Health operations and technical expertise – PoEs and mass gatherings:</th>
<th>The WCO set up points of case detection at hotels, as well as an electronic system to record symptoms of travellers entering Seychelles.</th>
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</thead>
<tbody>
<tr>
<td>Health operations and technical expertise – laboratories and diagnostics:</td>
<td>The WR facilitated agreements with the Kenya Medical Research Institute to transfer samples for analysis since the usual referral laboratory in South Africa that Seychelles used was inaccessible.</td>
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<td>With assistance from WCO in training, defining protocols and disseminating guidelines, the Seychelles Public Health Laboratory set up several private diagnostic labs.</td>
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<tr>
<td>Health operations and technical expertise – surveillance, investigation, contact tracing and PHSM:</td>
<td>In cooperation with MoH, the WCO trained non-health care professionals on rapid diagnostic testing and set up rapid response teams.</td>
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<tr>
<td>Health operations and technical expertise – IPC:</td>
<td>As COVID-19 was first major outbreak in Seychelles, WHO sent an expert in IPC to provide training and guidance. WHO provided training across the country to health care workers, social workers, teachers, students and transport employees on correct IPC protocols.</td>
</tr>
<tr>
<td>Health operations and technical expertise – vaccination:</td>
<td>WHO, as part of COVAX, helped to fill the vaccine gap, but initial doses were procured through Government efforts. As a high-income country, Seychelles was not a priority for the initial doses of COVID-19. Initial doses of COVID-19 vaccines were procured from the United Arab Emirates through Government connections. Subsequent vaccine needs were met by COVAX and Seychelles did not need to buy any vaccines.</td>
</tr>
<tr>
<td>Health operations and technical expertise – continuity of essential health services:</td>
<td>Based on advocacy, protocols and guidelines from WHO, the Government set up triage outside health care facilities to screen patients for COVID-19.</td>
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<td>Operations support and logistics:</td>
<td>WHO supported the procurement of essential supplies using commercial flights to the island.</td>
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<td>WHO donated a genomic sequencer to increase the national testing capacity.</td>
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<tr>
<td>Finance, administration and resource mobilization:</td>
<td>The WCO, with WHO AFRO’s support, mobilized over four times the biennial budget of the WCO to support emergency response activities, including capacity-building, operational support and logistics.</td>
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<td>The WCO provided tablets to help with field surveillance.</td>
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</table>
As a tourist destination and small island nation, Seychelles had to act quickly to contain the spread of COVID-19. WHO’s support was critical to strengthening the national emergency response capacity, including through training and strengthening of testing and critical care infrastructure.

**Challenges faced by WHO**

- **Leadership and internal coordination:**
  o WHO’s capacity-building support was focused on the NEOC and some provincial support. This meant that experts below the provincial level had to depend on their trained peers, who may not have had the breadth of knowledge of WHO experts. For example, fewer than 10 people received dedicated laboratory and diagnostics training.
  o Seychelles needed more technical support beyond the number of experts deployed by the WHO owing to the country’s limited existing capacity.

- **Health operations and technical expertise – laboratories and diagnostics:** While WHO helped to increase diagnostic expertise in Seychelles, it should have trained more people for a sustainable outcome.

- **Health operations and technical expertise – case management and clinical operations:** The capacity of Seychelles to respond to infectious disease outbreaks was insufficient owing to a lack of preparedness, and the country needed to import health care workers from Kenya.

- **Finance, administration and resource mobilization:** The WCO did not have an advanced system to process large transactions associated with the pandemic response. Traditionally, large transactions, over US$ 5000, are processed at the WHO Kuala Lumpur office. Given the unique nature of the COVID-19 pandemic and expedited need, funds had to be processed locally using a petty cash system.

**Lessons learned**

- **Advocacy and support for government proactiveness and preparedness:** The Seychelles Government displayed strong political will in implementing measures and supporting vaccines, which made it easier to educate people on COVID-19-related risks and contributed to lower infection rates.

- **Role of intersectoral cooperation:** The strong multisectoral collaboration was instrumental in the country’s successful COVID-19 response. Training of hotel staff, schoolteachers, carers for children and elderly people, public transport employees and airport staff ensured a comprehensive response in the country.

- **Importance of maintaining a pool of experts:** Travel restrictions made it difficult to involve external experts. The Government was compelled to identify local experts and train local staff, of which there were often not enough. This highlighted the importance of maintaining a regional pool of experts that could provide support as needed.

- **Resilience in diagnostic capacity:** Seychelles procured advanced laboratory machinery during the response and established necessary agreements with the Kenya Medical Research Institute for diagnostic support, which increased the resilience of its diagnostic capacity.

- **Continued support in delivery of essential supplies:** WHO should continue to develop mechanisms for the procurement of essential supplies for small island states such as Seychelles.
South Africa

While South Africa was one of the hardest-hit countries in the African Region, the decisive government response and the support provided by WHO and partners helped to manage the severity of the COVID-19 pandemic.

**Context of the response**

- **South Africa was one of the countries hardest-hit by the COVID-19 pandemic in the African Region.** As of 2 August 2023, South Africa had recorded over 102,000 deaths attributed to COVID-19, the highest in the African Region.\(^{279}\)

- **South Africa took swift measures in response to COVID-19, including countrywide lockdowns.** The country declared a National State of Disaster and instituted a countrywide lockdown, decisions commended by WHO.\(^{279}\) The National Coronavirus Command Council and the Ministerial Advisory Committees were activated when the National State of Disaster was announced.

- **South Africa also invested in health systems to strengthen the COVID-19 response, including rapidly scaling up testing capacity nationwide.** At the beginning of the pandemic, South Africa had the capacity to conduct 5000 tests for COVID-19 daily. In April 2020, South Africa increased its testing capacity sixfold through the procurement of 60 mobile lab units for sampling and testing.\(^{280}\) The increase in testing capacity allowed South Africa to detect more cases compared to peers in the Region.\(^{281}\) Moreover, South Africa supported COVID-19 testing for samples received from other countries in the African Region at the beginning of the pandemic.\(^{282}\)

- **WHO worked with the Government in the COVID-19 response through a whole-of-government approach.** WHO worked closely with the National and Provincial Departments of Health to complement the national response, with WHO providing technical and financial support. WHO’s support was provided at the request of the Government to provide technical assistance towards the response.\(^{283}\) This support involved the highest level of leadership, including a country mission led by the WHO Regional Director for Africa.

