World Health Organization

REGIONAL OFFICE FOR Africa

MONITORING AND EVALUATION FRAMEWORK FOR THE COVID-19 RESPONSE IN THE WHO AFRICAN REGION

August 2020

Monitoring and evaluation framework for the Covid-19 response in the WHO African Region

ISBN: 978-929023443-2

Suggested citation. Monitoring and evaluation framework for the Covid-19 response in the WHO African Region. Brazzaville: WHO Regional Office for Africa; 2020. Licence: CC BY-NC-SA 3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at http://apps.who.int/iris.

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Designed and printed in the WHO Regional Office for Africa, Brazzaville, Congo

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Foreword

Dr Matshidiso Moeti

Regional Director for Africa
World Health Organization

Since the report of a cluster of unusual pneumonia cases in Wuhan, China in December 2019, caused by a novel coronavirus, SARS-CoV-2, COVID-19 has spread to nearly every country and territory in the world. The disease arrived in Africa in February 2020, with initial cases introduced by travellers from Europe into Egypt and Algeria. As of 8 July 2020, there was a cumulative total of 395 024 cases and 7376 deaths reported from all countries in the WHO African Region. Globally, cases now exceed 11 million, with more than 500 000 deaths. Although the Region accounts for a small percentage of cases and even fewer deaths, the impact of COVID-19 has been significant.

Coming late into the pandemic, the African Region has the benefit of learning from responses elsewhere in the world and progress has been made in tackling the virus, most notably the rapid increase in testing capacity, rising from two countries in February 2020 to more than 40 countries to date. In addition, all countries rapidly implemented public health measures such as case finding, testing, contact tracing and isolation and quarantine, as well as targeted care for those requiring hospital admission. Non-pharmaceutical prevention measures, such as physical distancing, wearing of face masks and hand hygiene have been universally introduced. Most countries closed their borders and instituted lockdowns, closing businesses and schools, banning large gatherings and restricting people's movement. However, in the developing world context, these strict measures are economically unsustainable. Presently, most of the Region is resuming economic activity, even with rising numbers of cases, but maintaining non-pharmaceutical measures, and discouraging large gatherings and non-essential movement of people.

The introduction of the Transformation Agenda saw the implementation of a cross-cutting information management programme, feeding into all aspects of the Health Emergencies Programme, which has centralized the role of data collection, monitoring and evaluation and accountability. These data and information are widely used by ministries of health, partners and WHO to inform responses to outbreaks and emergencies.

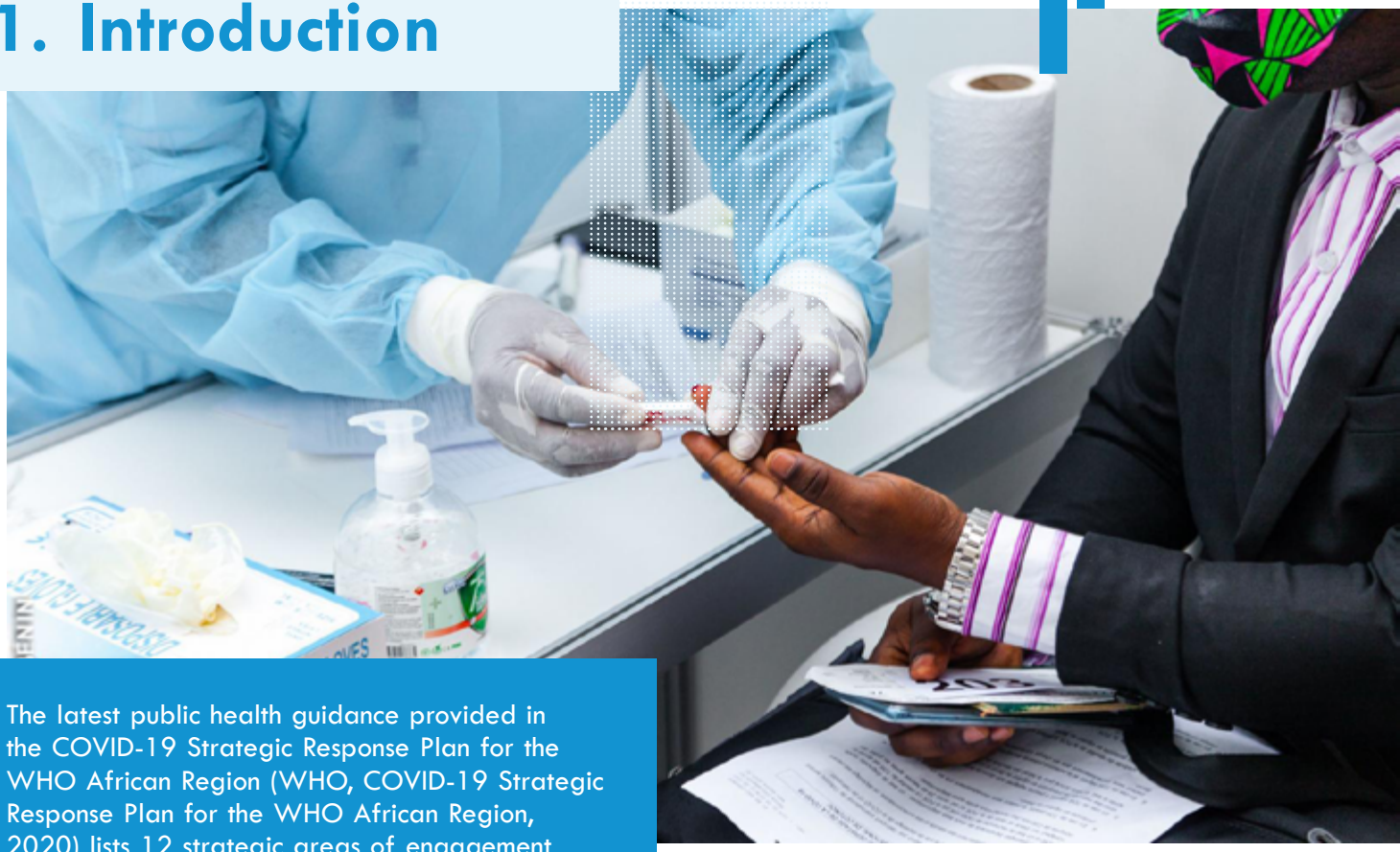
The M&E Framework targets ministries of health, WHO country offices and the Regional Office, and aims to assess national, country and regional response performance and progress, measured against country national plans, response efforts and the broader WHO COVID-19 Strategic Preparedness and Response Plan. The framework presented here emphasizes a results-based performance approach, which requires systematic collection, analysis and reporting against a defined set of indicators for planned interventions in the 11 response pillars to ensure full monitoring of a comprehensive response. Well-known M&E standards are used to operationalize the Framework – human resources, data collection and resources, processing, analysing and synthesizing, producing communications and reports. A national repository of indicators is available in the M&E Framework, monitored using key performance indicators. Additionally, there is a repository of indicators that allows WHO to monitor its own mandate and performance, as well as its performance at country and regional levels using a 'traffic light approach'.

This investment in M&E will enhance data collection and the other roles of the information management programme to increase transparency and accountability for better results and outcomes. I urge all Member States, partners and WHO staff to use this strengthened M&E Framework to successfully control the COVID-19 outbreak in the Region.

List of Acronyms

AAR	After-action review
AFRO	World Health Organization Regional Office for Africa
ANC3	Antenatal care third visit
bOPV	Bivalent oral polio vaccine
CO	Country office
COVID-19	Coronavirus disease 2019
DPT3	Diphtheria-tetanus-pertussis vaccine third dose
EQA	External quality assurance
EQAP	External quality assurance programme
FluID	Global platform for influenza epidemiological surveillance accommodating both qualitative and quantitative data
FluNet	Global platform for influenza virological surveillance launched in 1997 to track the spread of viruses globally
GPW 13	Thirteenth General Programme of Work, 2019-2023
HIS	Health information systems
HIV	Human immunodeficiency virus
ICU	Intensive care unit
IDSR	Integrated Disease Surveillance and Response
ILI	Influenza-like illness
IMS	Incident Management System
IMST	Regional Incident Management System Team
IPC	Infection prevention and control
JOR	Joint Operational Review
LTCF	Long-term care facilities
M&E	Monitoring and evaluation
Men A	Serogroup A meningococcal vaccine
MHPSS	Multisectoral mental health and psychosocial support
mOPV2	Monovalent oral polio vaccine type 2
OCV	Oral cholera vaccine
ODK	Open Development Kit
OPD	Outpatient Department
PCR	Polymerase chain reaction
PoE	Point of entry
PPE	Personal protective equipment
RCCE	Risk communication and community engagement
RO	Regional Office
RT-PCR	Reverse transcription polymerase chain reaction
SARI	Severe acute respiratory infection
TB	Tuberculosis
TCV	Typhoid conjugate vaccine
Td	Tetanus and diphtheria vaccine, adult/adolescent formulation
VFM	Value for money
VPD	Vaccine-preventable disease
WHO	World Health Organization
WHO AFRO	World Health Organization African Region
WCO	World Health Organization country office

1. Introduction



The latest public health guidance provided in the COVID-19 Strategic Response Plan for the WHO African Region (WHO, COVID-19 Strategic Response Plan for the WHO African Region, 2020) lists 12 strategic areas of engagement and support to countries at 'regional, national and subnational levels' (op. cit. 5) with numerous activities (op. cit., pp. 16-26), accompanied by the 'Monitoring of the Response Strategic Plan' (op. cit. pp. 27-28).

