# **Strengthening real-time health services tracking and monitoring in the context of the COVID-19 pandemic**

*Country concept note for adaptation and tailoring, 25 February 2021*

## Objectives

The proposed work aims to strengthen country capacities to track and monitor the delivery of essential COVID-19 tools and other essential health services. Primary objectives are included below:

1. Generate understanding and evidence to identify health systems bottlenecks through rapid readiness assessment tools (facility, community levels);
2. Guide country responses to deliver COVID-19 tools and maintain essential health services by strengthening country capacities and platforms in health systems and services monitoring, analysis and use of data; and
3. Scale to sustainable health services monitoring systems through implementation, documentation and learning.

## Context

Over the past year, the COVID-19 pandemic has challenged public health systems and health services globally, revealing that even robust health systems can be rapidly overwhelmed and compromised by an outbreak. A multitude of questions must be addressed to prepare for and respond directly to the COVID-19 pandemic while maintaining other essential health services. Key decisions and actions to mitigate health system bottlenecks and constraints must be informed by accurate and real-time data collected through ongoing tracking and monitoring of health services during all phases of the COVID-19 pandemic.

To respond to this need and improve availability of accurate and timely data on health service capacities throughout a rapidly evolving situation, regular monitoring systems can be strengthened through regular and rapid surveys in facilities and communities to fill critical data gaps and help determine priority needs in terms of service availability, workforce capacities, training and protection, the availability of essential health products and supplies, vaccine readiness, infection prevention and control (IPC) capacities and safety measures.

## Approach

***1. Frontline service readiness assessment tools to identify health systems bottlenecks and gaps***

The proposed approach fills critical data gaps by implementing regular and rapid facility and community surveys on a regular basis in a sample of sentinel facilities and communities The scope and frequency of the survey, including the identification of survey module should be adapted to country context, priorities, and needs. Please see annex for further details on suite of modules [WHO suite of health facility and community assessments in the context of the COVID-19 pandemic](https://www.who.int/teams/integrated-health-services/monitoring-health-services).

An overview of key questions the tools help to answer and proposed indicators is included in the Annex 1.

The tools are designed to detect and monitor health systems bottlenecks and health facility capacity and readiness gaps throughout the rapidly changing and uncertain course of the pandemic. The recommended data collection methodology is high-frequency phone surveys with facility managers and/or community representatives in a network of sentinel facilities and communities (in facility catchment area), facilitated through an online instrument. This approach takes into account the need for high frequency (near to real-time) data as well as for rapid and safe implementation using limited resources. While not fully representative of the national context, sentinel facilities and communities can nonetheless provide early evidence of changes in health service provision and utilization. Frequency may range from monthly to quarterly to provide trend data and allow national planners and stakeholders to track the impact on health service capacities throughout the pandemic.

***2. Guiding country response through automated analysis and dashboards***

Should countries choose to use the WHO online instrument for the phone survey, automated analysis chartbooks and dashboards will be available for real-time decision making and use. The dashboards will bring together survey data with pertinent available routine data to provide an alert function for specific bottlenecks and challenges – such as stock outs, changes in utilization, service disruptions and staff shortages – to inform mitigation strategies and protocols for maintaining essential health services as well as for planning and redistribution of resources at national, subnational and local levels. Countries will have access to their country database locally. When repeated regularly (monthly or quarterly) the approach can support continuous monitoring for real-time use as the situation evolves. Regular policy dialogues should be organized with key country stakeholders at each survey interval to review findings, alert critical bottlenecks, and co-develop an action plan to mitigate challenges and disruptions.

***3. Building better resilient systems for real-time health services tracking and monitoring in the context of the COVID-19 pandemic***

Through documentation, adaptation and learning, the aim is to integrate these tools and dashboards into routine data systems that allow countries to scale to support sustainable real-time monitoring and early warning systems for health services in the event of future crises.