- **WHO’s support aligned with the ERF pillars as part of the national and provincial IMTs.** WHO supported the COVID-19 response in a range of areas, including strengthening preparedness, providing technical support, providing strategic support, supporting response coordination and capacity-building.\(^{284}\) For example, WHO trained over 1200 health care professionals on IPC, case management and continuity of essential health services. In addition, WHO assessed and supported over 400 public and private health facilities for adherence to IPC measures, deployed over 100 experts to eight provinces, procured and distributed over 130 computers to facilitate data management and conducted nine IARs.\(^{285}\) WHO supported the transition from the acute COVID-19 response to recovery and integration of COVID-19 response into routine health services.\(^{286}\)

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280 NEPAD, 2020, South Africa’s COVID-19 testing capacity increased with 60 new mobile lab units launched.
281 BBC, 2020, South Africa’s ruthlessly efficient fight against coronavirus.
282 Adepoju, 2020, Africa’s struggle with inadequate COVID-19 testing.
### Challenges at the country level

- **South Africa was costing and implementing the National Action Plan for Health Security when COVID-19 struck.** This interruption may have prevented the country from being better prepared for the pandemic.
- **South Africa is a major PoE for the continent;** as such, it had higher exposure to overseas travellers as compared to other countries in the Region.

### Successes achieved by WHO

#### Leadership and internal coordination:
- **WHO initially supported for the COVID-19 response by repurposing WCO staff, subsequently deploying additional local and international experts.** Between March 2020 and October 2021, WHO deployed over 100 surge support experts with different types of expertise to augment response at the national and provincial levels. The experts included public health specialists, epidemiologists, case management specialists and data managers. This ensured timely technical support for the response.
- **WHO Headquarters and WHO AFRO were directly involved in providing support to the WCO.** The Regional Director for Africa supported the country’s request with surge staff and strategic and technical support, while WHO Headquarters provided guidance and technical support virtually. This support was not only in the field but also at the policy and strategic level, involving collaboration with the National Department of Health (NDoH), the Ministerial Advisory Committee and the Advisory Committee for Vaccines.

#### Information and planning:
- **WHO provided operational guidelines and SOPs** to support the national COVID-19 response. Guidelines covered a range of pillars, including overall coordination, IPC, case management, epidemiology and surveillance, RCCE, vaccine deployment, continuity of essential health services and operational research.
- **The WCO commenced work on preparedness measures with the NDoH in January 2020,** much earlier than the first case report on 5 March 2020. This helped to strengthen the country’s readiness even before the first COVID-19 case was confirmed.
- **WHO provided technical support through the development of reports and data analyses.** Some of the reports generated included situation reports, IARs, AARs and strategic risk analyses. The IARs at the national and provincial levels informed the planning for subsequent waves of COVID-19.
- **The WCO provided weekly epidemiological updates.** The WCO published weekly data at the national and provincial levels on key indicators to track disease prevalence trends that ultimately underpinned the development of regional guidelines for dealing with resurgences.

#### Partner coordination and engagement:
- **WHO facilitated strong public partner coordination.** WHO co-chaired the Health Partners Forum alongside representation from the Government, UN entities, donors and civil society, ensuring strong national-level stakeholder coordination. The coordination between the private and the public sector was also very strong.
- **WHO was also the lead agency for the UN Country Team response to COVID-19.**
WHO worked closely with provincial governments to strengthen response plans and ensure successful implementation. The WCO deployed staff at the provincial level and in select high-risk districts to move closer to the operations for enhanced impact, coordinating with provincial level IMTs and authorities. When WHO arrived in provinces before the lockdown, the Provincial Department of Health already had preparedness and response plans and required support to strengthen and implement them. The WCO partnered with provinces on implementation, allowing them to execute their response plans effectively.

- **Health operation and technical expertise – RCCE and infodemics management:** The WCO supported risk communication in conjunction with the Government. It was well-regarded and considered a trustworthy source of information. As part of this effort, WHO directly trained 100 health promotion practitioners as COVID-19 champions on RCCE.

- **Health operation and technical expertise – surveillance, investigation, contact tracing and PHSM:**
  - WHO contributed US$ 1 million to support the National Institute for Communicable Diseases to maintain the country’s pandemic epidemiology and surveillance system. The support included maintaining the notifiable medical conditions reporting system and support for capacity-building in epidemiology and genomic surveillance. Additionally, funds were used to hire epidemiologists to complement those already supporting the NDoH.
  - WHO, in partnership with the South African National Bioinformatics Institute (and the University of the Western Cape), launched the Regional Centre of Excellence for Genomic Surveillance and Bioinformatics in Cape Town to scale up sequencing and bioinformatics on the continent for COVID-19 and other diseases in Southern Africa. WHO provided technical support and over US$ 4.5 million for operations in the first six months. The first recognized Omicron variant of COVID-19 was identified in South Africa.
  - WHO supported the implementation of the Go.Data tool for contact tracing in partnership with the national and provincial departments of health. WHO’s support included procuring and distributing over 100 computers to facilitate the installation and rollout of Go.Data, training and data analysis. Go.Data accelerated data capture enabled quick visualization and analysis of COVID-19 transmissions. through a centre of excellence and training.
  - WHO also partnered with academic institutions to conduct operational research on COVID-19 clinical care as part of a network of multicounty research studies.

- **Operations support and logistics:** The WCO deployed staff to build in-country capacity for oxygen supply and use.

- **Finance, administration and resource mobilization:** The WCO supported provincial IMTs to assess needs to ensure resources were directed where they were most needed.
### Challenges faced by WHO

- **Health operations and technical expertise – surveillance, investigation, contact tracing and PHSM:** Inadequate surveillance and epidemiology capacity at different levels affected the quality of surveillance and response data.\(^{290}\) WHO can partner with NDoH to train trainers on surveillance techniques and they can then cascade lessons to the subnational level.

- **Health operations and technical expertise – infection prevention and control:**
  - **Lack of permanent national focal points.** Low investment and inadequate IPC staffing constrained IPC efforts.
  - **Limited transfer of IPC knowledge.** The 5-day basic IPC training was offered as training for trainers. However, it was not well cascaded by the trainees as intended.\(^{291}\)

- **Health operations and technical expertise – case management and clinical operations:** Inconsistent compliance with clinical guidance.\(^{292}\) WHO assisted in developing SOPs and policy briefs to simplify the rapidly evolving clinical guidelines. Health care workers struggle to keep up with rapidly changing updates on clinical guidance.

- **Operations support and logistics:** Procuring PPE in the amounts needed and timelines was particularly challenging early in the pandemic. Limited availability resulted in higher costs and problems with quality assurance.