In early 2020, countries with WHO support, implemented a three-pronged preparedness and response strategy based on: (a) coordination and support (1 pillar); (b) scaling up country readiness and response operations (9 pillars); and (c) priority research and innovation (1 pillar), which together constitute the foundations of the 11 pillars of the strategy (WHO, 2019 Novel Coronavirus (2019-nCoV): Strategic Preparedness and Response Plan, 2020). These 11 pillars are therefore reflected within, and form the basis of this M&E Framework. Furthermore, in the recent Strategic Response Plan for the African Region (WHO, COVID-19 Strategic Response Plan for the WHO African Region, Febr.-Dec. 2020, Update 4 May 2020), among the five strategic objectives, one specifically addresses M&E by 'conducting robust and continuous monitoring and evaluation of the response capacities using key performance indicators (KPIs) in ALL countries' (op. cit., p. 9). At the global level, a recent monitoring and evaluation framework (WHO, COVID-19 Monitoring and Evaluation Framework, Update 5th June, 2020) revisited M&E in the form of pillars and a compendium of indicators, which this document takes a step further for the African Region.

This M&E Framework is structured to address different audiences from the countries which constitute the source of all data, the WHO country offices (WCOs) and the Regional Office and international partners (Section 2). From the outset, the Framework specifies its aims and objectives (section 3). The logical framework for the approach used and performance-based results follow as background information to delineate the scope of the Framework (section 4). International partners' roles in the M&E of COVID-19 are then presented (section 5), followed by details showing how the M&E Framework is operationalized using a standard M&E system approach (section 6). Other M&E frameworks and their accompanying indicators for the countries (links to Excel spreadsheets), WCOs and the WHO African Region (WHO AFRO) and international partners are presented in the final sections (7 and 8).

The WHO African Region has major experience in managing geographically extensive and large-scale outbreaks of infectious disease, including cholera, Ebola virus disease and HIV/AIDS. The Framework is constructed to recognize this experience.

2. Target Audience

The M&E data originate from countries' ministries of health (MoH) (ref. section 6), which are using the requisite processes for preparedness and response to COVID-19 as an opportunity to strengthen and sustain their national surveillance and M&E systems, as part of health systems strengthening (HSS). Therefore, the MoHs, as the backbone of the health information system (HIS) are the primary beneficiaries and audience of the M&E Framework. This is clarified in section 7, which includes the tool for data collection at national level (section 7 and ref. Appendix 1, Annex 2 Country level).

During major outbreaks, WCOs act as a link between WHO AFRO and the affected countries by providing the surveillance data required for daily and weekly monitoring and reporting, while at the same time providing the support required by the countries (ref. Section 7, and Section 8). The WCO transmits to WHO AFRO not only the country data produced and key performance indicators (KPIs), but also any additional information required at the regional level. WHO AFRO in turn will monitor and use the information collected by countries and the Region. The WCOs and the Regional Office are therefore the additional two target audiences for this M&E Framework.

The M&E Framework is linked to a convenient single repository of 4 pieces of information (Appendix 1): the Key Performance Indicators (Annex 1 at the end of this Framework), the Country Indicators (Annex 2), the Regional Indicators (Annex 3), and the Definitions (Annex 4).

3. Aims and Objectives

3.1. Aims

The Framework aims to assess the performance and progress of the country and regional responses against the country national plans/responses, and the WHO COVID-19 Strategic Preparedness and Response Plan.

3.2. Main Objective

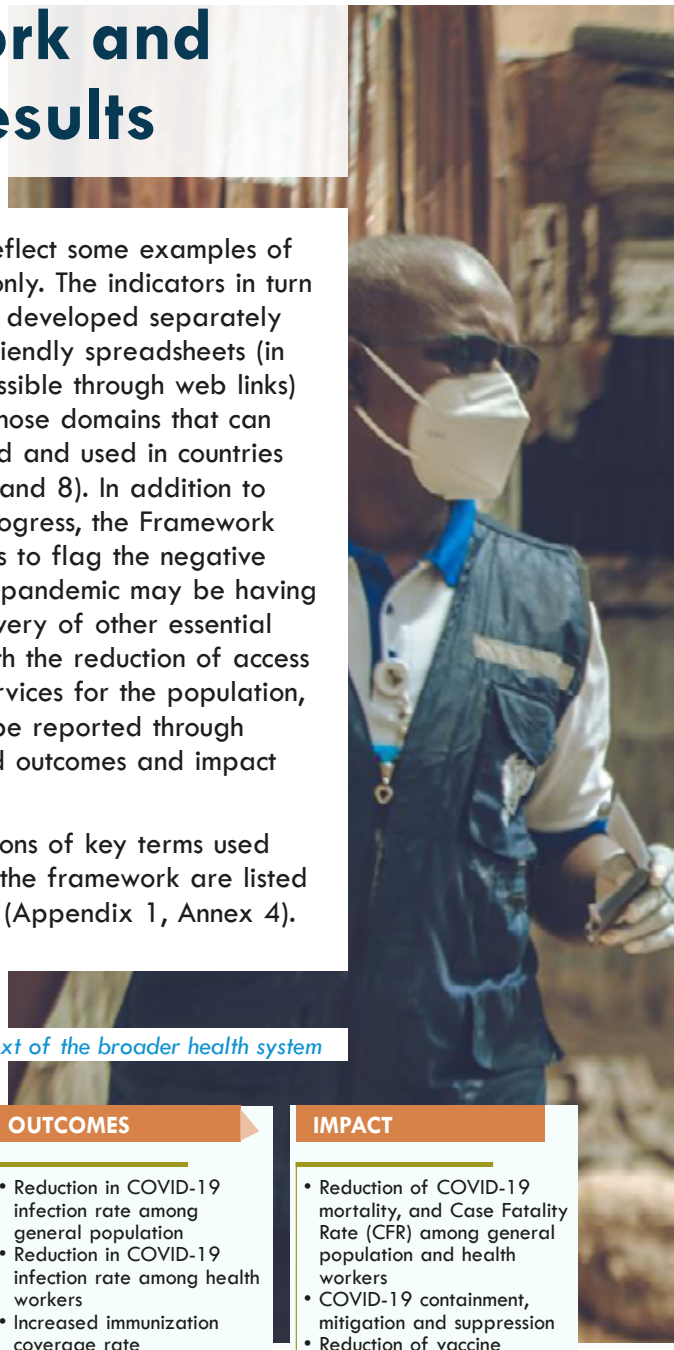
The main objective of this Framework is to establish and maintain a set of specific country and regional indicators to support the monitoring and evaluation (M&E) of planned COVID-19 response activities and to ensure advocacy, transparency and accountability with donors and other partners involved in the response. It also supports the MoH in fulfilling its role in collecting and reporting national data, while it enables the WCO and WHO AFRO to track progress against the goals and objectives of the COVID-19 Strategic Response Plan (SRP), and to correct approaches and actions, as required.

3.3. Specific Objectives

The specific objectives are to:

- Collect, analyse and report national data based on daily and/or weekly needs;
- Establish and maintain a set of key performance indicators for response tracking and evidence-based decision-making;
- Monitor response activities through essential inputs, leading to output and outcome indicators at country and regional levels;
- Produce systematic assessments and analyses of response activities;
- Compare results of activities against the epidemiological progression of the pandemic;
- Support the prioritization of response activities and inform decision-making at different levels;
- Strengthen and accelerate transparency and information sharing;
- Support planning and resource mobilization;
- Produce evidence for quarterly operational reviews and documentation of lessons learned;
- Conduct an evaluation of the Framework six months after its operationalization;
- Conduct after-action reviews (AAR) at regional and country levels at the end of the event.

