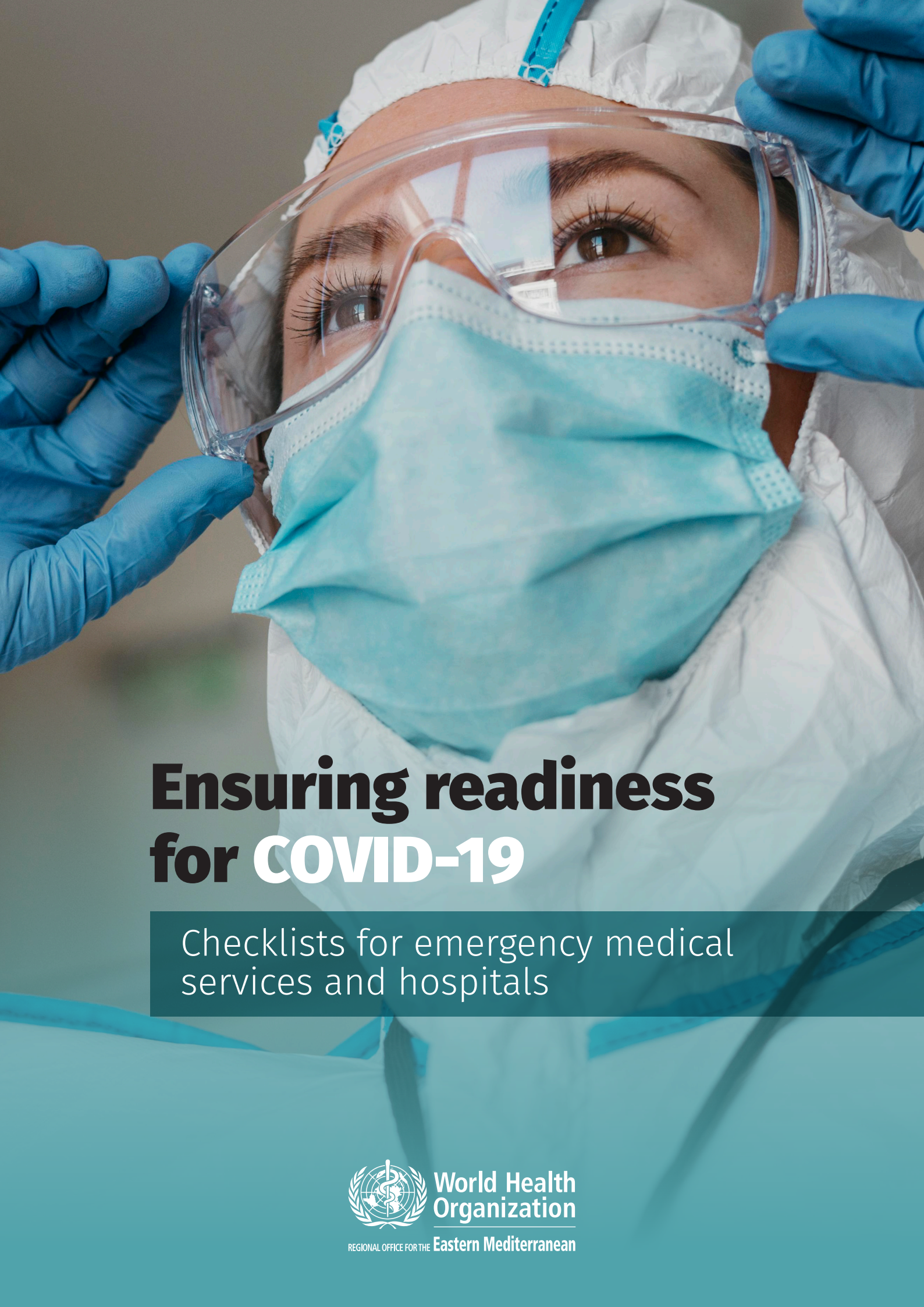

Ensuring readiness for COVID-19

Checklists for emergency medical services and hospitals

World Health Organization
REGIONAL OFFICE FOR THE Eastern Mediterranean

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1. Introduction

Pre-hospital emergency medical services and hospitals play a critical role within the health system in providing essential medical care to the community, particularly in crisis such as the COVID-19 pandemic.