- **Finance, administration and resource mobilization:** limited capacity and funding at WCO. Given the low donor interest and limited flexible funding for upper middle-income countries such as South Africa, funding challenges restrained the WCO’s ability to deploy additional technical assistance as needed.

### Lessons learned

- **Preparedness:**
  - **Early deployment of emergency preparedness tools improves response.** The WCO can support the country in developing and testing its contingency plans routinely, holistically and comprehensively in line with the country’s priorities under the national action plan for health security.

  - **Institutionalizing preparedness contributes to health system resilience.** To assist in institutionalizing preparedness, the WCO is committing to prepare the country for the next emergency through multiple avenues, such as the Preparedness and Resilience for Emerging Threats (PRET) Framework and the Presidential Health Compact Document.

  - **Integrated disease surveillance and response is critical for strengthening the national surveillance system.** The WCO is supporting the NDoH to roll out the IDSR strategy to strengthen the national surveillance system.

  - **Establishing PHEOCs facilitates a more coordinated emergency response.** The WCO is building in-country capacity by collaborating with the NDoH to create subnational PHEOCs as units for streamlining the coordination of emergencies at all levels.

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\(^{291}\) Ibid.

\(^{292}\) Ibid.
- **Community based surveillance can increase access to last-mile populations.** Increasing access to essential services for harder-to-reach individuals will aid in the early detection of cases and a more rapid mobilization and response in future emergencies.

- **Alignment with pre-existing and established structures enables a seamless transition into response and recovery phases.** WHO recognized and aligned its support to existing structures and capacities, which ensured an agile response.

- **Ensuring the continuation of essential health services during emergencies reduces disruptions in service delivery.** Even though the Government maintained the availability of essential services, public uptake of services was reduced during the lockdown. There is a need to focus on essential services from the onset. For example, the disruption of maternal and child health and HIV treatment services was mitigated by the rapid convening of multidisciplinary response teams focused on maternal and child health and HIV services. Operational guidelines for mothers, neonates and children were developed with WHO support and were disseminated using multiple digital platforms.

- **Digital technologies should be leveraged to circumvent challenges introduced by health emergencies.** For example, embracing technology allowed for weekly meetings with frontline, implementing partners and the Government. Also, MomConnect (for maternal health) was adapted to rapidly launch and scale interconnected services, for example, COVID-19 Health Alert, COVID-19 HealthCheck and Health Worker Alert. Training, orientations and meetings were adapted to virtual platforms such as Knowledge Hub, Zoom and Teams.

- Private sector engagement to address the gap in the government response is key. For example, collaboration with the private sector was critical to providing psychosocial support to health care workers who needed it, the rollout of the vaccines and the dissemination of information.
The country was slow to accept the pandemic at the onset which impacted the overall response, but later achieved success with the change in leadership that adopted global COVID-19 measures.

**Context of the response**

- At the onset of the COVID-19 pandemic, national leaders did not acknowledge the disease, which affected the smooth implementation of prevention measures.\(^{293}\)

- The health care system was underprepared to accommodate the high number of COVID-19 cases. The existing infrastructure, personnel and medical supplies were insufficient to meet the demand of COVID-19 patients, particularly at the onset.\(^{294}\)

- In March 2021, Tanzania had a change in national leadership after the passing of the President. This marked a turning point in the COVID-19 response approach in the country, where the new leadership publicly acknowledged the disease and adopted COVID-19 protection measures, including vaccines.\(^{295}\)

- As a result of the course correction, Tanzania increased vaccine uptake from a mere 2.8% in January 2022 to 51% in April 2023. In a year and a half, Tanzania leapfrogged many of its African neighbours in terms of its COVID-19 coverage.\(^{296}\)

- WHO played a critical role in the national COVID-19 response, including by providing technical assistance, capacity-building and investing in the health care infrastructure. WHO organized training for health care workers in partnership with the MoH, including 400 people by April 2020.\(^{297}\) In Zanzibar, WHO helped to restore oxygen production at the island’s sole plant in Mnazi Mmoja Hospital. WHO’s support included purchasing spare parts, procuring 27 000 litres of liquid oxygen and training biomedical technicians on maintenance and repair of the plant.\(^{298}\)

**Challenges at the country level**

- The delayed acceptance of COVID-19 by the country’s leadership meant that WHO’s response was muted, including the messaging to the community on prevention measures.

- Lack of government leadership in coordinating the response at the onset affected the country’s ability to have a bigger impact on mobilizing funds and implementing partners.

**Successes achieved by WHO**

- Leadership and internal coordination: WHO quickly established the IMS in the country which included facilitation of emergency response pillar discussions.

- Information and planning: WHO was a key source for trusted information on COVID-19 for both partners and technical experts at the MoH. Information, including guidelines, was disseminated through the technical working groups.

- Partner coordination and engagement: WHO coordinated the partner response to COVID-19, including leading technical working groups and resource mobilization to fund response activities.

- Health operations and technical expertise: WHO provided technical support through training of leadership at the MoH and health care workers at the subnational level on managing COVID-19 cases.

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\(^{293}\) Oduor, M, 2021, Tanzania still in denial about Covid-19 existence despite surge in cases.

\(^{294}\) York, G, 2020, Tanzanian hospitals overwhelmed by dramatic rise in secret COVID-19 cases, U.S. says.

\(^{295}\) BBC, 2021, Tanzania’s Samia Suluhu Hassan gets Covid jab in policy reverse.

\(^{296}\) GAVI, 2023, How Tanzania leapfrogged into the lead on COVID-19 vaccination.

\(^{297}\) WHO, 2020, Equipping Tanzanian health workers with skills for critical care.

\(^{298}\) WHO, 2022, WHO restores medical oxygen supplies in Zanzibar.
### Challenges faced by WHO

- **Health operations and technical expertise – RCCE and infodemics management:** WHO and partners such as UNICEF have strengthened the RCCE capacity in Tanzania, including training COVID-19 community champions and expanding the call centre capacity to increase access to COVID-19 information to combat misinformation.

- **Health operations and technical expertise – case management and clinical operations:** WHO provided essential supplies for managing COVID-19 cases, including by supplying oxygen in almost all regions of Tanzania and PPE.

### Lessons learned

- **Leadership and internal coordination:** The verticality of the IMS at the beginning of the COVID-19 response affected the ability for cross-pillar collaboration, including resource mobilization and training. This was later resolved by switching to an integrated approach.

- **Information and planning:** Information overload on overburdened health care workers, particularly the different guidelines on managing COVID-19 cases and infections, contributed to low adherence at the beginning.

