

Rapid hospital readiness checklist

Harmonized health service capacity assessments in the context of the COVID-19 pandemic

INTERIM GUIDANCE

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Organization



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WHO continues to monitor the situation closely for any changes that may affect this interim guidance. Should any factors change, WHO will issue a further update. Otherwise, this interim guidance document will expire 2 years after the date of publication.

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Summary

Harmonized health facility assessment modules in the context of the COVID-19 pandemic

The *Harmonized health facility assessment modules in the context of the COVID-19 pandemic* is a suite of health facility assessment tools to support rapid and accurate assessments of current, surge and future capacities of health facilities throughout the different phases of COVID-19 preparedness, response and recovery. The suite comprises of modules related to facility readiness and response planning and COVID-19 case management, as well as in-depth modules on the availability of essential medicines, diagnostics, supplies, and essential biomedical equipment for COVID-19, infection prevention and control capacities, and treatment centre design and structural capacities. Additionally, it includes a module on the continuity of essential health services during the COVID-19 outbreak to help assess changes in service utilization, service delivery modifications, and required capacities to ensure the maintained delivery of non-COVID-19 essential health services.

The modules can be used to inform the prioritization of actions and decision-making at health facility, subnational and national levels. Countries may select different combinations of modules according to context and need for one-time or recurrent use throughout the pandemic.

Rapid hospital readiness checklist for COVID-19

The *Rapid hospital readiness checklist for COVID-19* assesses hospital governance, structures, plans and protocols to help countries rapidly determine current capacities and gaps of hospitals to respond to the COVID-19 pandemic and to identify major areas that require investment and action and to develop hospital readiness improvement plans. The tool can be used periodically to monitor hospital emergency operational readiness capacity development.

Content areas include:

- Leadership and Incident Management System
- Coordination and communication
- Surveillance and information management
- Risk communication and community engagement
- Administration, finance and business continuity
- Human resources
- Surge capacity
- Continuity of essential support services
- Patient management
- Occupational health, mental health and psychosocial support
- Rapid identification and diagnosis
- Infection prevention and control

Target audiences:

Primary: Hospital managers

Others:

- National and subnational health authorities
- National and sub-national COVID-19 incident management teams
- Facility managers

Key questions:

- Do facilities have the necessary arrangements and backup arrangements in place and functioning to respond to COVID-19 (including safe and quality care of COVID-19 and non-COVID-19 patients and the continued provision of safe and essential public health functions)?
- Which recommended actions need to be prioritized and invest in to make the facility fully functional?
- What are the 'to do' priority actions in case of surge?

When to use:

Pre-outbreak/epidemic or early stage of outbreak/epidemic, during pandemic/epidemic

Mode of data collection:

Paper based and electronic



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Introduction

The WHO *2019 novel coronavirus (2019-nCoV): strategic preparedness and response plan* for novel coronavirus disease (COVID-19) outlines the public health measures that need to be considered by countries to prevent, prepare for and respond to the COVID-19 pandemic. The plan supports countries to rapidly identify relevant actions from their national action plans for health security and pandemic influenza preparedness, which are pertinent to managing the COVID-19 pandemic and can be adapted using the knowledge that has been gained about the COVID-19 virus. Using these plans will help guide and align all national and international partners to support national governments in managing the pandemic. The nine pillars of the Strategic Plan for COVID-19 refer to different aspects of the pandemic and allow countries to develop capacities to respond to the crisis, including by taking measures to strengthen their health systems. In the context of COVID-19, specialized services offered by health care facilities, especially those available in hospitals, will be required to serve the affected population.

On 30 January 2020, the Director-General of the World Health Organization, declared the COVID-19 outbreak to be a global public health emergency of international concern under the International Health Regulations. Following the spread of COVID-19 cases in many countries across continents, COVID-19 was characterized as a pandemic on 11 March 2020 by the Director-General, upon the advice of the International Health Regulations Emergency Committee.