This publication provides checklists of key actions to take in the context of a continuous pre-hospital and hospital emergency preparedness process. The checklist on pre-hospital emergency medical services readiness for COVID-19 has been prepared to support pre-hospital emergency medical services in assessing their readiness to respond to the COVID-19 outbreak, and in identifying immediate and priority actions aimed at responding to the emergency in an efficient and timely manner. The hospital readiness checklist for COVID-19 has been developed to support hospital preparedness and response for the management of COVID-19 patients.

The checklists have been prepared with the aim of supporting a range of individuals involved in the transport and care of COVID-19 patients to ensure an effective emergency medical service and hospital-based response. The systematic implementation of key generic and specific actions can facilitate effective pre-hospital and hospital-based management during a rapidly evolving outbreak.

This document is intended for use by:

- offices of pre-hospital care (ministries of health);
- managers of first responder programmes, including security and law enforcement services;
- managers of communication centres/call centres (universal access number, official social media communication channels, if applicable), especially in the health sector;
- managers of emergency dispatch centres;
- managers of EMS for primary and inter-facility response, transfer and transportation;
- hospital emergency units/department managers;
- case management unit within emergency operation centres; and
- hospital managers.

2. Pre-hospital emergency medical services readiness for COVID-19

2.1 Background

Pre-hospital emergency medical services (EMS) have a significant impact on public health and secondary disease prevention (*1,2*). They facilitate initial care through basic and/or advanced life support and the transfer of injured or sick patients from the site of the emergency to the health facility where they will receive definitive care. EMS can also transfer patients from a health care facility to another, higher level or more complex facility, in what is known as an inter-facility transfer (*3*).

During public health emergencies, pre-hospital EMS may be overwhelmed by the number of calls or the demand for medical transfers. It is therefore important that the agencies and/or organizations that provide pre-hospital care have the necessary tools and mechanisms to continue with daily activities and also to adjust their capacity to respond to specific scenarios such as COVID-19.

Within the context of the COVID-19 outbreak, pre-hospital EMS may easily be overwhelmed due to an increased demand for primary responses to patients with respiratory symptoms or the increased demand for inter-facility transfers. Similarly, health care providers may be particularly susceptible to occupational exposure to the virus through patient care and high-risk patient transfers.

For these reasons, all pre-hospital EMS must prepare for the spread and response to the pandemic in order to protect health care resources, health care providers and patients. It is important to remember that readiness is not a static process but one that should be monitored continuously and respond to the changing nature of the health emergency.

2.2 Pre-hospital emergency medical services readiness checklist for COVID-19

The purpose of this checklist is to assist pre-hospital EMS in assessing their readiness to respond to the COVID-19 outbreak, and in identifying immediate and priority actions aimed at responding to the emergency in an efficient and effective manner. Once this checklist has been completed, each service should reflect on its results and rapidly identify priority areas for improvement to effectively and safely respond to the outbreak based on the local situation and available resources.

This checklist was first developed through a review of the literature and other similar open-source readiness checklists. Thereafter, components were drafted based on the World Health Organization (WHO) Emergency Care System Framework (*4*) and the proposed regional framework for pre-hospital emergency care services.

The checklist focuses on different elements of pre-hospital EMS involved in the management of COVID-19 patients. The elements described in the list may not apply to all settings and may need to be adapted to the specific characteristics of each setting, the legislation governing it, and the national health system and community in which it is based.

The items on the list are designed for dichotomous confirmation, i.e. whether or not they have been met or achieved. If the activities have been initiated but have not yet been

implemented and tested, they should be noted as “in process”. This makes it possible to monitor each activity.

Complete	EMS have developed, validated and implemented the procedure/protocol.
In process	EMS have developed a procedure/protocol but has not yet implemented or validated it.
Incomplete	EMS do not have the procedure/protocol and/or recommended equipment.

Pre-hospital emergency care checklist

Country: Region:		Evaluation date:	(DD-MM-YYYY)
Area of region: Population in region: Name of department/organization:			
Type of ambulance service: ☐ Private ☐ Government ☐ Volunteer ☐ Other: _____			
Emergency contact number or insert option if not applicable:			
Call management: ☐ Contact centre ☐ Operational staff			
Name and designation of person completing this survey:			
Operational fleet (transport by type)			**Number**
Basic life support ambulances:			
Intermediate life support response vehicles:			
Intermediate life support ambulances:			
Advanced life support response vehicles:			
Advanced life support ambulances:			
Medical helicopters:			
Fixed-wing air ambulance:			
Dedicated COVID-19 ambulances:			
Dedicated COVID-19 paediatric/neonatal ambulances:			
Other:			
Pre-hospital emergency care providers			**Number**
Basic life support:			
Intermediate life support:			
Advanced life support:			
Prehospital nursing staff:			
Physicians/medical practitioners:			
Other:			