- **Health operations and technical expertise – IPC:** Slow adoption of tools and methodologies, for example, the IPC assessment framework, in managing COVID-19 cases in favour of traditional tools for example, standards-based management and recognition, in the case of IPC.

- **Health operations and technical expertise – CEHS:** The delayed adoption of the CEHS pillar made it difficult to incorporate it in the IMS.

### Cultivating deep relationships with technical experts

- **Cultivating deep relationships with technical experts** in key ministries, departments and agencies is critical to ensuring continuity of interventions, particularly when there is limited alignment from the national government, as was the case at the onset of the pandemic.

- **A community-led approach, using champions is critical to communicating information** at the subnational level, especially when misinformation is prevalent regarding diseases, preventive measures such as vaccines, etc.
## Annex 2: Review framework

The report structure is guided by the six critical functions of the ERF and the cross-cutting function of GEHR. Each function is additionally mapped to one of 11 SPRPs, with health operations and technical operations encompassing 9 SPRP pillars.

Combining the 6 functions of the ERF and 11 pillars of the SPRP

<table>
<thead>
<tr>
<th>Leadership &amp; Internal Coordination</th>
<th>Partner Coordination &amp; Engagement</th>
<th>RCCE &amp; Infodemics Management</th>
<th>Points of Entry &amp; Mass Gatherings</th>
<th>Laboratories &amp; Diagnostics</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRRP: 1</td>
<td>SRRP: 1</td>
<td>SRRP: 2</td>
<td>SRRP: 4</td>
<td>SRRP: 3</td>
</tr>
<tr>
<td>Information &amp; Planning</td>
<td>Operations Support &amp; Logistics</td>
<td>Health Operations &amp; Technical Expertise</td>
<td>Surveillance, Investigation, Contact Tracing &amp; PRISM</td>
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<td>SRRP: 8</td>
<td></td>
<td>SRRP: 5</td>
<td>SRRP: 11</td>
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<tr>
<td>SRRP: 1</td>
<td>Cross-Cutting</td>
<td>SRRP: 7</td>
<td>SRRP: 6</td>
<td>SRRP: 10</td>
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<td>SRRP: 9</td>
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</tbody>
</table>

A detailed description of each function, derived from the ERF, is given below:

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations support and logistics</td>
<td>This function ensures that WHO staff and relevant operational partners have a reliable operational platform to deliver effectively on the WHO action plan and joint operational plan that encompasses across supply chain management, operational support and health logistics.</td>
</tr>
<tr>
<td>Finance, administration and resource mobilization</td>
<td>This function provides finance, management and administrative support to enable the smooth functioning of the WHO response and ensures that decisions made by the Incident Manager trigger the provision of management and administrative services according to WHO and performance SOPs.</td>
</tr>
<tr>
<td>Gender, equity and human rights</td>
<td>This cross-cutting pillar assesses the extent to which WHO’s response to COVID-19 was tailored to gender, equity &amp; human rights considerations.</td>
</tr>
</tbody>
</table>

Pillar 8: Operational support & logistics, and supply chains

Pillar 1: Coordination, planning, financing and monitoring

Cross-cutting
| ERF function                          | Description                                                                                                                                                                                                                                                                                                                                                       | SPRP pillar mapping                                                                                     |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Leadership and internal coordination | The leadership function is responsible for overall management of the WHO response, including supervision of team leads for all other IMS functions. Additionally, the function is responsible for strategic leadership and day-to-day oversight and management of WHO’s own specific response to the emergency.                                                                                           | Pillar 1: Coordination, planning, financing and monitoring                                              |
| Partner coordination and engagement  | This function includes coordination across both health and intersectoral partners.                                                                                                                                                                                                                                                                               |                                                                                                                                                                 |
| Information and planning             | This involves the collection, analysis and dissemination of information on health risks, needs, service coverage and gaps and performance of the response. Information is used to develop and continually refine the response, as well as to inform recovery planning.                                                                                      |                                                                                                                                                                 |
| Health operations and technical expertise | RCCE & infodemics management: This pillar focuses on the provision of timely, credible and relevant information to manage the infodemic (an overabundance of information, including misinformation) and ensures that people-centred and community-led approaches are widely championed, to increase trust and social cohesion.     | Pillar 2: RCCE                                                                                           |
|                                      | Surveillance, investigation, contact tracing & public health and social measures: This pillar strengthens the systematic collection, analysis and communication of any information used to detect, verify and investigate events and health risks, as well as supporting the dissemination of data related to public health events. | Pillar 3: Surveillance, outbreak investigation and calibration of public health and social measures     |
|                                      | PoE and mass gatherings: This pillar focuses on collaborating with partners to scale up passenger screening, early detection and isolation of suspected cases and quarantine of contacts at PoEs, as well as the provision of guidelines, training and resources on the hosting of mass gatherings for public health officials. | Pillar 4: PoE, international travel and transport and mass gatherings                                  |
|                                      | Laboratories & diagnostics: This pillar is focused on strengthening capacity to detect cases and the infrastructure for diagnostic laboratory testing.                                                                                                                                                     | Pillar 5: Laboratories and diagnostics                                                                |
|                                      | IPC: This pillar is concerned with preventing the spread of COVID-19 infection during health care delivery, and in public and private communal settings.                                                                                                                                                     | Pillar 6: Infection prevention and control and protection of the health workforce                         |
|                                      | Case management & clinical operations: This pillar is focused on preparing health care facilities for the management of COVID-19 cases and delivering and maintaining appropriate care pathways.                                                                                                                                 | Pillar 7: Case management, clinical operations and therapeutics                                      |
|                                      | CEHS: This pillar is focused on ensuring the monitoring and continuity of essential services, as well as the strengthening of health systems.                                                                                                                                                        | Pillar 9: Strengthening essential health services and systems                                             |
|                                      | Vaccination: This pillar aims to help countries tackle and mobilize vaccine distribution to face challenges related to misinformation, accountability in health systems, adequacy of health workforce training, tracking and data capabilities.                                      | Pillar 10: Vaccination                                                                                  |
|                                      | Research, innovation and evidence: This pillar is concerned with supporting countries with training on innovation and leadership and with research on various key COVID-19-related issues.                                                                                                                                  | Pillar 11: Research, innovation and evidence                                                           |
Annex 3: Interviewee list

The following 142 interviewees were engaged via either one-on-one interviews (83) or focus group discussions (8).