The current and rapidly evolving nature of the COVID-19 pandemic requires hospitals to have in place all essential preparedness measures. These measures may vary depending on the designated role of each hospital and the way in which hospitals are linked to the country's overall plan for managing the pandemic while continuing to provide essential services to other patients who require care. These roles are likely to include (a) testing people for COVID-19 and managing early investigations to identify confirmed cases who require hospital care, (b) providing treatment for COVID-19 cases, (c) continuing to provide routine essential health services, (d) preventing patients from acquiring COVID-19 while in hospital, and (e) communicating information on COVID-19 as part of the country's and hospitals' risk communication strategy in coordination with the central response system and communities, with the aim of containing and mitigating the pandemic.

This WHO rapid hospital readiness checklist for COVID-19 was developed based on WHO's COVID-19 strategic response and preparedness plan, hospital preparedness for epidemics and interim versions of similar checklists from WHO's Regional Office for the Americas/Pan American Health Organization, the Regional Office for Europe and WHO headquarters. The purpose of the Checklist is to help hospital managers prepare for COVID-19 patient management by optimizing each hospital's capacities. It has been designed to be user-friendly, taking into consideration the human resources and the assessment time required to conduct and complete the checklist in its entirety.

The Checklist carefully connects the hospital's COVID-19 capacity requirements with each hospital's:

- existing plans and capacities for managing epidemics and seasonal outbreaks of diseases, such as influenza, and highlights the use of measures needed to protect staff, other patients and visitors from infection;
- plans and capacities to manage emergencies and disasters arising from other hazards;
- general and specialized services that are normally provided;
- designated role during the COVID-19 pandemic, including any specific services that it will offer.



Thus, the Checklist takes into account a wide range of issues including the need to provide continuing care to patients with acute or chronic illnesses; the laboratory services needed; the relevant blood supplies and services; the need to provide community health outreach activities (such as immunization and antenatal care); the distribution, tracking and security of medicines and medical supplies; how hospitals manage information; the need to train staff and other personnel; security challenges, including the protection of health care workers, patients and visitors; and the needs for mental health and psychosocial support for all hospital staff (both medical and non-medical). While completing the Checklist, users should also consider any additional challenges the health system will face in ensuring preparedness for any other outbreaks and concurrent emergencies. These considerations are included in the Checklist, along with advice on the importance of having adequate back-up arrangements for many components of hospital readiness.

The Checklist should be used as a general reference tool for assessing hospital readiness in conjunction with other more in-depth harmonized health facility assessment modules from WHO. WHO already has guidance on health emergency and disaster risk management framework (WHO, 2019) and hospital preparedness for epidemics (WHO 2014). This Checklist should be adapted to national and local contexts by taking account of a country's policies, guidance, local risks, requirements, standards and practices. The Checklist can be used periodically (at least at 3 to 6-month intervals) to monitor the progress of a hospital's readiness for the COVID-19 pandemic.

The Checklist comes with an Excel file that provides an indicative quantification and analysis of a hospital's readiness for COVID-19.

Objectives of the checklist

General objective

The WHO rapid hospital readiness checklist for COVID-19 primarily assists hospitals in preparing to effectively respond to the pandemic by assessing existing capacities and identifying those areas that need further strengthening.

Specific objectives

The specific objectives of the Checklist are to:

- assess the capacities of a hospital against a set of requirements for effectively managing COVID-19 risks;
- identify gaps in capacities of a hospital's readiness for the COVID-19 pandemic, as well as determine how it will maintain continuity for other essential health services (business continuity); and
- engage hospital personnel and stakeholders in the process of applying findings from the checklist to strengthen coordination mechanisms by adapting existing hospital emergency management mechanisms, plans or procedures to manage the COVID-19 pandemic.

Target audience

The Checklist is intended to be used by:

- hospital leadership and the incident management system team;
- the hospital emergency committee (including the hospital epidemic subcommittee, if any);
- hospital managers and administrators;
- ministries of health; and

- hospital staff (e.g. those tasked with planning for emergencies, operational readiness actions and surge capacity).