## Key activities

1. **Rapid assessment and situation analysis**
	1. Regular routine data collection
	2. Facility and community sentinel survey
		1. Establishment of governance and coordination mechanisms for survey implementation;
		2. Preparatory and planning activities, including:
			1. Determining scope and frequency (monthly or quarterly) of survey
			2. Developing sampling approach and determining the sample
			3. Reviewing and adapting modules, training materials, analysis plan, analysis chartbooks, and dashboards to meet country-specific needs (paper and electronic formats)
			4. Identifying/contracting and training the survey implementation team
			5. Preparing survey plan and materials (e.g. facility contact list, interview schedule)
			6. Pilot testing the tools
		3. Data collection and inputs into automated analysis chartbooks/dashboards;
	3. Analysis and triangulation of data to identify key priorities;
2. **Country workshop/policy dialogues** to develop action plan and strategies for prioritizing mitigation strategies and resource allocation;
3. Repeat activities 1-2 for **ongoing monitoring and evaluation** as action plan is implemented and situation evolves to adapt and update action plan; and
4. **Documentation of learning**. Key activities should be adapted based on learning and repeated [quarterly/monthly] in subsequent survey rounds for ongoing monitoring and adaptation and for scaling to early warning systems for health services in future crises.

## Deliverables

1. Facility and community survey completed
2. Country data triangulated and consolidated in country database and dashboard
3. Country report on key findings and priority actions
4. Recommendations for scaling system to early warning health services monitoring system for future health crises

## Annex 1: Suite of health service capacity assessments in the context of the COVID-19 pandemic

In response to country demand, the [suite of health service capacity assessments in the context of the COVID-19 pandemic](https://www.who.int/teams/integrated-health-services/monitoring-health-services) has been developed to support rapid and accurate assessment of the current, surge and future capacities of health facilities throughout the different phases of the COVID-19 pandemic. The suite consists of core modules as well as in-depth assessment modules that can be used to inform the prioritization of actions and decision-making at local, subnational and national levels. Countries may select different combinations of modules according to context and need for one-time or recurrent use.

Key questions that the core modules can help to answer and key performance indicators are described below.

**Table 1. Suite of health service capacity assessments in the context of the COVID-19 pandemic**

|  |
| --- |
| **Health facility and community assessment tools (core modules)** |
| 1 | [**COVID-19 case management capacities: diagnostics, therapeutics, vaccine readiness, and other health products**](https://www.who.int/publications/i/item/WHO-2019-nCoV-HCF_assessment-Products-2020.1) | Assess present and surge capacities for the treatment of COVID-19 in health facilities |
| 2 | [**Continuity of essential health services: facility assessment tool**](https://www.who.int/publications/i/item/WHO-2019-nCoV-HCF_assessment-EHS-2020.1) | Assess health facility and health workforce capacities to maintain the safe provision of essential health services  |
| 3 | [**Community needs, perceptions and demand: community assessment tool**](https://www.who.int/publications/i/item/WHO-2019-nCoV-vaccination-community_assessment-tool-2021.1) | Assess community needs, changes in care-seeking behaviours, and barriers to accessing care |
| **In-depth assessment tools/modules**  |
| 4 | [**Rapid hospital readiness checklist**](https://www.who.int/publications/i/item/WHO-2019-nCoV-hospital-readiness-checklist-2020.1) | Assess overall hospital readiness to identify priority actions to prepare for, be ready for and respond to COVID-19 |
| 5 | [**Biomedical equipment for COVID‑19 case management – inventory tool**](https://www.who.int/publications/i/item/WHO-2019-nCov-biomedical-equipment-inventory-2020.1) | Conduct an in-depth facility inventory of biomedical equipment re-allocation, procurement and planning measures for COVID-19 |
| 6 | [**Ensuring a safe environment for patients and staff in COVID‑19 health-care facilities**](https://www.who.int/publications/i/item/WHO-2019-nCoV-HCF_assessment-Safe_environment-2020.1) | Assess structural capacities of health facilities to allow safe service delivery and enable surge capacity planning |
| 7 | [**Infection prevention and control health-care facility response for COVID-19**](https://www.who.int/publications/i/item/WHO-2019-nCoV-HCF_assessment-IPC-2020.1) | Assess infection prevention and control capacities to respond to COVID-19 |