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>IMST Pillar/function/cluster</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joseph Cabore</td>
<td>Director</td>
<td>Programme management</td>
</tr>
<tr>
<td>Abdou Salam Gueye</td>
<td>Regional Emergency Director</td>
<td>EPR</td>
</tr>
<tr>
<td>Oomarmagaisen M. Sandrasagren</td>
<td>Director</td>
<td>GMC</td>
</tr>
<tr>
<td>Adelheid Werimo Onyango</td>
<td>Director</td>
<td>UHP</td>
</tr>
<tr>
<td>Alexandre Tiendrebéogo</td>
<td>Interim Director</td>
<td>UCN</td>
</tr>
<tr>
<td>Akpaka Kalu</td>
<td>Team Lead, Disease Control Strategic Planning and Policy, previously Malaria, Tropical and Vector-Borne Diseases</td>
<td>UCN</td>
</tr>
<tr>
<td>Benson Droti</td>
<td>Health Information Systems Team Lead</td>
<td>ULC</td>
</tr>
<tr>
<td>James Avoka Asamani</td>
<td>Health Workforce Team Lead</td>
<td>ULC</td>
</tr>
<tr>
<td>Fiona Braka</td>
<td>Programme Area Manager, Emergency Response</td>
<td>EPR</td>
</tr>
<tr>
<td>Michel Yao</td>
<td>Incident Manager</td>
<td>EPR</td>
</tr>
<tr>
<td>Ngoy Nsenga</td>
<td>Incident Manager</td>
<td>EPR</td>
</tr>
<tr>
<td>Ann Fortin</td>
<td>Incident Manager</td>
<td>EPR</td>
</tr>
<tr>
<td>Thierno Baldé</td>
<td>Incident Manager</td>
<td>EPR</td>
</tr>
<tr>
<td>Jayne Tusiime</td>
<td>Incident Manager</td>
<td>EPR</td>
</tr>
<tr>
<td>Ambrose Otou Talisuna</td>
<td>Incident Manager, South Africa</td>
<td>EPR</td>
</tr>
<tr>
<td>Patrick Otim</td>
<td>Emergency Response Officer, South Africa</td>
<td>EPR</td>
</tr>
<tr>
<td>Kamara Fouad Rashidatu</td>
<td>Technical Consultant</td>
<td>Case management</td>
</tr>
<tr>
<td>Dadié Maiga</td>
<td>Team Lead</td>
<td>Vaccination</td>
</tr>
<tr>
<td>Jason Mwenda Mathiu</td>
<td>C-19 Vaccines effectiveness studies coordinator</td>
<td>Vaccination</td>
</tr>
<tr>
<td>Oniovo Efe-Alatu</td>
<td>Technical Officer/Interim Pillar Lead</td>
<td>Vaccination</td>
</tr>
<tr>
<td>Hieronyma Nelsiwe Gumede-Moeletsi</td>
<td>Genomics Sequencing Focal Point</td>
<td>Laboratory and diagnostics</td>
</tr>
<tr>
<td>Ernest Dabire</td>
<td>Team Lead – Humanitarian crises and gender</td>
<td>GEHR</td>
</tr>
<tr>
<td>John Adabie Appiah</td>
<td>Team Lead</td>
<td>Case management</td>
</tr>
<tr>
<td>Janet Kayita</td>
<td>Team Lead</td>
<td>HSS</td>
</tr>
<tr>
<td>Alhassan Fouard Kanu</td>
<td>Pillar Lead</td>
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</tr>
<tr>
<td>Phionah Atuhebwe</td>
<td>Pillar Lead</td>
<td>Vaccination</td>
</tr>
<tr>
<td>Claude Mangobo</td>
<td>Supply Chain &amp; Logistics</td>
<td>Vaccination</td>
</tr>
<tr>
<td>Julienne Anoko Ngoundoung</td>
<td>Team Lead</td>
<td>RCCE</td>
</tr>
<tr>
<td>Landry Cihambanya</td>
<td>Team Lead</td>
<td>IPC</td>
</tr>
<tr>
<td>Babacar Ndoye</td>
<td>Consultant</td>
<td>IPC</td>
</tr>
<tr>
<td>Opeayo Ogundiran</td>
<td>Team Lead</td>
<td>Surveillance</td>
</tr>
<tr>
<td>Mamadou Saliou Kalifa Diallo</td>
<td>Team Member</td>
<td>Surveillance</td>
</tr>
<tr>
<td>Name</td>
<td>Team</td>
<td>Department/Role</td>
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</tr>
<tr>
<td>Mamadou Zongo</td>
<td>Team Member</td>
<td>OSL</td>
</tr>
<tr>
<td>Zinedine Kada</td>
<td>Team Lead</td>
<td>OSL</td>
</tr>
<tr>
<td>Mary Stephen</td>
<td>Team Lead</td>
<td>PoE</td>
</tr>
<tr>
<td>Belinda Herring</td>
<td>Team Lead</td>
<td>Laboratory and diagnostics</td>
</tr>
<tr>
<td>Ali Ahmed Yahaya</td>
<td>Team Lead</td>
<td>Laboratory and diagnostics</td>
</tr>
<tr>
<td>Joseph Okeibunor</td>
<td>Team Lead</td>
<td>Research</td>
</tr>
<tr>
<td>Boniface Oyugi</td>
<td>Project Manager</td>
<td>Research</td>
</tr>
<tr>
<td>Ezekiel Dauda Danjuma</td>
<td>Team Lead</td>
<td>OSL</td>
</tr>
<tr>
<td>Etienne Magloire Minkoulou</td>
<td>Team Lead</td>
<td>Information management, monitoring &amp; evaluation</td>
</tr>
<tr>
<td>Jerry Jonas Mbasha</td>
<td>Partnerships coordinator</td>
<td>Coordination</td>
</tr>
<tr>
<td>Miriam Nanyunja</td>
<td>Nairobi Hub Coordinator</td>
<td>Coordination</td>
</tr>
<tr>
<td>Doris Kirigia</td>
<td>COVID-19 19 country focal points lead</td>
<td>Coordination</td>
</tr>
</tbody>
</table>

### WHO Headquarters

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mike Ryan</td>
<td>Executive Director, WHO, Health Emergencies Programme</td>
</tr>
<tr>
<td>Abdi Rahman Muhanad</td>
<td>(Former) Global COVID-19-19 Incident Manager</td>
</tr>
<tr>
<td>Paul Molinaro</td>
<td>Chief, Operations Support and Logistics</td>
</tr>
<tr>
<td>Maria Van Kerkhove</td>
<td>Technical Lead, COVID-19-19 response</td>
</tr>
</tbody>
</table>