Key components of the Checklist

The Checklist highlights 12 key components that are essential to managing COVID-19 in a hospital setting. They are described below.

1. Leadership and incident management system
2. Coordination and communication
3. Surveillance and information management
4. Risk communication and community engagement
5. Administration, finance and business continuity
6. Human resources
7. Surge capacity
8. Continuity of essential support services
9. Patient management
10. Occupational health, mental health and psychosocial support
11. Rapid identification and diagnosis
12. Infection prevention and control

Technical guidance on using the Checklist

The Checklist identifies the key capacities needed to ensure hospital readiness for a COVID-19 response. It is recommended that this tool be tailored to local contexts, such as the role that the hospital is expected to play in response to the pandemic. For example, some hospitals may be designated as specialized treatment hospitals for COVID-19 cases while others may be designated to provide services that do not focus on COVID-19 cases.

The Checklist can be adapted for situation reports, technical guidance (which can be supported by video presentations) and public advice to ensure its relevance to the rapidly evolving COVID-19 situation. Therefore, it is recommended that hospital staff regularly review and adapt policies, procedures and practices vis-à-vis guidance and updates that are communicated officially via ministries of health and other national or subnational health authorities, as well as WHO's dedicated COVID-19 web page . In principle, hospitals should be prepared for the worst case scenario and, therefore, the assessment should assume sustained community transmission of COVID-19 with an expected surge in cases in the local area.

While the checklist is included in the interim guidance document for easy reference, it is the companion interactive Excel tool that will be completed by users who conduct the readiness assessment. Responses entered into the Excel tool will be automatically analysed after it has been completed.

For each component, the Checklist contains recommended actions to be assessed using the following ratings, which are colour coded:

- not available** (i.e. planned but has not started or does not exist);
- partially functional** (i.e. exists but is not comprehensive enough to achieve all of the core elements required to perform the action); or
- fully functional** (i.e. effectively and efficiently operational, complying with standard approaches).

The checklist also includes:

- **a means of verification.** Each assessment should be accompanied by an explanation of the means of verification, and comments should be added to support the assessment in the appropriate column in the Excel tool. The means of verification documents, for example, policies; protocols; plans; lists; inventories; guidance; manuals; information, education and communication materials; or videos. If there are no means of verification, then “none” should be entered. Additional comments may be used to elaborate on the status of the recommended action, for example, why the assessment is rated as “partially functional”;
- **a summary of priority actions.** This column should include a comprehensive list of the actions needed to address the identified gaps. The priority actions should be based on the status of the recommended actions discussed under each component that are needed to strengthen the capacities or implement the recommended action.

How to use the Checklist

The following steps outline how the Checklist can be implemented.

- Form a team of evaluators from the hospital comprising representatives from managerial, technical, administrative, financial and medical (e.g. doctors, nurses) employees, based on the services offered by the hospital.
- Have the evaluation team go through the Checklist together to come to a common understanding of the approach and determine how the appropriate documents will be collected for each recommended action. This will allow the team to build connections with the relevant departments and services at the hospital.
- Ensure that the team is led by both a senior staff member from management and a doctor or nurse.
- Have the team conduct a workshop during which they complete the information required in the Excel document.
- Use the corresponding Excel sheets to identify and describe the hospital in detail.
- Complete the Excel sheet on the hospital readiness checklist tab using the drop-down menu in the Status column; select Not available, Partially functional or Fully functional for all categories from 1.1 to 12.16. Be sure to include information in the Means of verification column.
- After completing each section, list priority actions for that particular area in the Summary of priority actions column.
- Once the Excel sheet on the hospital readiness checklist tab has been completed, select the Results overview tab. On the left-hand side the inputs (status) for each key component will already be summarized with the total score and the percent achieved. These scores and percentages will give a quantitative indication of the hospital’s readiness for the COVID-19 pandemic. On the right-hand side, a visual representation of the percentage achieved in each category will be presented in a spider chart.
- Together, the analysis of the spider chart and the narrative derived from the Summary of priority actions column will become part of the report (see the next section), indicating the hospital’s baseline readiness for the COVID-19 pandemic. This baseline will be used to monitor the progress of capacity development at the hospital.
- The hospital preparedness plan should be developed based on the priority actions listed for implementation for each component of the Checklist.
- This Checklist should be used periodically to assess and monitor the progress of the hospital’s preparedness plan as it moves towards each category being rated as fully functional.