[**COVID-19 case management capacities module**](https://www.who.int/publications/i/item/WHO-2019-nCoV-HCF_assessment-Products-2020.1)

**Table 2. Key questions this module helps to answer and key performance indicators**

|  |  |  |
| --- | --- | --- |
| **Sections** | **Key questions** | **Key performance indicators**  |
| **1** | **Health facility description** | * What are the facility characteristics?
 | * All key performance indicators (KPIs) can be disaggregated by facility type, residence area (rural/urban), managing authority (public/private)
 |
| **2** | **Hospital IMST** | * Have facilities adopted and activated incident management support (IMST) team protocols?
 | * % of facilities with IMST protocols adopted and activated
 |
| **3** | **Case management & bed capacity** | * Do facilities have sufficient bed and space capacities to manage COVID-19 patients?
 | * Total # of beds for COVID patients (moderate, severe, critical)
* # of beds currently occupied by COVID patients
* Total # of beds available for surge (ICU, respiratory isolation)
 |
| **4** | **Medicines & supplies** | * Do facilities have the necessary medicines and medical supplies for the management of COVID-19 patients?
 | * % of facilities with available tracer medicines
* % of facilities participating in the Solidarity Clinical trial (and availability of trial medications)
 |
| **5** | **Personal protective equipment (PPE) & IPC** | * Do facilities have necessary PPE for health workers?
* Do facilities have the necessary IPC supplies?
 | * % of facilities with available personal protective equipment for staff (e.g. masks, gowns, goggles, etc.)
* % of facilities with available infection prevention and control supplies (e.g. soap, biohazard bags, sanitizer stations, etc.)
 |
| **6** | **COVID-19 laboratory diagnostics** | * Do facilities have necessary COVID-19 diagnostic supplies for COVID-19 testing?
 | * % of facilities with laboratory diagnostic capacities with tracer items (e.g. specimen collection, onsite PCR/ RDTs, system for offsite testing)
* % of facilities receiving timely results
 |
| **7** | **Medical equipment** | * Do facilities have the necessary medical equipment for COVID-19 patient diagnosis, monitoring and case management?
 | * % of facilities with available/functional medical equipment onsite for COVID-19 diagnosis, monitoring, and case management (e.g. x-ray, pulse oximeters, ventilators, oxygen, etc.)
* % of facilities with malfunctions (and reasons)
 |
| **8** | **COVID-19 vaccine readiness** | * Do facilities have a functioning cold chain ready to support COVID-19 vaccine introduction?
 | * % of facilities with functional cold chain capacity to deliver COVID-19 vaccines (vaccine fridge with continuous temperature recorder, vaccine carriers/cold boxes, ice packs)
 |

[**Continuity of essential health services module**](https://www.who.int/publications/i/item/WHO-2019-nCoV-HCF_assessment-EHS-2020.1)