4. M&E Logical Framework and Performance-Based Results



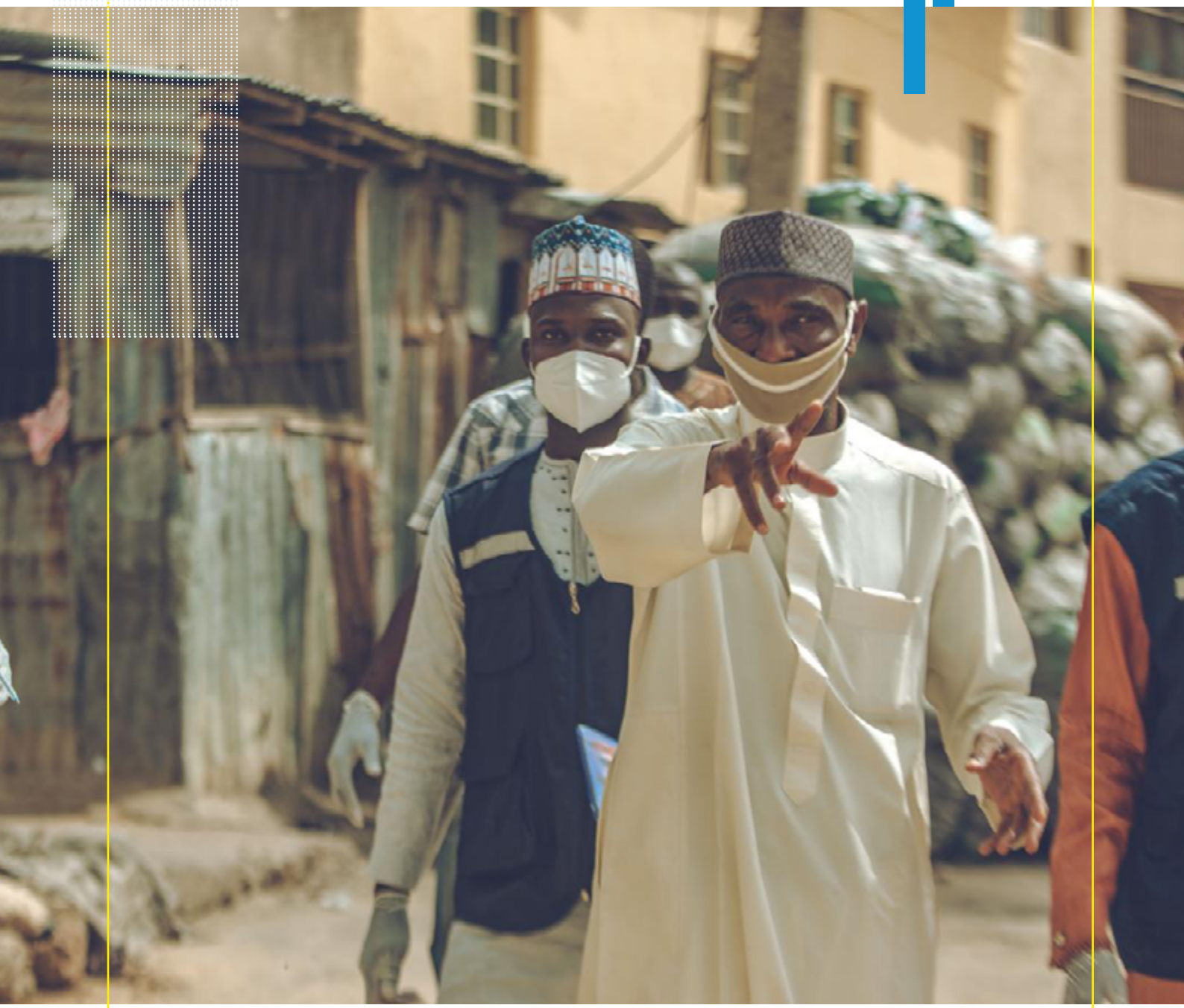
The development of this Framework is a comprehensive initiative involving all 11 response pillars (section 1). It is driven by a small working group established by the Regional Incident Management Support Team (IMST) and draws from the experience of country data collection and WCOs. It is based on a simplified logical framework using identification of internationally recognized standard inputs, outputs, outcomes and the impact of the national response in the broader context of the health system (Figure 1).

The logical framework is results-driven, emphasizing close monitoring (daily and/or weekly) of outputs and outcomes/impact reported through the HIS. It uses performance indicators and a few KPIs. The 'indicator domains' reflect some examples of indicators only. The indicators in turn are further developed separately with user-friendly spreadsheets (in Excel, accessible through web links) reflecting those domains that can be adapted and used in countries (sections 7 and 8). In addition to tracking progress, the Framework allows users to flag the negative impact the pandemic may be having on the delivery of other essential services with the reduction of access to basic services for the population, which will be reported through outputs and outcomes and impact indicators.

The definitions of key terms used throughout the framework are listed separately (Appendix 1, Annex 4).

Figure 1 *COVID-19 M&E Logical Framework in the context of the broader health system*

	INPUTS & PROCESSES	OUTPUTS	OUTCOMES	IMPACT
Indicators domains	• Health workers • Funding • Public and private health facilities • Isolation capacity • Technologies • Laboratory infrastructure • Law enforcement • Technical assistance • Logistics/ Materials for Basic services (e.g., hand hygiene, masks) • Multi-sectoral approach	• Sustained key essential health services • Availability in quality and quantity of personal protective equipment at all level of the local health system • Increased community engagement and leadership for prevention of COVID-19 • Increased laboratory testing capacities at all levels • Effective surveillance and contact tracing • Expanded treatment centres • Effective coordination, planning, monitoring and evaluation	• Reduction in COVID-19 infection rate among general population • Reduction in COVID-19 infection rate among health workers • Increased immunization coverage rate • Increased TB case notification • Increased HIV treatment coverage	• Reduction of COVID-19 mortality, and Case Fatality Rate (CFR) among general population and health workers • COVID-19 containment, mitigation and suppression • Reduction of vaccine preventable diseases mortality • Reduction of TB and HIV/ AIDS mortality
Data Sources	Planning & administrative sources	SitReps, Activity implementation, Facility & Community assessments	Population-based, qualitative & special surveys Coverage, health status, equity, risk protection, responsiveness	
		Health Information System (HIS) and Clinical reporting systems Service readiness, quality, coverage, health status		
Analysis Synthesis	Use of tools such as Risk Scoring and Composite/ Index Indicators; Data Quality Assessment (DQA); Estimates and projections; In-depth studies; Use of research results; Assessment of progress and performance of the response and health systems			
Communication & Use	Targeted and comprehensive Country Reporting; Regular country operational review processes; Regional & Global reporting			



Domains related to 'Data sources', 'Analysis and Synthesis', and 'Communication & Use' are described next (Section 6) from an M&E system perspective.

Within the M&E Framework, surveillance (4 of 11 pillars) plays an important role in monitoring KPIs together with Pillar 3 – surveillance, rapid response teams and case investigations –, with three additional pillars also contributing to surveillance, namely Pillar 7 dealing with case management and continuity of essential services (for mortality, recovery indicators), Pillar 5 on laboratory services (such as number of tests), and Pillar 6 on IPC (for example, persons hospitalized/ discharged). Disaggregated data on age, sex, and outcome (as appropriate) are reported, allowing for further analyses and targeted responses.

The benefit of using the logical framework and ultimately the data collected at country level is that they will be part of the decision-making process to adjust national or local responses (such as the implementation of a combination of measures, lockdowns, relaxation) to the pandemic. The decision-making process is therefore evidence-based, and complementary to other important parameters, such as socioeconomic factors that are essential to daily life and food security (for example, for groups of the population that may depend mainly on the informal sector for their livelihood).

5. International Partners

Many international partners have joined WHO's mission and support to countries for the COVID-19 multisectoral, cross-pillar response in the Region by supporting the implementation of M&E activities, including, but not limited to, surveillance. The 2014-2016 Ebola virus disease outbreak in West Africa provided evidence of synergies that can be developed in countries to control and eradicate the outbreak in the subregion. While many partners have an important role to play, the following examples will focus on three partners who have a particular role to play in surveillance and M&E.

The Global Fund (GF) recently released (GF, June 2020) a strategic report documenting its role in the response to the pandemic, notably in mitigating the impact of COVID-19 on countries affected by HIV/AIDS, TB and malaria, as outlined in the report's executive summary. (op. cit-, pp. 4-5). More specifically, some of the activities (requested by countries, relating to grant flexibilities for COVID-19 to the GF and Response Mechanisms and Grant allocation procedures[1] that are supported in reinforcing health systems for health, will address:

'Monitoring and evaluation systems and surveillance, through strengthening surveillance systems, e.g. integrated disease surveillance; contact tracing for the highest risk groups; procurement of mobile phones, tablets and laptops for data management and adherence support' (op. cit., p 15).

The COVID-19 Response Mechanism supports countries in responding to COVID-19, mitigating its impact on HIV, TB and malaria programmes, and initiating urgent improvements in health and community systems, including activities linked to M&E and surveillance.

Gavi, the Vaccine Alliance, issues regular situation reports for Gavi-eligible countries globally (GAVI, 16 June 2020)[2], with the aim of achieving its goals through routine immunization (RI), and other immunization support strategies, despite the impact of COVID-19:

'Fifty-one reprogramming applications have been approved so far, of which 36 are health system strengthening (HSS) reprogramming applications" (op. cit., pp. 2, 4). Among these, seven of the top 10 recipients are in the WHO African Region. Details are outlined by country (op. cit., pp. 5-9), with Pillar 3 – surveillance, rapid response teams and case investigations – accounting for 6% of the US$ 72.5 million devoted to reprogrammed activities according to the WHO Strategic and Response Plan (SPRP)'. (op. cit., p. 2).

The World Bank (WB) responded early in the COVID-19 pandemic with broad support to countries. More specifically, the WB is, among other activities 'Building systems for real-time community-based disease surveillance and through proactive, evidence-based citizen engagement'[3] (WB, 2020).