Report

The summaries under each key component in the Results overview sheet constitute the report. The quantitative analysis from the Excel document can be used to plan how to improve the hospital's level of readiness in alignment with the national COVID-19 preparedness and response plan. The Checklist includes recommended actions for high-level components in a hospital that are critical to the safe and effective management of COVID-19 cases and risks and to ensure the continuity of the hospital's services and functions. The outcome of the assessment can be used by the hospital to systematically prioritize and implement the recommended actions until all actions are considered to be fully functional.

As the Checklist is for internal use only, the hospital leadership and incident management system team (or its equivalent) may decide, as appropriate and necessary, with whom they will share the results; for example, they may choose to share with other hospitals in the hospital's network or with local and national authorities. In principle, transparency about and sharing of results is appreciated by staff and hospital stakeholders, including the emergency management community. Information sharing can be considered as a bridge for enhancing relationships and support amongst stakeholders before, during and after an infectious disease outbreak or any other emergency.

WHO rapid hospital readiness checklist for COVID-19

Identification and description of the hospital

Provide general information about the hospital, including identification and its description.

Key components of the Checklist

The checklist consists of 12 key components that are essential to managing COVID-19 in a hospital setting. They are described below.

Component 1.

Leadership and incident management system

Good leadership and a well-functioning hospital incident management system team are essential for the effective management of emergency operations. As many hospitals have existing crisis management and emergency preparedness plans, WHO suggests using these plans and adapting them to the core requirements for both the response to the COVID-19 outbreak and maintenance of the hospital's routine essential health services. (For more information, see reference 7.)

Component 2.

Coordination and communication

Accurate communication and timely coordination are necessary to ensure informed risk analyses and decision-making, and effective collaboration, cooperation and confidence amongst all hospital staff and stakeholders. This component includes communication and coordination both within the hospital and through links with local and national authorities, including communities and primary health care services. (For more information, see references 8, 9 and 10)

Component 3.

Surveillance and information management

Global surveillance for COVID-19 is a basic activity needed to monitor and control the outbreak, especially in the hospital setting. The COVID-19 case definitions are based on current information and may be revised as new evidence emerges. Countries may need to adapt case definitions depending on their own epidemiologic situation. Hospital information management complements surveillance and is crucial in raising public awareness about surveillance, the associated risks the emergency poses to people's health and the measures required to reduce these risks and respond to the emergency. (For more information, see reference 11.)

Component 4.

Risk communication and community engagement

Risk communication and community engagement will help limit or stop the spread of rumours about the outbreak and can be used to convey accurate and clear information about COVID-19. (For more information, see reference 12.)

Component 5.

Administration, finance and business continuity

Administration and finance comprise important, integral support systems for preventing, preparing for and responding to emergencies such as the COVID-19 pandemic. (For more information, see reference 13.)

Component 6.

Human resources

Human resources are the most important resource for preventing, preparing for, responding to and recovering from a disease outbreak. It is essential to review staffing requirements to ensure that hospitals are adequately staffed (e.g. assess the adequacy of the hospital's recall procedure for existing staff), with respect to number of staff and the competencies required to deliver quality care to respond to the demands posed by an outbreak. (For more information, see reference 14.)

Component 7.