COVID-19 readiness checklist for emergency medical services

Primary function	Function component	Short description	Complete	In process	Incomplete
Family and companion response	System activation	Availability of universal access number (UAN) and other official social media communication channels			
		UAN/social media channels have a screening tool that aligns with the most current case definition and is implemented for all cases (This should not delay a response to priority calls)			
		Availability of a platform for call/message classification, triage and management that is operative 24/7			
		System in place to monitor and report on repeat calls			
		System in place to report on patients who have been advised to self-isolate			
		Adequate numbers of trained personnel available to cover call management posts			
	Family and companion care	Life-threating emergencies managed in keeping with local first-responder training			
		Public educated on notifying either the COVID-19 advice line or emergency communication centre on possible cases			
		Instructions provided to family regarding infection prevention and control (IPC) when dealing with suspected COVID-19 at home			
Dispatch	Dispatch of personnel	Policies and procedures in place to advise the public on which cases warrant an EMS (ambulance) response, as not all will do so (e.g. home-quarantine instructions). These should be in line with curren t national outbreak response guidance			
		Protocol/procedure established for communication to inform responding emergency medical personnel of a possible case of COVID-19			
		Simple algorithm to screen patients available based on most up-to-date case definition			
		Reliable and sustainable primary and back-up communication systems in place			
	Instructions for family and companions	Pre-arrival instructions in place for patients, family and companions to be prepared for the response. For a COVID-19 case, this could include asking a known patient to put on a face cover or mask, if available			

Primary function	Function component	Short description	Complete	In process	Incomplete
Care provider response	Scene control and care	Continuous available paramedics and ambulance staff who are well trained in assessment and initial medical care of suspected and confirmed cases of COVID-19			
		Ambulance teams with adequate personal protective equipment (PPE) available			
		A clear policy in place outlining each provider's role with regard to interaction with suspected COVID-19 patients (This has implications for PPE use)			
		Screening tool being used that aligns with the most current case definition for all cases			
		IPC guidelines in place, including rational use of PPE according to national guidelines and in accordance with WHO recommendations			
	Field to facility communication	Communication between health care providers started before arriving at the patient's bedside			
		Policy in place to inform receiving facilities that a suspected COVID-19 case will be referred, to ensure the emergency unit is prepared to receive the patient			
		Isolation centre/referred health facility predefined and known to the emergency communication centre, EMS staff and the suspected case and his/her family			
	Destination triage	If the suspected COVID-19 patient is screened positive, complete a risk assessment to decide on use of PPE, cleaning and decontamination, and self-isolation for suspected cases			
		If self-isolation is recommended, specific guidance should be provided to patient and family regarding when, where and how to seek help			
		Patient triage score selected and disseminated (Integrated Interagency Triage Tool)			
		Specific clinical practice guidelines for an aerosol-generating procedure in place. These include CPR, intubation, bag-valve mask, nebulization and suctioning			

Primary function	Function component	Short description	Complete	In process	Incomplete
Patient transport		Availability of safe ambulances, with proper separation between the driver's cabin and the patient's compartment/treatment area			
		Clear policy in place for isolation of driver and patient care attendant to support rational PPE use			
		Policy in place for the transport of family members of suspected cases of COVID-19 and other patients			
Transfer care		Trained health care workers available to transfer COVID-19 patient appropriate to level of care required			
		Protocol in place for management and transport of suspected and confirmed COVID-19 cases			
		All interventions and patient information (such as demographic information, type of care provided and information on contacts) recorded, using updated forms, and reported to receiving hospital and health authorities			
		Adequate provision of bag-valve mask, non-rebreather mask and oxygen cannula to ensure adequate provision of oxygen while limiting droplet exposure to pre-hospital personnel			
		Regular review process established to confirm functionality of ambulance equipment, including ventilators used in ambulances			
		Policy and procedures in place for use, removal and disposal of PPE			
		Availability of adequate hand hygiene resources in ambulances			
		Ambulance staff trained in ambulance and equipment decontamination, disinfection and cleaning			
		Availability of an adequate, clearly indicated area for the disposal of biological/infectious waste			
		Guidance in place for management of deaths on the scene or en route			
Inter-facility transfer		Availability of a mechanism to regulate and coordinate inter-hospital transfers with concerned centres/units			
		Protocols established for referrals, if necessary, and proper communication with emergency communication centre			