WHO is working with these international partners and many others in the M&E and surveillance of COVID-19. Opportunities are available for leveraging the necessary additional support for special funding through MoHs, for example, special monitoring of outbreaks in hotspots or sites, or development of additional tools (section 7.4), or other priorities as they arise (including for capacity-building, section 7.5).

1. *Response Mechanisms and Grant allocation (Xcel spreadsheet): https://www.theglobalfund.org/en/covid-19/response-mechanism/*

2. *Gavi: https://www.GAVI.org/sites/default/files/document/2020/GAVI-COVID-19-Situation-Report-11-20200616.pdf*

3. *Factsheet February 11, 2020 , This factsheet was last updated on June 8, 2020. https://www.worldbank.org/en/news/factsheet/2020/02/11/how-the-world-bank-group-is-helping-countries-with-covid-19-coronavirus*

6. Operationalization: M&E System Approach

There are 12 components that still guide the operationalization of M&E systems based on the 'Organizing Framework' developed for HIV/AIDS (UNAIDS, 2009) and subsequently largely used in public health programmes. The use of data for decision-making is central to the system approach, and its core elements are described below.

6.1. Human Resources, Roles and Responsibilities

The implementation of the Framework requires human resources at all levels of the response. The existing M&E networks (polio, immunization, HIV/AIDS, and others) in countries are used and staff have been repurposed accordingly. At country level, at least one M&E WCO focal point supports data collection, validation, analysis, reporting and assessment of pandemic control. At Hub/IST level, the M&E focal points support countries in their subregions and undertake the subregional assessment of pandemic control. At the regional level, the M&E Working Group coordinates all regional COVID-19 M&E functions in close collaboration with the response pillars. The regional M&E Working Group provides weekly updates on pandemic control through analyses of the situation to outline achievements and make recommendations on targeted or corrective actions for the response.

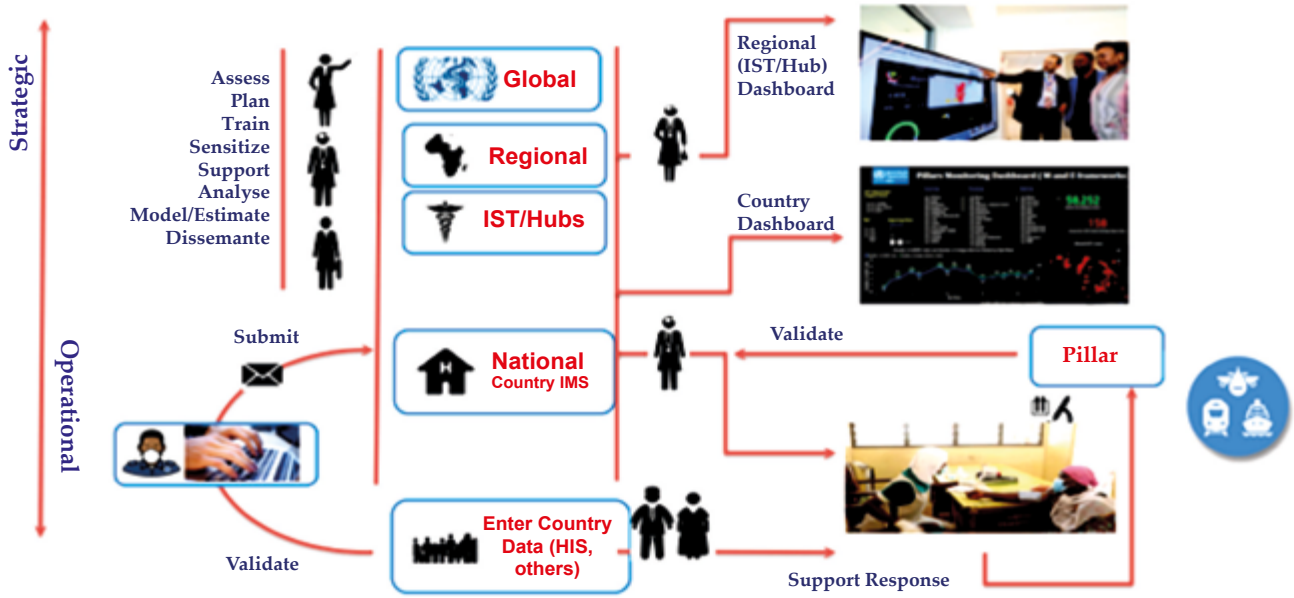
The implementation of the M&E Framework is done in a transparent manner with well-defined roles and responsibilities, including accountability of all stakeholders involved.

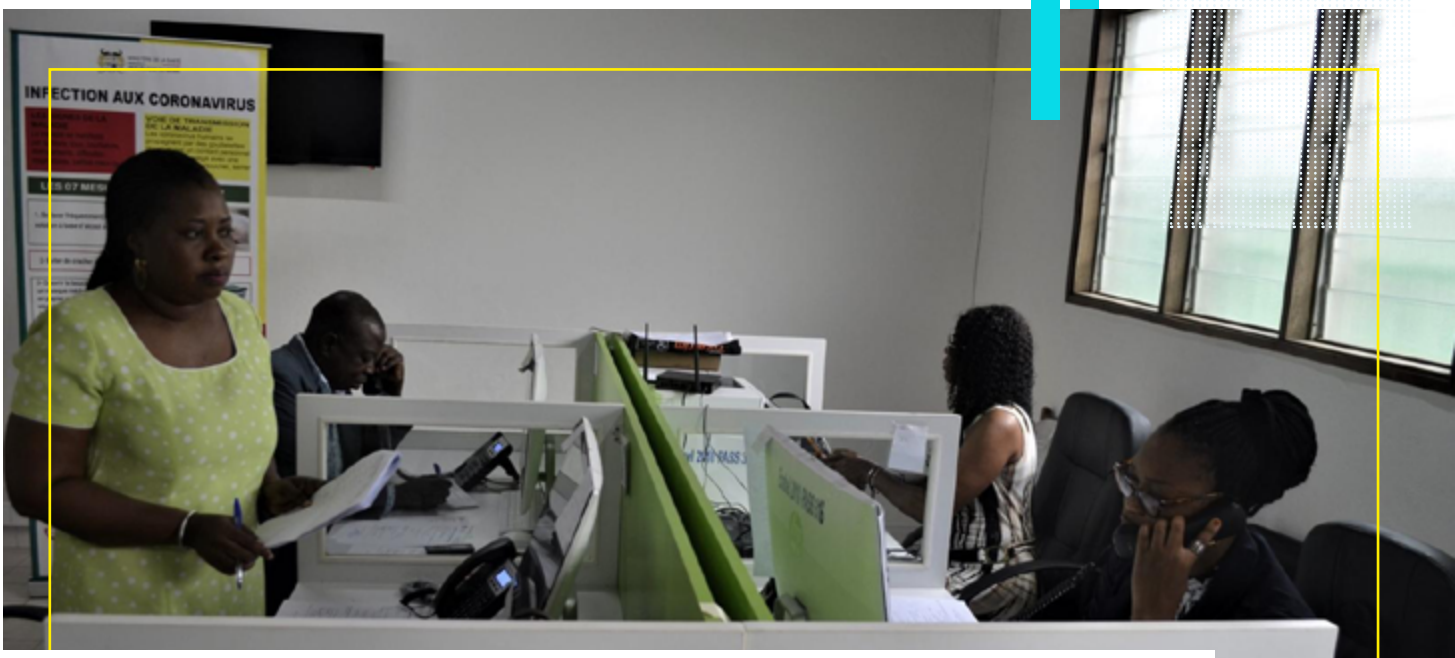
6.2. Workflow Data Collection, Data Sources and Data Processing

The Polio GIS infrastructure and resources serve as the backbone of the COVID-19 M&E system. This strategic choice stems from the various direct benefits they offer for an effective COVID-19 M&E system. The Polio GIS infrastructure is a well-functioning and robust reporting system at community level, with well-trained community health workers (CHWs) or health workers (HWs) for contact tracing, including in remote rural areas. Beyond the COVID-19 pandemic, the system can be sustained and transferred back to polio and/or repurposed for future epidemics. For each of the 11 pillars, various sources of information can be used (sections 7.1 and 7.2).

A high-level strategic and operational summary of the workflow and data processing is illustrated in Figure 2.

Figure 2 *COVID-19 M&E system workflow and data processing*





Data are collected in countries through various data collection products (called 'sitreps'). These are managed directly by the MoH, or jointly between the MoH and the WCOs. Finally, the WCO produces a sitrep using its own compiled data, which is transmitted to the WHO Regional Office (WRO).

Routine HIS covers much of the indicator reporting, in particular through the health infrastructure (such as facility-based reporting). The pandemic situation does not allow for the use of some of the data quality assessment tools available for national programmes such as HIV/AIDS (WHO, Data quality assessment of national and partner HIV treatment and patient monitoring data and systems implementation tool, 2018). Therefore, it is important to check data quality when entering data and during analysis, as it can constitute a limitation to the data reported through the system. WHO AFRO has promoted screening and recommendation of indicators (sections 7 and 8) using standard criteria[4] to check the quality of data (Box 1).