### WCOs

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Member State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fernanda Alves</td>
<td>Senior Medical Advisor/ WHO Acting Representative</td>
<td>Angola</td>
</tr>
<tr>
<td>Javier Aramburu</td>
<td>OIC EPR team lead/lab focal point</td>
<td>Angola</td>
</tr>
<tr>
<td>Victor Luteganya</td>
<td>Data analyst</td>
<td>Angola</td>
</tr>
<tr>
<td>Walter Firmino</td>
<td>Surveillance focal point</td>
<td>Angola</td>
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<tr>
<td>Kuku Muhau</td>
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<td>Sandra Silva</td>
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<td>Danielle Cavalcante</td>
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<td>Lionel Nizigama</td>
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<td>Lucy Maribe</td>
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<td>Kennedy Mokgethi</td>
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<td>Motalalepu Jele</td>
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<td>Edison Maombi</td>
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<td>Issaya Gad Singli</td>
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<td>Ibrahim Diomande</td>
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<tr>
<td>Guy Saidi</td>
<td>Planning, monitoring &amp; evaluation and reporting</td>
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<td>Jack Katson Katya Maliro</td>
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<td>Ruth Yala</td>
<td>WHO FP/Kongo-Central</td>
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<td>John Frederick Dadzie</td>
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<td>Omotayo Tirimidhi Hamzat</td>
<td>Supply Chain &amp; Health logistics</td>
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<tr>
<td>Joshua Ofoli</td>
<td>Support to NEMSAS &amp; Emergency Medical Teams</td>
<td>Nigeria</td>
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<td>Inigbehe Oyinloye</td>
<td>GBV/PRSEAH</td>
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<td>Ibrahim Audu Salisu</td>
<td>Health emergency interventions &amp; services in fragile, conflict &amp; vulnerable settings</td>
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<td>Victor Tugumizemu</td>
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<td>Dwamo Philip Zorto</td>
<td>Infectious Hazards Prevention, Management &amp; Control Measures</td>
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<td>Rex Mpazanje</td>
<td>WHO Representative</td>
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<td>Adjibola Olagunoye</td>
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<td>Owen Laws Kaluwa</td>
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<td>WCO external relations</td>
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<td>Joseph Muiruri Kibachio Mwangi</td>
<td>MO NCD</td>
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<td>Sithembile Dlamini-Nqeketo</td>
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<td>Nkateko Mkondo</td>
<td>NPO/TB</td>
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<td>Moonasar Devanand</td>
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<tr>
<td>Grace Elizabeth Saguti</td>
<td>Incident Manager (IM)</td>
<td>Tanzania</td>
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<td>Gabriel Omoniyi Ayeni</td>
<td>Coordination</td>
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<td>Jaliath Salum Rangi</td>
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<td>Jerry Bikyeombe Mlembwa</td>
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<td>Faraja Msemwa</td>
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<td>Janeth Stanslaus Masuma</td>
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<tr>
<td>Neema Kileo</td>
<td>Health Promotion/ RCCE</td>
<td>Tanzania</td>
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Review of WHO’s response to Covid-19 in the WHO African Region

The following table lists the names of the members of the review panel and their roles and organizations:

<table>
<thead>
<tr>
<th>Name</th>
<th>Role and organization</th>
<th>Member State</th>
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</thead>
<tbody>
<tr>
<td>George Kauki</td>
<td>Surveillance</td>
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<tr>
<td>Pelagia Muchuruza</td>
<td>NBW/One Health</td>
<td>Tanzania</td>
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<tr>
<td>Tegegne Sisay</td>
<td>Programme Management/Strategic Information PMO</td>
<td>Tanzania</td>
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<tr>
<td>Iriya Joseph</td>
<td>Case Management</td>
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<tr>
<td>Makoni Absolom</td>
<td>Operation Officer/ Finance and Admin Lead</td>
<td>Tanzania</td>
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<tr>
<td>Humanyun Salim</td>
<td>External Relations/Resource Mobilization</td>
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<tr>
<td>Rweyemamu Leticia</td>
<td>DPG-Health/ Partner Coordination</td>
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<tr>
<td>Mary Kessi</td>
<td>Gender Inclusion/ PRSEAH</td>
<td>Tanzania</td>
</tr>
<tr>
<td>Nanai Alphonsus</td>
<td>NCD/ NTDs/ Ag. Logistic support</td>
<td>Tanzania</td>
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</table>

The following table lists the names of external stakeholders and their roles and organizations:

<table>
<thead>
<tr>
<th>Name</th>
<th>Role and organization</th>
<th>Member State</th>
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<tbody>
<tr>
<td>Helga Reis de Freitas</td>
<td>National Director Public Health, Ministry of Health</td>
<td>Angola</td>
</tr>
<tr>
<td>Frederico Brito</td>
<td>Chief Health &amp; Nutrition, UNICEF</td>
<td>Angola</td>
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<tr>
<td>Joana Morais</td>
<td>Director, INIS</td>
<td>Angola</td>
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<tr>
<td>Thebeyame Macheke</td>
<td>IM/Coordination, Ministry of Health</td>
<td>Botswana</td>
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<tr>
<td>Ali Mahamat Moussa</td>
<td>Ministry of Health</td>
<td>Chad</td>
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<td>Mbaidedji Dekandji Francine</td>
<td>Ministry of Health</td>
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<td>Souleyman Molly</td>
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<td>Emmanuel Issa</td>
<td>Ministry of Health</td>
<td>Chad</td>
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<tr>
<td>Oumalkher Adam Youssouf</td>
<td>Team Lead of Research and Development in the National Coordination of the COVID-19 Response, Ministry of Health</td>
<td>Chad</td>
</tr>
<tr>
<td>Hassan Mahamat Ali</td>
<td>Management and Procurement of Inventory, Ministry of Health</td>
<td>Chad</td>
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<tr>
<td>Abdelkerim Nedjim</td>
<td>IPC Focal Point, Ministry of Health</td>
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<td>Abdelsadick Hidjab Abdoulaye</td>
<td>Ministry of Health</td>
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<tr>
<td>Djikini Djimornan</td>
<td>Deputy Head of Vaccination, Ministry of Health</td>
<td>Chad</td>
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<tr>
<td>Antoine Mbaitageodem</td>
<td>Logistician to Vaccination, Ministry of Health</td>
<td>Chad</td>
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<tr>
<td>Gisèle Mbuyi</td>
<td>Surveillance, Ministry of Health</td>
<td>DRC</td>
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<tr>
<td>Olohitare J. Uduokhai</td>
<td>Field Epidemiologist, Port Health Services Division, Department of Public Health</td>
<td>Nigeria</td>
</tr>
<tr>
<td>Olúṣọlá Aruna</td>
<td>Country Lead/Senior Public Health Advisor, International Health Strengthening Programme, UK Health Security Agency</td>
<td>Nigeria</td>
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<tr>
<td>Oyeladun Okunromade</td>
<td>Head, Surveillance and Epidemiology Department IHR National Focal Point, NCDC</td>
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<tr>
<td>Meyiwa Ede</td>
<td>Programme Officer II – Strategic Communications, Breakthrough ACTION</td>
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<tr>
<td>Costa Atori</td>
<td>Project Coordinator/Technical Lead – Global Health Security, RCCE Portfolio, Breakthrough ACTION</td>
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</tr>
<tr>
<td>Name</td>
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<tr>
<td>Rejoice Luka-Lawal</td>
<td>Assistant Director, Health Emergency Preparedness and Response/ COVID-19 Incident Manager, NCDC</td>
<td>Nigeria</td>
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<tr>
<td>Joan Ezinne Ojukwu</td>
<td>Health and Care Officer – West Coast Cluster (Benin, Ghana, Togo, Nigeria), IFRC</td>
<td>Nigeria</td>
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<tr>
<td>Leon Biscornet</td>
<td>Head, SPHL</td>
<td>Seychelles</td>
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<tr>
<td>Jude Gedeon</td>
<td>Public Health Commissioner, Ministry of Health</td>
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<tr>
<td>Marie-May Esparon</td>
<td>Secretary-General, Seychelles Red Cross</td>
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<td>Natalie Mayet</td>
<td>Deputy Director, NICD</td>
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<tr>
<td>Dasaria Swai</td>
<td>Logistics And Operational Support, WFP</td>
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<tr>
<td>Ulrika Baker</td>
<td>Health Manager, Primary Health Care, UNICEF</td>
<td>Tanzania</td>
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</table>
Annex 4: Documents included in desk research