**Table 2. Key questions this module helps to answer and key performance indicators**

|  |  |  |
| --- | --- | --- |
| **Sections** | **Key questions** | **Key performance indicators** |
| **1** | **Health facility description** | * What are the facility characteristics?
 | * All KPIs can be disaggregated by facility type, residence area (rural/urban), managing authority (public/private)
 |
| **2** | **Staffing** | * How many staff are available?
* How many staff have been diagnosed with COVID-19?
* Is additional staff training and support being provided related toCOVID-19?
 | * % of staff (by occupation) diagnosed with COVID
* % of facilities with staff leave/absences and reasons/changes in staff management
* % of facilities providing staff training, support, supervision (by type)
 |
| **3** | **Financial management** | * Are facilities continuing to charge user fees?
* Are facilities receiving additional funding for essential health services?
* Are staff salaries and overtime pay paid on time?
 | * % of facilities that waived/increased user fees
* % of facilities receiving additional funding for essential health services and sources
* % of facilities maintaining on-time salary/overtime payments
 |
| **4** | **Service delivery & utilization** | * Has delivery of non-COVID-19 services changed?
* Has service utilization increased/decreased and what are the reasons?
* Which types of services or service areas have been most affected?
* Has the facility implemented community communication campaigns?
* Has the facility made catch-up plans for missed routine appointments?
 | * % of facilities with service delivery modifications
* % of facilities with observed increases/decreases in tracer services (OPD, IPD, emergency) and reasons
* % of facilities with service restoration plans
* % change in service utilization (record review)
 |
| **5** | **IPC & PPE** | * Are safety processes and protocols in place to ensure the safe delivery of services?
* Do facilities have triage/isolation capacities?
* Do staff have sufficient PPE to deliver services safely?
 | * % of facilities with safe environment measures (triage capacity, isolation capacity)
* % of facilities with IPC guidelines in place
* % of facilities with adequate PPE for staff
 |
| **6** | **Management of COVID-19 in PC** | * Which COVID-19 primary care services are being delivered in the facility?
* What support is being provided to deliver these services?
 | * % of primary care facilities with measures to manage COVID-19 (mild cases)
* % of facilities with capacity to provide COVID-19 services in primary care
 |
| **7** | **Therapeutics** | * Do facilities have available therapeutics for services?
 | * % of facilities with available tracer therapeutics
 |
| **8** | **Diagnostics** | * Do facilities have available diagnostic tests and supplies for essential health services?
 | * % of facilities with available tracer diagnostics
 |
| **9** | **Vaccine readiness** | * Do facilities have functioning cold chain capacity?
 | * % of facilities with cold chain capacities
 |
| **10** | **Facility infrastructure** | * Have facilities experienced unplanned closures?
* Have facilities experienced infrastructure issues?
 | * % of facilities experiencing unplanned closures
* % of facilities with infrastructure-related issues
 |

[**Community needs, perceptions and demand module**](https://www.who.int/publications/i/item/WHO-2019-nCoV-vaccination-community_assessment-tool-2021.1)

**Table 3. Key questions this module helps to answer and key performance indicators**

|  |  |  |
| --- | --- | --- |
| **Section** | **Key questions** | **Key performance indicators** |
| **1** | **Identification and informed consent** | * Who is the key informant providing responses?
* What is the residence setting of the community?
 | * All KPIs can be disaggregated by type of community key informant (CHW, community leader, CSO, etc.) and residence area (rural/urban)
 |
| **2** | **Community needs and use of essential health services** | * How has the COVID-19 pandemic affected utilization of essential health services?
* What are the current unmet needs for health services in the community?
 | * % of key informants who believe that community has unmet health needs
 |
| **3** | **Barriers to seeking care** | * What are main barriers for people to use essential health services during the COVID-19 pandemic?
* Are there marginalized group more affected during the COVID-19 pandemic?
* Where/what are the first point of contact during COVID-19 pandemic?
 | * % of key informants who believe that community faced barriers to seeking care pre-COVID
* % of key informants % who believe barriers to care have increased during COVID-19
* % of key informants who believe there are disadvantaged groups in the community
* Distribution of first point of care/information in the community
 |
| **4** | **Attitudes towards COVID-19 vaccination** | * What are perceived attitude towards potential COVID-19 vaccine?
 | * % of key informants who believe community has demand for COVID-19 vaccine (adults, children)
* Distribution of reasons for low demand
 |
| **5** | **Barriers in delivery of community-based services** | * Have community health workers (CHWs) been able to continue their work in the COVID-19 pandemic context?
* Have CHWs experienced stigma in pursuing their functions?
 | * Distribution of perceived risk (moderate, high, very high) reported by % of CHWs informants and reasons
* % of CHWs lacking support to perform work
* % of communities with change in service volume by service (e.g. malaria prevention, social support for TB patients)
 |