4. Source: adapted from JSI, MEASURE/ EVALUATION: https://www.measureevaluation.org/prh/rh_indicators/overview/rationale2)

Box 1. Criteria used to cross-check the robustness of indicators

Relevance: There is a clear relationship between the indicator for the national and regional level and the WHO Strategic Preparedness and Response Plan

Accuracy: The indicator measures what it purports to measure as per the Definitions (Appendix 1, Annex 4) and the definitions of indicators (including numerators and denominators in the various spreadsheets)

Importance: The measurement captures something that "makes a difference" in programme effectiveness, as per KPIs and emphasis on outcomes/impact

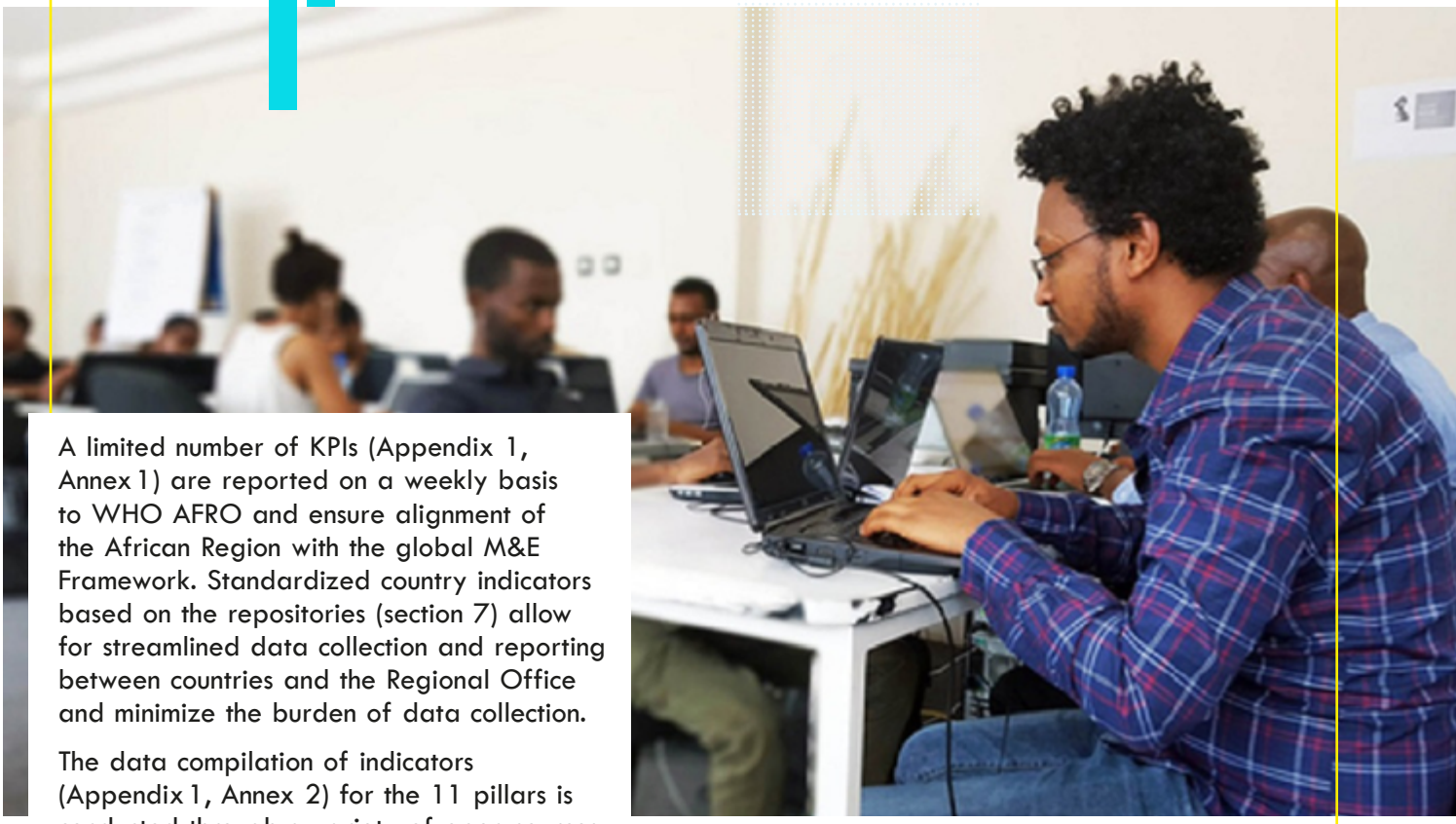
Usefulness: The results point to areas for improvement. Furthermore, the indicator captures information that helps move COVID-19 strategies, priorities, or programming forward towards their final aim and instructs decision-makers based on data

Feasibility: Data can be obtained with reasonable and affordable effort by the HIS using well-known standardized indicators that are easy to collect

Credibility: The indicators have been recommended – and are being used – by leading experts and organizations such as WHO, NGOs, the WB, other bilateral agencies across the world in the early stages of the pandemic

Validity: To the extent possible, the indicator has been field-tested in other epidemic/ pandemic situations or is used in practice, e.g. for the Ebola virus disease

Distinctiveness: The indicator lacks redundancy and does not measure something already captured under other indicators.



A limited number of KPIs (Appendix 1, Annex 1) are reported on a weekly basis to WHO AFRO and ensure alignment of the African Region with the global M&E Framework. Standardized country indicators based on the repositories (section 7) allow for streamlined data collection and reporting between countries and the Regional Office and minimize the burden of data collection.

The data compilation of indicators (Appendix 1, Annex 2) for the 11 pillars is conducted through a variety of open sources at the level of the country and the WCO, with the support of their partners, for example, Excel-based data management tools, Go.Data, EWARS-in-a-box (others, including DHIS2, ODK/collection forms, SORMAS, AVADAR and other systems are used as well).

6.3. Data Analysis and Synthesis

The MoHs conduct their own analysis, then the WCOs utilize dashboards (such as ArcGIS, PowerBI, Tableau) to compile the weekly situation reports and transmit them and other information to the Regional Office at specified reporting frequency (daily, weekly, monthly quarterly and annually). They are validated through an approval process and stored in servers at the data centre of the Regional Office. Regional, sub-regional and country dashboards (such as the weekly situation reports) are built on key indicators using traffic lights. The dashboard provides regional and functional data views tailored towards different audiences, which include regional WHO and COVID-19 teams, country decision-makers and WCOs and partners. The dashboards are available online and accessible via computers, tablets and smart phones. A weekly notification on updates is sent to key stakeholders.

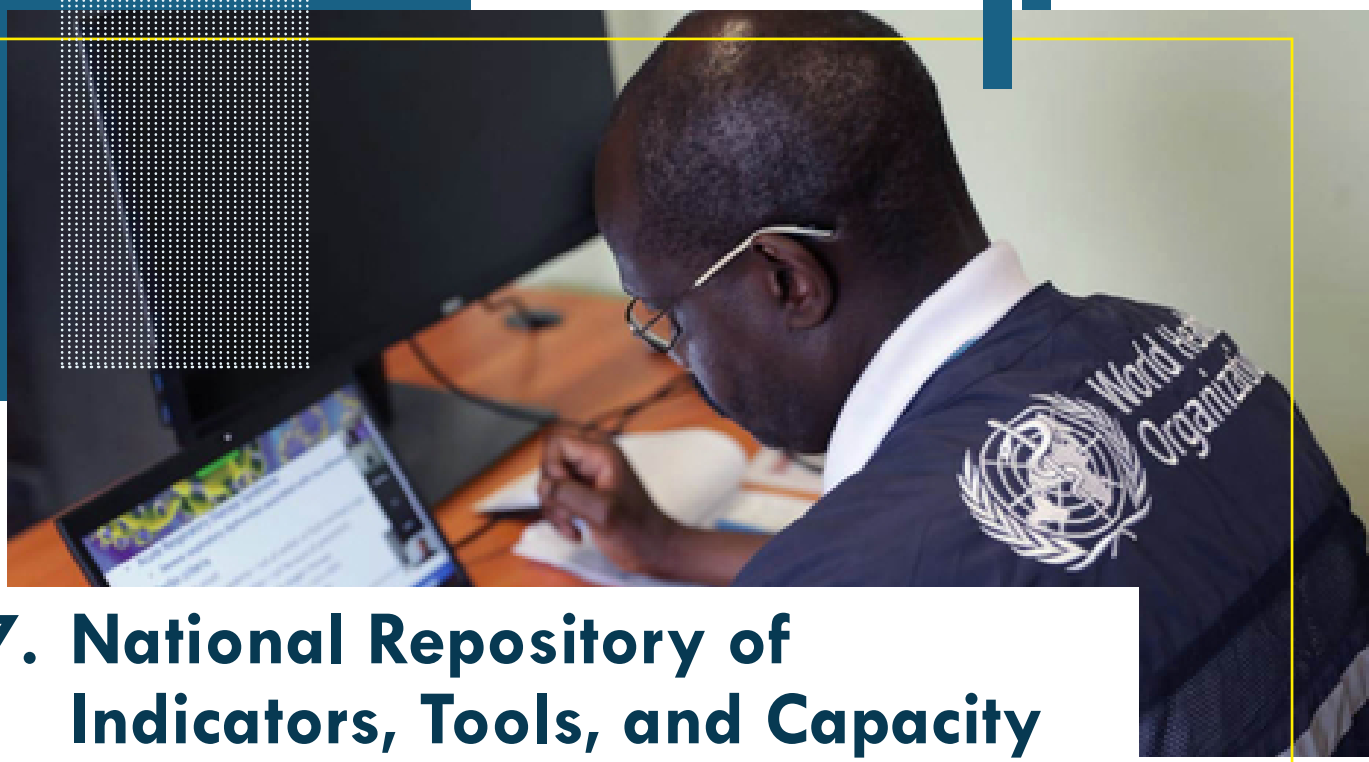
Additional analyses may be undertaken with other software packages such as SPSS, Stata, Excel, Power BI, Tableau or R.