Surge capacity

The goal of responses to this component is to enable the hospital to expand its ability to manage a sudden or rapidly progressive surge in demand for hospital services created by an emergency. COVID-19 may cause a rapid and sustained increase in demand (i.e. a rising tide as opposed to the big bang of a sudden-onset disaster). The essential services and supplies needed to address the risks from COVID-19 include essential health care and the equipment and supplies necessary to maintain high-quality health care especially for patients with severe cases of COVID-19. Additionally, an increased workload should be anticipated. (For more information, see references 15 and 16.)

Component 8.

Continuity of essential support services

While the outbreak of COVID-19 evolves and requires rapid scale-up of emergency preparedness and operational readiness, there are also existing needs for essential medical and surgical care that routinely require a hospital's attention (e.g. emergency medical and surgical services) to ensure business continuity. Therefore, hospitals must consider how best to safely continue to address and sustain continuity in their health services (e.g. in terms of supplies and logistics and their pharmacy services), while addressing COVID-19 case management needs. (For more information, see references 17-19.)

Component 9.

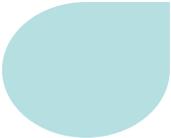
Patient management

Patient management includes admission or referral, triage, diagnosis, treatment, patient flow and tracking, discharge and follow up, as well as management of support services, pharmacy services and logistics and supply functions. The goals are to ensure that (a) the hospital's patient management system remains safe, effective and efficient; and (b) the hospital can achieve safe and effective patient management under routine circumstances and when the COVID-19 pandemic makes increased demands on the hospital's resources and capacities. When dealing with an outbreak of a new communicable disease, measures should aim to ensure that hospitals have space for triage and to isolate suspected, probable and confirmed cases of COVID-19. Appropriate case or clinical management for people with COVID-19 is important and urgent. Setting up a treatment centre for patients with severe acute respiratory infection may be helpful. (For more information, see references 2 and 20-25.)

Component 10.

Occupational health, mental health and psychosocial support

Occupational health, mental health and psychosocial support services are required to reduce the adverse psychological and social impacts of COVID-19 on hospital patients and staff, and members of the affected community. WHO has published guidance about assessing and managing risks to health



care workers. Also, there are several publications that address the mental health and psychosocial issues associated with the pandemic. (For more information, see references 26–29.)

Component 11.

Rapid identification and diagnosis

The rapid identification and laboratory diagnosis of COVID-19 cases will ensure a logical and effective chain of events in case management. Laboratory services must be provided to support the hospital's preparedness, operational readiness and response activities, such as surveillance, IPC protocols and patient management; all of these must be accomplished in a timely and efficient manner. (For more information, see references 21 and 30.)

Component 12.

Infection prevention and control

Based on current information, it is assumed that COVID-19 is a zoonotic disease with human-to-human transmission enabled through breaches in IPC practices. Thus, an operational IPC programme is critical to minimize the risk of transmission and finally break the chain of transmission to hospital staff, close contacts, visitors and other patients without COVID-19 who are being cared for in hospitals. In anticipation of an increased workload and requirements for waste management and cleaning, hospitals should carefully consider scaling up personnel to meet the higher demand for IPC services. (For more information, see references 18, 22 and 31–36.)

Key approaches

To ensure smooth implementation of the recommended actions in the Checklist, it is particularly important to take the following actions.

Prepare for all-hazard emergencies

Being prepared and ready for outbreaks, epidemics and pandemics implies:

- integrating recommended actions into an overall hospital emergency risk management programme;
- conducting ongoing assessments of risks from the interactions of possible hazards, community vulnerabilities and the health system's strengths and weaknesses;
- engaging in risk reduction and emergency preparedness activities, such as emergency response planning, training and exercises;
- ensuring there is an early warning of hazards, including diseases, that may trigger activation of the hospital's emergency response plan, including an epidemic subplan (in the case of an outbreak, an early warning is usually given to hospitals by health authorities, but the warning may also result from detection by a hospital's surveillance system of an abnormal occurrence or change in the usual number of cases of a disease);
- implementing emergency response plans, including the hospital's epidemic subplan;
- ensuring there is a commitment by the hospital or by the community (with hospital support) to undertake the readiness activities required to reduce the risks associated with an emergency and to acquire the capacity needed to ensure an effective emergency response;
- undertaking specific emergency preparedness activities to create or expand communication channels among the government, health sector entities, mass media and communities;
- developing or adapting emergency response plans, including the hospital's epidemic subplan, to ensure the continuity of clinical services critical to patients affected by an epidemic;