Primary function	Function component	Short description	Complete	In process	Incomplete
Service delivery	Clinical care (decision-support, coordination and oversight	Service-specific task team set up in-keeping with disaster management principles (at the policy/system level)			
		Process/procedure established for periodic updating and maintenance of all EMS procedures for COVID-19 response			
		Clear policy in place regarding resuscitation and transport of out-of-hospital cardiopulmonary arrest			
		All services are provided equally for citizens, migrants and refugees with no discrimination			
		A designated official spokesperson in place, and they coordinate with health authorities			
		Inter-service collaborations in place, specifically with the emergency operation centre (EOC), and provincial or local government services, for sharing of resources, training and policies			
		Mechanisms identified and established for communication/coordination with authorities at health services and points of entry, for case reporting and transportation of patients			
		Mechanisms in place for coordination and collaboration between different functional EMS systems in the country/region			
	Infection prevention and control	A comprehensive IPC policy addressing COVID-19 in place			
		EMS staff are well trained in IPC, including transmission mechanisms, protocols, use of PPE, decontamination and disinfection processes, and waste management			
		Protective supplies distributed according to risk stages of posts to ensure correct protection and avoid overprotection; PPE registry and tracking system established			
		Strict supervision established for the implementation of IPC measures			
		Continuity of essential emergency care services for non-COVID-19 patients ensured. Critically ill emergency patients may be COVID-19 positive even if that is not the primary reason for their presentation. Arrangements should be in place to rapidly transport, resuscitate and stabilize critical cases at the most appropriate facility to treat their underlying emergency, while maintaining IPC measures			

Primary function	Function component	Short description	Complete	In process	Incomplete
		Context-appropriate essential emergency care identified for noncommunicable diseases, trauma, and maternal, neonatal and child health, and prioritization of these services supported, with a focus on life-threatening conditions for which time-sensitive interventions and continuity of care is paramount			
		Context-appropriate essential emergency care identified for gender-based violence across levels of care, and prioritization of gender-based violence services supported, with a focus on life-threatening conditions for which time-sensitive interventions and continuity of care is paramount			
		National pre-hospital communication/orientation/dispatch protocols established for non-COVID-19 patients requiring non-urgent chronic medication/follow-up, in order to mitigate public health control measures limiting mobility and access to health care facilities (such as teleconsultation and chronic medication deliveries)			
Administration	**Human resources**	Human resources management adapted to ensure adequate staff capacity and continuity of operations in response to an increased demand for human resources			
		Protocols for risk exposure assessment and management of professionals exposed to COVID-19 developed, tested and implemented			
		Staff absenteeism estimated in advance and monitored continuously. Mechanism in place to replace absent staff and to cover a surge in staff demand			
		Multidisciplinary psychosocial support teams available for EMS staff and their families			
		Domestic support measures (such as for travel, child care, or care of the ill or family members with disabilities) identified to enhance staff flexibility for shift work and longer working hours, and define off-work time for recuperation			
		A protocol for medical leave for quarantined emergency personnel and a return to work policy developed and implemented			
		Health professionals are well trained in patient assessment and treatment, including aerosol-generating procedures, in accordance with the relevant guidelines			

Primary function	Function component	Short description	Complete	In process	Incomplete
	Operational support, logistics and supply management	An up-to-date and detailed inventory made of all equipment and supplies developed/maintained, and their consumption estimated based on the most likely outbreak scenarios			
		Procedures in place for supply chain management, given increased demands on supply, to ensure continuity of the service. These should specifically address the procurement of PPE, hygiene and disinfection products			
		Mechanism in place for the prompt maintenance and repair of all equipment required for essential services			
Integrated data management		Functional mechanism between EMS, EOC and surveillance bodies is in place for the exchange of data regarding COVID-19			
		Suspected COVID-19 cases are reported to the national surveillance authority using a standardized reporting format			
Security	**Security of staff**	Robust measures in place to ensure safety and security of EMS staff during dispatch, adopting a zero-tolerance policy on violence towards health workers and creating a system of reporting			
	EMS access during curfew	Security forces have granted EMS mobility during curfews			
Surge response		Staff reallocated and trained in accordance with anticipated roles and responsibilities			
		Policies established to manage volunteer workers (for vetting, accepting, rejecting, addressing liability issues, etc.)			
		Additional staff (such as retired staff, reserve military personnel, university affiliates/students and community volunteers) recruited and trained according to the anticipated need and in line with related legal requirements			
		Mechanism established to promote partnerships with the private (for-profit) and nongovernmental (not for-profit) sectors to support surge capacity (human resources and logistics)			

3. Hospital readiness for COVID-19

3.1 An effective hospital-based response

Hospitals play a key role in providing health services and essential medical care within health systems. This role is particularly prominent during crises. Many hospitals regularly operate at near-surge capacity, and so just a small rise in patient numbers during an emergency can pressure hospitals to work beyond their functional capabilities. The progressive spread of disease during an outbreak can overwhelm hospitals' ability to respond as there are simply too many patients needing medical care at the same time.