6.4. Communication and Use, Report Writing

Communication and use of data are almost in real time (for example, daily and weekly) to monitor the progress of the pandemic and the response thereto, using the findings described above.

The national office in-charge of COVID-19 submits a weekly situation report (sitrep) to WHO based on the MoH data collected using the compendium of indicators in the repository (section 7). The WCO in turn submits a summary of KPIs every week in a dashboard as part of a weekly situation report (internal for the sake of independence and action expected from WCOs) to WHO AFRO. In addition, the WCO is part of the ongoing weekly discussions or feedback based on all reports, that takes place daily and/or weekly in countries through different mechanisms (such as briefings or task meetings).

The end products for WHO AFRO will reflect the needs of countries, those of the IMS in countries and partners, including IMST at regional level. These are comprised of activity reports, weekly, monthly, quarterly updated dashboards to facilitate data visualization, and progress reports on the response to the pandemic at country, subregional and regional levels.



7. National Repository of Indicators, Tools, and Capacity Building (Appendix 1, Annex 2)

The proposed indicators were chosen through a consultative selection process between the IMST COVID-19 response pillars and the M&E working group.

There is one national country level repository at the core of the M&E Framework (section 7.1) which the ministries of health are using at country level to collect, compile, and analyse the data harmonized for the 11 pillars in relation to the national plan (or its equivalent). For example, Pillar 3 on surveillance, rapid response teams and case investigation will collect indicators at country level such as:

- number of new confirmed cases reported during the last 7 days
- number of alerts investigated within 24 hours during the last 7 days.

This single repository, which largely relies on the HIS from the MoH as the original source of data (Fig. 1), prevents countries from being overwhelmed by the volume and quantity of national data requested. It streamlines data collection through the HIS, without burdening the countries with additional WHO information. WHO regional needs are detailed separately (section 8).

7.1. National Country Level Repository (Appendix 1, Annex 2)

The national country repository is a convenient menu base of indicators for the 11 pillars classified in the standardized, well-known M&E layout (an Excel Spreadsheet accessible on the WHO AFRO website, Appendix 1, Annex 2).

This open repository has the advantage that it may be tailored to country needs, and may also evolve during the pandemic, or be adapted for (future) pandemics of respiratory diseases that may be transmitted through aerosols or droplets. The indicators are categorized (inputs to outcomes/ impact, ref. Fig. 1 section 4) and include key performance indicators, which should be collected and reported as well.

The repository is not meant to be fully comprehensive. For example, countries may wish to monitor more closely the important roles of communities/civil society/NGOs, which may not be sufficiently monitored except through a few indicators. International NGOs may fill this niche by, for example, using anthropological research tools such as qualitative surveys to assess community participation or perceptions, to cite just one example. A limitation to the M&E Framework is that the listing of indicators does not encompass information collected through surveys (for example, Pillar 2 on

communication with KAP surveys).

The continuity of essential health services focuses on surveillance of routine services provision. It is important to rapidly identify areas where service utilization and/or capacity are affected, to put in place remedial measures. Just as with the ISDR process, it does not replace routine reporting mechanisms such as the HMIS, but rather serves as an early warning system.

Two aspects are monitored: service utilization (changes in the outcomes of service provision), and service capacity (changes in the ability to provide services).

For service utilization, numbers using different services across a health facility for a given month are compared with the average for the same month in the 2 previous years. If utilization for the assessed month is 2 standard deviations (SDs) out of the average value, it is considered a significant change and triggers an alert. The indicators used are (1) OPD new attendances, (2) # skilled birth attendances, (3) # of people living with HIV/AIDS in target area who received ART, and (4) DTP-3 coverage. For service capacity, the health facility is expected to capture any month by month changes in staff, medicines and/or infrastructure.

The tool to facilitate collection of the data is part of the disease surveillance tools already in use by the surveillance teams. This can be found here (https://rebrand.ly/servicecontinuity). As the national level team, it is important to constantly monitor the frequency of data capture by the surveillance team, and support those not reporting. At the end of each month, the national level extracts the country specific data and uses this to analyze the trends for alert points where utilization and/or capacity has changed significantly.

Reporting shall be monthly, summarizing the information in the surveillance tool. The summary shall have, for the just concluded month:

- Numbers of facilities by level (hospital / primary care facility) reporting for the month
- Numbers of persons utilizing services for the given indicator
- The proportional variation of the reported utilization from the preceding 2 years average, and so determining the proportional change in utilization
- Proportion of reporting facilities by level of care where staff, medicines or infrastructure capacity has reduced

With this information, countries are already reporting their progress on a weekly basis through the COVID-19 sitrep describing the epidemiological situation and the response measures and public health actions that have already been implemented.

7.2. Country Level Repository and WHO Traffic Light Approach (Appendix 1, Annex 2)

At the national level, the same approach is planned for the WCO, as part of WHO's internal procedures. Therefore, additional questions (and grading of performance) are proposed (Appendix 1, Annex 2), which may be used by the WCO and/or WHO AFRO to complement the information from the national level (Appendix 1, Annex 2).

To complement this process, the WCO will be using a new weekly reporting tool to monitor and report on KPIs (next section 7.3).

The WCO completes a weekly situation report (also based on the sitrep, with a focus on the KPIs - ref. next section 7.3 - but also additional sources of information) which complements the above national COVID-19 situation report by bringing additional analyses and action points to the attention of the WCO and WHO AFRO. This information may be relayed as necessary to the in-country MoH or international partners.

7.3. New Weekly Reporting Tool and KPIs

To avoid burdening countries and owing to the urgency of the response to the pandemic, WHO has developed an additional new weekly indicator tool for country offices in the form of an automated dashboard, which closely monitors KPIs (Appendix 1, Annex 1),[5] coming from the broader national reporting system, which are reported in the weekly situation report to WHO AFRO. This allows for monitoring of the COVID-19 response both at WCO, Hub and WHO AFRO levels.

5. available to WHO country offices and flagged as KPIs in the national country level repository

7.4. Additional Tools: Risk Scoring and Composite/ Index Indicators

7.4.1. Risk Scoring

A Risk Score Approach[6] has been adapted and has already been tested in more than half a dozen countries as an innovative tool for bridging the gap between epidemiologists and politicians.

In light of various dynamics that continents and countries have experienced since early 2020, including lockdowns and relaxing of lockdown measures, politicians have needed to be better informed, and to use and understand epidemiological findings in order to implement public health responses (from basic measures to lockdowns and relaxation measures).

To this end, WHO and partners have developed a risk score methodology. This innovative tool, which is still experimental, is adapted to countries' existing data and needs and may be further adapted.

The risk score methodology combines four KPIs into a COVID-19 risk score to allow for decision-making that is evidence-based (with a score of 3 for each):

- attack rate/100 000 population,
- laboratory tests performed per 10 000 population,
- increase in the case load over the last week (avoiding hospitals being overwhelmed by the demand for treatment),
- case fatality ratio (CFR), a measure of impact.

The risk score provides for assessing and differentiating the 'social and physical measures by level of COVID-19 risk' such as:

- basic measures (including social distancing of individuals, frequent hand washing, wearing of masks in public spaces, widespread testing),
- intra- and interregional and intercity public transport,
- curfews,
- reopening of workplaces for essential businesses with strict attention to hygiene conditions,
- reopening of shopping malls, secondary schools, restaurants, bars, cafés,
- allowing mass gatherings and 100% of the workforce to return to work.

6. adapted from: https://preventepidemics.org/covid19/resources/levels/

7.4.2. Key Composite/Index Indicators

Additional **key composite/index indicators** are already being used but not fully, for example, case fatality ratio, average doubling time. Others (such as reproduction number, R_0) still need further adaptation, testing and systematic use. (WHO, Public health criteria to adjust public health and social measures in the context of COVID-19, 12 May 2020).

These indicators are all important in monitoring the effectiveness of the national response but are also key to monitoring and gradually implementing steps to ease lockdown measures (as experienced in May, June, and July 2020 in several countries of the WHO European Region). The systematic monitoring of R_0 has been an essential determinant (reaching above or below R_0=1) of the impact of lockdowns and other measures, and relaxing them gradually at national or regional levels.