Intra- and after-action reviews

8. COVID-19 Response Mid-Action Review – Strategic Directions, Nigeria Federal Ministry of Health/Nigeria Centre for Disease Control 2020
9. COVID-19 Vaccination Programme Presentation to KZN IAR, Department of Health Republic of South Africa 2022
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71. Comprehensive Needs For COVID-19: Prevention And Response, Refugees from Western Sahara, UNHCR/WFP/UNICEF 2020
72. COVID-19 Plan Operationnel Du Bureau Pays Pour La Réponse A L’épidemie, WCO Gabon 2020
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83. Plan de Préparation et de riposte à l’épidémie de Coronavirus au Gabon, République Gabonaise 2020
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118. Annual Health Sector Performance Report 2019, Department of Health Seychelles 2020

119. Case Study – Democratic Republic of Congo, Global Financing Facility, 2022


121. COVID-19: five lessons from Ebola, ODI, 2020

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125. Nigeria's COVID-19 Response, Minister of Health, Nigeria 2020
126. Public Health Personnel 2020 statistical Brief, Statistics Botswana 2022
128. SADC Gender Protocol 2021 Barometer Voice & Choice in the time of COVID-19, Gender Links 2021
130. Study on the Impact of COVID-19 on Gender Equality with a focus on Intersectionality and Economic Empowerment, Syspons GmbH 2022
131. The impacts of the COVID-19 outbreak response on women and girls in the Democratic Republic of the Congo, Social Sciences Analytics Cell CASS 2020

Peer-reviewed journals and articles


News Articles


Webpages


Annex 5: Survey

The following questionnaire, which seeks to document WHO’s COVID-19 response in the African Region, was developed and distributed to respondents across WHO AFRO, WCOs and external stakeholders.

Background information

1. Which of the following best represents your involvement in the COVID-19 response (where you spent most of your time)?

   (a) I was part of a WHO Country Office (WCO)
   (b) I was part of the WHO Regional Office for Africa (WHO AFRO)
   (c) I worked under the Ministry of Health (MoH)
   (d) I was an external partner in WHO’s response, but not part of the MoH
   (e) I have completed/scheduled an interview; will not complete the survey

2. Which WCO did you work for?

   (a) Nigeria
   (b) Tanzania
   (c) Seychelles
   (d) South Africa
   (e) Botswana
   (f) Angola
   (g) Chad
   (h) Democratic Republic of the Congo
   (i) South Sudan
   (j) Sierra Leone
   (k) Burundi
   (l) Algeria
   (m) Cameroon
   (n) Lesotho
   (o) Cabo Verde
   (p) Madagascar
   (q) Côte d’Ivoire
3. If you were a member of the Incident Management Support Team (IMST), which function did you contribute to the most?

(a) Leadership and internal coordination
(b) Information and planning (surveillance, M&E, information products)
(c) Health operations and technical expertise
(d) Partner coordination and engagement
(e) Operations support, logistics (OSL), and procurement
(f) Finance, administration and resource mobilization
(g) Not applicable. I was not a member of the IMST

4. Please select one country regarding which you can provide country-level perspectives.

(a) Nigeria
(b) Tanzania
(c) Seychelles
(d) South Africa
(e) Botswana
(f) Angola
(g) Chad
(h) Democratic Republic of Congo
(i) South Sudan
(j) Sierra Leone
(k) Burundi
(l) Algeria
(m) Cameroon
(n) Lesotho
(o) Cabo Verde
(p) Madagascar
(q) Côte d'Ivoire

5. What was/is your role in the MoH?

6. What organization were/are you affiliated with?

7. Please select one country regarding which you can provide country-level perspectives.
(a) Nigeria
(b) Tanzania
(c) Seychelles
(d) South Africa
(e) Botswana
(f) Angola
(g) Chad
(h) Democratic Republic of the Congo
(i) South Sudan
(j) Sierra Leone
(k) Burundi
(l) Algeria
(m) Gabon
(n) Lesotho
(o) Guinea-Bissau
(p) Madagascar
(q) Sao Tome and Principe
(r) Côte d’Ivoire

8. In what capacity did WHO engage with you or your organization directly, for example, capacity-building, distribution of health equipment, etc.?

Overview of WHO’s COVID-19 response in the country

9. What would you say were WHO’s primary positive contributions to the COVID-19 response in the country?
10. How did WHO’s involvement impede, if at all, the COVID-19 response in the country?
11. If the WCO set up an IMT or an alternative emergency response coordination mechanism, how was it structured?
12. Can you please provide examples of some of the things that the IMT did well, and why?
13. How could the IMT structure be improved?