- ensuring there is periodic reassessment and updating of the hospital's emergency risk management programme and its emergency response plan to consider new developments and lessons documented and learnt; and
- adapting and building on the hospital's capacity to cope not only with an epidemic but also with other forms of internal and external emergencies – such as mass casualty events, disasters from natural hazards and fires – to establish a single management system tailored to addressing concurrent risks and events likely to be faced when dealing with more than one type of emergency simultaneously.

Train hospital staff

In an emergency or disaster, hospital staff are generally required to go beyond their routine roles and responsibilities and undertake tasks with which they are less familiar. Staff will likely have to carry out these new tasks in a stressful environment. To meet these new demands, all staff members, irrespective of their hospital, departmental and individual duties, need to be involved in the emergency planning process so that they can distinguish between their routine and emergency responsibilities and be ready to contribute to the emergency response. Staff also need training in implementing risk reduction measures and the procedures and protocols called for in the hospital's emergency response plan, including the epidemic subplan. Additionally, they must participate in the regular simulation exercises needed to maintain a state of operational readiness for fulfilling planned emergency tasks.

Implement infection prevention and control measures

Preventing the spread of infection to a hospital's staff, patients and visitors is an absolute priority and calls for appropriate measures, including the use of personal protective equipment and water, sanitation and hygiene strategies (known as WASH). Hospital management teams should review and, if necessary, revise the hospital's IPC protocols. Additional IPC measures may be required to cope with the specific nature of the COVID-19 pandemic. Implementing appropriate IPC measures at all times will strengthen a health care facility's capacity to put them into practice during a stressful pandemic situation. Therefore, these measures should be included in the hospital's permanent IPC strategy.

Consider the hospital's security concerns associated with its context and/or location

Hospitals will not be able to perform to their fullest potential if there are security concerns related to ongoing conflict in the setting or country where the facility is located. This will have a direct impact on the accessibility of health care services for people and hospital staff. Therefore, hospitals must work closely with local and national authorities to ensure the safety and security of staff, patients and visitors and the optimum functionality of the hospital.

Ensure business continuity of the hospital

In the event of an outbreak, epidemic or pandemic, hospitals need to maintain all of their regular functions that address other patients' health needs while establishing and strengthening the extra measures needed to address infectious diseases. Ensuring continuity includes managing all resources, including financial, human, supplies and technology. In particular, the referral system needs to be assessed and well managed to avoid any transmission occurring to outgoing and incoming patients who are transferred by ambulance. Business continuity must be prioritized at the outset of any emergency situation or at the earliest opportunity.



Conclusions

WHO is working closely with Member States and partners to rapidly expand scientific knowledge to support all COVID-19 preparedness and response measures. At health facilities, specifically hospitals, staff need to be ready to effectively respond to patients with acute respiratory infections, especially those with moderate to severe cases. Accordingly, equipment and supplies need to be in place, such as mechanical ventilators and oxygen supplies; and information flow has to be optimized to make full use of hospitals during the COVID-19 pandemic.

This Checklist was developed to include qualitative measures to help underscore any capacity gaps in a hospital. However, a corresponding scoring mechanism was also added for indicative quantification of a hospital's readiness and to allow for monitoring across time of the actions being taken to enhance the hospital's capacities. The Checklist is fully aligned with the strategic preparedness and response plan for COVID-19 and will be adapted and revised, depending on feedback received.

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