The development of such tools deserves further support (ref. concluding remarks in section 5 on partners) with the scaling up of testing and trials within 1-3 months.

7.5. Capacity Building

Capacity building takes place under different formats, for example, in-country, with distance training through the OpenWHO platform, such as 'Influenza sentinel surveillance training' a self-paced course.[7] At present, the enrollees' affiliation shows a low level of participation (5.6%) for sub-Saharan participants (available OpenWHO News, June 2020, p. 3), out of the 4 million enrolments.[8] A massive open online course (MOOC) on Ebola during the West African epidemic attracted several hundreds of participants from the African Region. (Castaneda, 2015)

International partners (section 5) may also invest in developing much-needed broad training in the above-mentioned tools for advanced monitoring of the pandemic (section 7.4).

7. available at: https://openwho.org/courses/influenza-sentinel-surveillance

8. available at: https://openwho.org/pages/monthly_newsletter

8. M&E of COVID-19 Response of the WHO Country and Regional Offices

In the recent Strategic Response Plan for the African Region (WHO, COVID-19 Strategic Response Plan for the WHO African Region, Febr.-Dec. 2020, Update 4 May 2020), the surveillance, rapid response teams and case investigation pillar (op. cit. pp. 15-16) lists nine activities at regional and country level to strengthen these components, with specific reference to activities such as 'strengthening or establishing contact tracing and alert monitoring, taking stock of the polio GIS surveillance capacity'. KPIs for both the countries and the Region are listed separately (op. cit., pp. 28-29).

The present Framework operationalizes further this strategic guidance for the Region. This Framework covers the period of the current Strategic Response Plan, which ends on 31 December 2020. WHO AFRO and the WCOs have the mandate to monitor and evaluate its application throughout the period of implementation.

The Framework covers three perspectives and audiences: countries may wish to monitor indicators related directly to the response (for example national laboratory system, IPC, case management), while the WCOs may be more concerned with the establishment of national coordination and operational support. Finally, WHO AFRO may wish to concentrate on improving the effectiveness of international coordination.

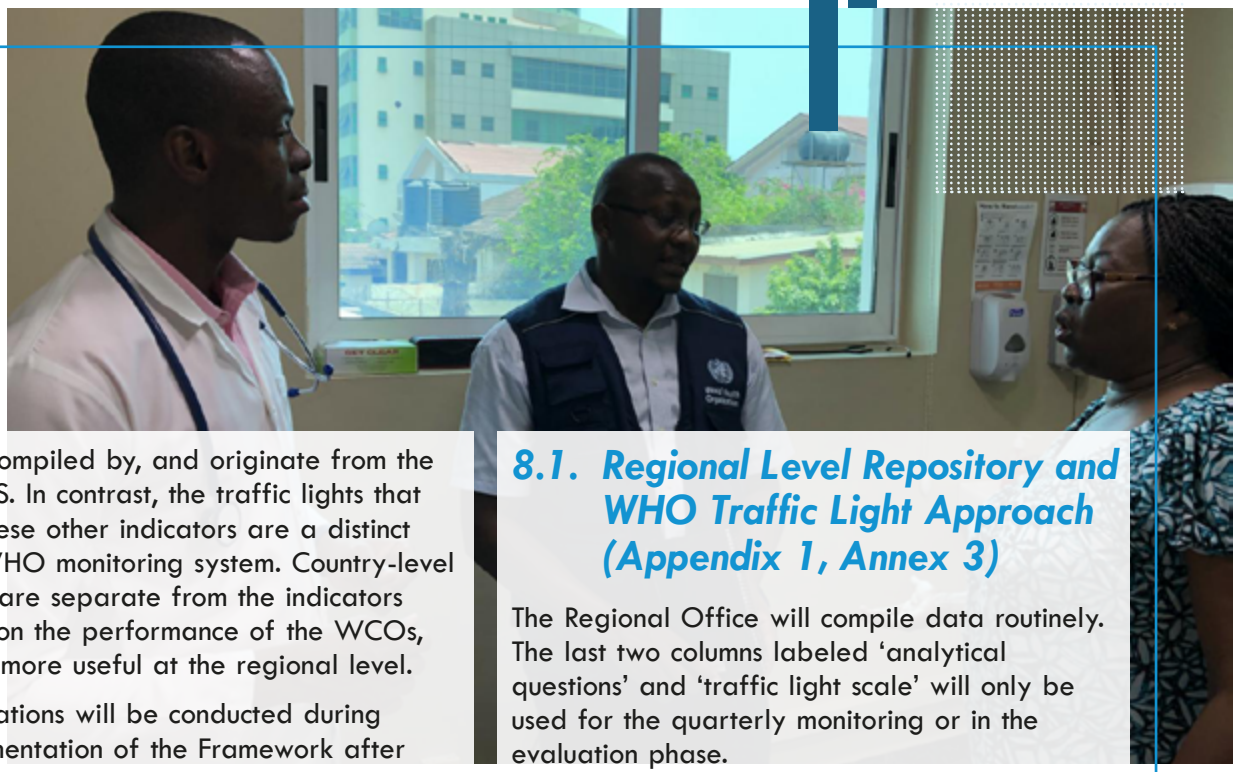
The regional level repository is a stand-alone M&E framework tailored to the needs of the WCOs and the Regional Office. For example, Pillar 3 on surveillance, rapid response teams and case investigation will collect data at country level through the WCOs:

- completeness of countries' daily COVID-19 reports submitted to WHO AFRO
- percentage of priority countries with IMS which have a focal point for implementing contact tracing and training.

Many indicators monitoring WHO regional efforts will be fed by specific indicators of WHO's role and support without being part of the HIS national reporting system.

WHO has set up an internal ongoing review with an M&E mechanism labelled the 'traffic light approach', adjusted for countries and the Region (section 8.1). In each pillar, and for each activity/indicator, analytical questions are asked, then graded using a 'traffic light scale'.

Most of the indicators are collected at country level (section 7.1), which means that



they are compiled by, and originate from the country HIS. In contrast, the traffic lights that support these other indicators are a distinct internal WHO monitoring system. Country-level indicators are separate from the indicators reporting on the performance of the WCOs, which are more useful at the regional level.

Two evaluations will be conducted during the implementation of the Framework after its launch. The mid-term evaluation will be conducted mid-September while the end-term evaluation will be conducted mid-January 2021. The mid-term evaluation will inform the changes required in the Framework based on the evolution of the pandemic and thus provide an opportunity for updating it. The end-term evaluation will focus on short-term outcome measurements in relation to the broader health system logical framework. To accomplish these objectives, WHO is planning to use an additional 'traffic light approach' described in the next section (sections 8.1).

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8.1. Regional Level Repository and WHO Traffic Light Approach (Appendix 1, Annex 3)

The Regional Office will compile data routinely. The last two columns labeled 'analytical questions' and 'traffic light scale' will only be used for the quarterly monitoring or in the evaluation phase.

This Framework lists indicators that will be used to monitor preparedness and response activities during the COVID-19 pandemic in the African Region and provides linkages to the latest WHO Thirteenth General Programme of Work, 2019-2023 (GPW 13)[9] results framework and the COVID-19 Global M&E Framework.

The information gathered from the Regional Level Repository, combined with the information from the National Country Level Repository (section 7.1), and the Country Level Repository and WHO Traffic Light Approach (Section7.2) will together allow for the compilation of a report of the subregions (Central Africa, West Africa, East and Southern Africa), and a regional COVID-19 report in the African Region (monthly or quarterly).

In conclusion, the 'Analysis for decision-making and traffic light approach' at regional and country levels is also going to be an important part of the mid- and end-term evaluations. Such mechanisms will allow the WHO Regional and Country Offices to strengthen their own accountability to partners in respect to their contributions to the response to the pandemic, either by pursuing specific strategies or, if necessary, re-evaluating some of their strategies. Countries, WHO offices, and partners are encouraged to use and extensively disseminate the present Framework.[10]

9. https://www.who.int/about/what-we-do/thirteenth-general-programme-of-work-2019---2023

10. Feedback or comments to improve the Framework and its indicators (Excel spreadsheets): afrooutbreak@who.int

9. References

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10. Appendix

APPENDIX 1. Repository of the COVID-19 M&E Framework available at https://www.afro.who.int/sites/default/files/Covid-19/M%26E%20Framework%20Appendices%20-%20Annex%201-4%20en.xlsx

- **Annex 1:** Key Performance Indicators
- **Annex 2:** Country Indicators
- **Annex 3:** Regional Indicators
- **Annex 4:** Definition of Key Terms