Successes and challenges of WHO’s COVID-19 response

14. What were WHO’s key successes in responding to COVID-19 in this country?
15. What factors enabled these successes?
16. In which areas could WHO have responded better to COVID-19 in this country?
17. What factors may have hindered WHO’s response in this country?

18. How effective was WHO AFRO’s support to this WCO?

   (a) Very effective
   (b) Somewhat effective
   (c) Neither effective nor ineffective
   (d) Somewhat ineffective
   (e) Very ineffective

19. How effective was the dedicated Country Support Team (CST) in supporting this WCO for the COVID-19 response?

   (a) Very effective
   (b) Somewhat effective
   (c) Neither effective nor ineffective
   (d) Somewhat ineffective
   (e) Very ineffective
   (f) We did not have dedicated CST

**Recommendations for response in future health emergencies**

20. How would you improve the support this WCO received from the IMST of WHO AFRO?

21. What would you change to improve the dedicated country support team in supporting this WCO during the first year of the pandemic?

22. What lessons learned from the WCO’s COVID-19 response should be shared with other WCOs, if applicable, to improve preparedness for future health emergencies?

23. What practices should the WCO discontinue to improve preparedness for future health emergencies, and why?

24. Please provide any additional inputs you would wish to be considered for the documentation of WHO’s COVID-19 response in the African Region.

**Overview of WHO’s COVID-19 response in the African Region**

25. What would you say were WHO’s primary positive contributions to the COVID-19 response in the Region?

26. How did WHO’s involvement impede, if at all, the COVID-19 response in the Region?
Successes and challenges of WHO’s COVID-19 response in the African Region

27. What were WHO AFRO’s top successes in responding to COVID-19 across the African Region?

28. What factors enabled these successes?

29. In which areas could WHO have responded better to COVID-19 in the African Region?

30. What factors may have hindered WHO’s response in the Region?

31. Which of the following functions of WHO’s emergency response did you support the most during the COVID-19 response in the Region?

   (a) Leadership and internal coordination
   (b) Information and planning
   (c) Health operations and technical expertise
   (d) Partner coordination and engagement
   (e) Operations support, logistics (OSL), and procurement
   (f) Finance, administration and resource mobilization

For each function selected how would you rate WHO AFRO’s delivery on the element of WHO’s COVID-19 response * (1 = Below expectations, 2, 3 = Met Expectations, 4, 5 = Exceeded expectations, Not observed).

   (a) Leadership and internal coordination
   (b) Information and planning
   (c) Health operations and technical expertise
   (d) Partner coordination and engagement
   (e) Operations support, logistics (OSL), and procurement
   (f) Finance, administration and resource mobilization

32. For the functions rated, please provide an explanation for your score with an example of a success (for high scores) or challenge (for low scores).

33.

34. Select one to three countries from the list below that you believe WHO had a successful COVID-19 response (please select at most 3 options).

   (a) Nigeria
   (b) Tanzania
   (c) Seychelles
(a) South Africa  
(b) Botswana  
(c) Angola  
(d) Chad  
(e) Democratic Republic of the Congo  
(f) South Sudan  
(g) Sierra Leone  
(h) Burundi  
(i) Algeria  
(j) Gabon  
(k) Lesotho  
(l) Guinea-Bissau  
(m) Madagascar  
(n) Sao Tome and Principe  
(o) Côte d’Ivoire  

35. Why do you think WHO was successful in responding to COVID-19 in these countries?  

36.  

37. Select one to three countries from the list below in which you believe WHO should have improved its COVID-19 response (please select at most 3 options).  

(a) Nigeria  
(b) Tanzania  
(c) Seychelles  
(d) South Africa  
(e) Botswana  
(f) Angola  
(g) Chad  
(h) Democratic Republic of the Congo  
(i) South Sudan  
(j) Sierra Leone  
(k) Burundi  
(l) Algeria  
(m) Gabon  
(n) Lesotho  
(o) Guinea-Bissau  
(p) Madagascar
38. Why do you think WHO needed to strengthen its response to COVID-19 in these countries?

Recommendations for WHO’s response in future health emergencies

39. What lessons learned from WHO AFRO’s COVID-19 response should be shared with other regions, if applicable, to improve preparedness for future health emergencies?
40. What practices should AFRO discontinue to improve preparedness for future health emergencies, and why?
41. Please provide any additional inputs you would wish to be considered for the documentation of WHO’s COVID-19 response in the African Region.

Overview of WHO’s COVID-19 response in the country

42. What would you say were WHO’s primary positive contributions to the COVID-19 response in the country?
43. How did WHO’s involvement impede, if at all, the COVID-19 response in the country?

Successes and challenges of WHO’s COVID-19 response in the country

44. What were WHO’s key successes in responding to COVID-19 in this country?
45. What factors enabled these successes?
46. In which areas could WHO have responded better to COVID-19 in this country?
47. What factors may have hindered WHO’s response in this country?

Recommendations for WHO’s response in future health emergencies

48. What lessons learned from the COVID-19 response of the WCO should be shared with other countries, if applicable, to improve preparedness for future health emergencies?
49. What practices should the WCO discontinue to improve preparedness for future health emergencies, and why?
50. Please provide any additional inputs you would wish to be considered for the documentation of WHO’s COVID-19 response in the African Region.

Overview of WHO’s COVID-19 response

51. What would you say were WHO’s primary positive contributions to the COVID-19 response in the area that you represent (country or African Region)?
52. How did WHO’s involvement impede, if at all, the COVID-19 response in the area that you represent (country or African Region)?
Successes and challenges of WHO’s COVID-19 response in the country

53. What were WHO’s key successes in responding to COVID-19 in the area that you represent (country or African Region)?

54. What factors enabled these successes?

55. In which areas could WHO have responded better to COVID-19 in the area that you represent (country or African Region)?

56. What factors may have hindered WHO’s response in the area that you represent (country or African Region)?

Recommendations for WHO’s response in future health emergencies

57. What lessons learned from the WCO’s COVID-19 response should be documented to improve preparedness for future health emergencies?

58. What practices should WHO discontinue to improve preparedness for future health emergencies, and why?

59. Please provide any additional inputs you would wish to be considered for the documentation of WHO’s COVID-19 response in the African Region.

Next steps

60. Would you like to be contacted for a follow-up one-on-one conversation?

   (a) Yes
   (b) No

61. Please provide your name and contact details.
The WHO Regional Office for Africa

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Africa is one of the six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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