Annex 1: Key Performance Indicators

Pillar/Domain	No	Indicators	Frequency	Numerator	Denominator
Coordination, planning and monitoring	1	C1.2- Country with a functional multi-sectoral, multi-partner coordination mechanism for COVID-19 preparedness and response	Monthly	NA	NA
	2	C1.3- Percentage of government response plan budget that is funded	Weekly	Total amount mobilized for the government response plan	Total budget of the government respond plan
	3	C1.5- Percentage of WCO IMS planned positions filled	Weekly	Number of filled positions in the IMS	Number of planned positions in the IMS
	4	C1.6- Funds utilization rate of COVID19 Workplans	Weekly	Total amount in the COVID-19 OCR Plan utilized	Total amount in the COVID-19 OCR Plan budgeted
	5	C1.12- Percentage of funding mobilized locally for the COVID-19 national preparedness and response plan	Monthly	Total amount mobilized locally for the COVID-19 national preparedness and response plan	Total budget of the national COVDI-19 preparedness and response plan
	6	C1.14- Percentage of in-country staff in the WCO IMS	Weekly	Number of in-country staff in the WCO IMS	Total Number of staff in the WCO IMS
	7	C1.15- Percentage of WCO IMS staff deployed to or supporting decentralized IMSs	Weekly	Number of WCO IMS staff deployed to or supporting decentralized IMSs	Total Number of staff in the WCO IMS
	8	C1.16- Number of supportive supervision missions to decentralized IMS	Weekly	NA	NA
	9	C1.17- Percentage of regional COVID-19 guidelines adapted and implemented	Weekly	Number of Regional Covid-19 guidelines adapted and implemented	Total Number of Regional Covid-19 guidelines received
Risk communication and community engagement (RCCE)	10	C2.3- Rapid behavioural assessment for COVID-19 conducted by the country	Quarterly	NA	NA
	11	C2.8- Percentage of public transport means (taxis, buses, minibuses, motorbikes) complying with the social distancing policy	Quarterly	Number of public transport means (taxis, buses, minibuses, motorbikes) complying with the social distancing policy	Total Number of public transport means (taxis, buses, minibuses, motorbikes) observed
	13	C2.11- Percentage of individuals wearing correctly a face mask at check points	Quarterly	Number of individuals wearing correctly a face mask at check points	Total number of individuals observed at check points
	14	C2.12- Country with a rumor management mechanism is in place and operational and evidenced by a report	Monthly	NA	NA
	15	C2.13- Percentage of individuals reached by RCCE activity (e.g. CHW trainings, health worker trainings, hotline usage) last week	Quarterly	Number of individuals reached by RCCE activity (e.g. CHW trainings, health worker trainings, hotline usage) last week	Total number of individuals expected to be reached by RCCE activity (e.g. CHW trainings, health worker trainings, hotline usage) last week
	16	C2.14- Percentage of individuals observing handwashing or hand sanitizing at check points	Weekly	Number of individuals observing handwashing or hand sanitizing at check points	Number of individuals observed at check points

Pillar/Domain	No	Indicators	Frequency	Numerator	Denominator
Surveillance, rapid response teams and case investigation	17	C3.2- Percentage of contacts followed last 24 hours	Weekly	Number of contacts followed the previous day	Total number of active contacts
	19	C3.13- Percentage of alerts investigated within 24h during the last 7 days	Weekly	Total number of alerts investigated within 24h during the last 7 days	Total number of alerts recorded during the last 7 days
	20	C3.16- Percentage of new confirmed cases among known contacts the last 7 days	Weekly	Number of new confirmed cases among known contacts the last 7 days	Total number of confirmed cases the last 7 days
	21	C3.17- Percentage of confirmed cases among healthcare workers	Weekly	Cumulative number of confirmed cases among healthcare workers	Cumulative number of confirmed cases
	22	C3.18- Percentage of new confirmed cases among healthcare workers the last seven days	Weekly	Number of new confirmed cases among healthcare workers during the last 7 days	Number of new confirmed cases during the last 7 days
	23	C3.19- Percentage of districts that have reported at least one confirmed case during the last 7 days	Weekly	Number of districts (admin level 2) that have reported at least one confirmed case during the last 7 days	Number of districts (admin level 2) in the country
	24	C3.20- Case fatality ratio of confirmed cases reported during the last 7 days	Weekly	Number of deaths of confirmed cases that occured during the last 7 days	Number of confirmed cases las 7 days
Points of entry	25	C4.1- Percentage of designated points of entry (PoEs) with messages for both travelers and staff working at the PoE facilities and conveyances	Monthly	Number of designated points of entry (PoEs) with COVID-19 messages	Total number of designated PoE
	26	C4.2- Percentage of designated points of entry with screening, isolation facilities and referral system for COVID-19	Weekly	Number of designated points of entry with screening, isolation facilities and referral system	Total number of designated PoE
	28	C4.5-Percentage of travelers who tested positive on arrival in the last 7 days	Weekly	Number of travelers who tested positive on arrival in the last 7 days	Total number of travelers tested on arrival in the last 7 days
Laboratory services	29	C5.1- Number of laboratories with COVID-19 testing capacity in the country	Weekly	NA	NA
	30	C5.3- Number of daily PCR tests conducted	Daily	NA	NA
	31	C5.6- Percentage of samples with laboratory results shared within 48 hours	Weekly	Number of samples with laboratory results shared within 48 hours the previous week	Total number of samples collected and analysed the previous week
	32	C5.8- Percentage of districts laboratories with COVID-19 testing capacity	Weekly	Number of districts laboratories with COVID-19 testing capacity	Total number of existing districts laboratories
	33	C5.11-Percentage increase in lab testing capacity	Weekly	Cumulative number of tests per 10 000 population performed at the end of the current week	Cumulative number of tests per 10 000 population performed at the end of the previous week
	34	C5.12-Percentage of new tests performed during the current week by labs at decentralized level	Weekly	Total number of new tests performed during the current week by labs at decentralized level	Total number of new tests performed during the current week by all labs

Pillar/Domain	No	Indicators	Frequency	Numerator	Denominator
Infection Prevention and control	35	C6.2- Percentage of health facilities with available handwashing facility having soap for use at critical points and times.	Monthly	Number of health facilities with available handwashing facility having soap for use at critical points and times.	Total number of health facilities targeted
	36	C6.5- Percentage of priority health care facilities with isolation capacity	Monthly	Number of priority health care facilities having isolation capacity	Total number of priority health facilities
		C6.10- Percentage of health care workers trained in IPC for COVID-19	Weekly	Number of health care workers trained in IPC for COVID-19	Total number of health care workers targeted for training on IPC for COVID-19
	38	C7.3- Percentage of health care workers trained in basic case management of COVID-19 cases	Weekly	Number of health care workers trained in basic management of COVID 19 patients the previous month	Total number of health care workers in the country
	39	C7.7- Bed occupancy for severe/ critical cases	Weekly	Number of beds occupied by severe/ critical cases	Total number of beds available for severe/critical cases
	40	C7.11- Bed occupancy rate for confirmed cases at present	Weekly	Total number of designated beds for confirmed COVID-19 cases	Number of bed occupied by confirmed cases at present
	41	C7.12- Number of COVID-19 treatment centers functional at present	Weekly	NA	NA
	42	C7.13- Case fatality ratio	Weekly	Cumulative number of deaths	Cumulative number of cases
Operational support and logistics	43	C8.1- Number of staff trained in the use of the UN pool procurement portal	Weekly	NA	NA
	44	C8.2- Country with a functioning logistic supply monitoring system for COVID-19	Weekly	NA	NA
	45	C8.4- Number of days with stockouts of PPEs, testing kits or medical equipements at medical store last week	Weekly	NA	NA
External communication	46	C9.2- Number of social media messages on COVID-19 shared last week on social media platforms	Weekly	NA	NA
Research, Innovations and Vaccines	47	C10.1- Number of studies (Early investigations or Research on priority questions) conducted on COVID-19	Quarterly	NA	NA
	48	C10.2- Country participating in the Solidarity Trial	Quarterly	NA	NA
	49	C10.3- Number of innovations for COVID-19 used in the country	Quarterly	NA	NA

Pillar/Domain	No	Indicators	Frequency	Numerator	Denominator
Continuity of essential health services	50	C11.3- Number of OPD attendance	Monthly	NA	NA
	51	C11.5- Number of surviving infants receiving third dose of DPT containing vaccine	Monthly	NA	NA
	52	C11.17- Number of caesarean sections performed in the country	Monthly	NA	NA
	53	C11.18- Percentage of change in consultations	Monthly	Number of consultations last month	Number of consultations same month in 2019
	54	C11.19- Percentage of change in surviving infants receivig first dose of measles containing vaccine (MCV1)	Monthly	Number of surviving infants receivig third dose of measles containing vaccine during the last month	Number of surviving infants receivig third dose of measles containing vaccine the same period in 2019
	55	C11.20- Percentage of change in ODP attendance	Monthly	Number of OPD attendance during the last month	Number of OPD attendance during the same month in 2019
	56	C11.21- Percentage of change in number of people living with HIV in target area who received ART	Monthly	Number of people living with HIV in target area who received ART last month	Number of people living with HIV in target area who received ART during the same month in 2019

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Correspondence on this publication may be directed to:
WHO Emergency Preparedness and Response
WHO Regional Office for Africa
P O Box. 06 Cité du Djoué, Brazzaville, Congo
Email: afrooutbreak@who.int

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REGIONAL OFFICE FOR Africa