Hospitals need to consider their readiness to cope with the influx of patients and increased need for medical services in times of crisis. They should prioritize and implement actions specified in their emergency preparedness plans for biological threats, specifically threats that may cause severe acute respiratory illness, in order to identify suspected cases, limit transmission within the facility and provide specialized medical care. This includes activating protocols and procedures in safe physical spaces emphasizing isolation measures, education and training of personnel in the use of PPE, patient management, sample collection and handling, and handling and disposal of hazardous biological waste (*5*).

The benefits of an effective hospital-based response include:

- continuity of essential services;
- well-coordinated implementation of priority action;
- clear and accurate internal and external communication;
- swift adaptation to increased demands;
- effective use of scarce resources; and
- a safe environment for health workers (*6*).

3.2 Hospital readiness checklist for COVID-19

The purpose of hospital readiness checklist is to support hospital preparedness and response for the management of COVID-19 patients. The elements described in the list may not apply to all hospitals and may need to be adapted to the specific characteristics of each hospital, the legislation governing it, and the national health system and community in which it is based (*7*).

The checklist has been developed based on current knowledge and available evidence (*5,6,7,8,9,10,11,12*). WHO's Regional Office for the Eastern Mediterranean will update this checklist should new relevant information become available.

Elements to be assessed have been divided into the following areas:

- Leadership and coordination
- Operational support, logistics and supply management
- Information
- Communication
- Human resources
- Continuity of essential services and surge capacity
- Rapid identification

- Diagnosis
- Isolation and case management
- Infection prevention and control.

Guidance and resource materials related to the domains have been provided for additional support to countries.

Description of hospital	
Evaluation date:	
Name of the hospital:	
Clinical services provided:	
Ownership status: ☐ Public (ministry of health) ☐ Public (other than ministry of health) ☐ Private ☐ NGO	
Teaching status:	City:
Bed capacity:	Beds in intensive care unit (ICU):
Number of annual discharges:	Diagnostic facility: ☐ Laborarory ☐ X-ray ☐ CT scan ☐ MRI
Names and positions of the people interviewed:	
Name of evaluators:	

Response function		Response readiness activity	Verification		
			Yes	No	In process
Leadership and coordination	1	Establish/activate hospital incident management system involving representatives from all related departments and units.			
	2	Designate a secure, easily accessible and well-equipped Hospital Emergency Operations Centre (EOC), with well-functioning means of communication and a dedicated response operations manager.			
	3	Establish a core team for the management of the event, including a hospital senior manager, the hospital infection control team, heads of relevant departments/units (e.g. ICU, emergency unit) and an infectious disease expert.			
	4	Assign roles and responsibilities for the different response functions, with enough trained staff available to ensure operational continuity; compile an up-to-date directory of telephone numbers, residence and email addresses of staff.			
	5	Develop contingency plans for staffing, logistics, budget, procurement, security and treatment.			
	6	Identify and establish coordination mechanisms with local authorities and health and disaser management authorities.			
	7	Activate mechanisms for coordination, communication and collaboration with the integrated health services network at the local level, considering patient care, the necessary medicines, laboratory services, supplies and equipment, and patient transfer.			

Operational support, logistics and supply management	**1**	Develop/maintain an up-to-date and detailed inventory of all equipment, supplies, and medicine and estimate their consumption based on the most likely outbreak scenarios.			
	2	Ensure a procedure for supply chain management (medicines and supplies), considering increased demands on the supply and distribution chain, and respecting quality and technical specifications and established protocols.			
	3	Coordinate with authorities to ensure the continuous provision of essential medications and supplies (e.g. institutional and central stockpiles, contingency agreements with local suppliers, donations).			
	4	Identify storage facilities for additional stock; storage facilities must meet all demands with respect to temperature, humidity, cold-chain, logistics, etc.			
	5	Activate legally available and authorized administrative and financial mechanisms for emergency management, as well as procedures for the purchase and procurement of supplies and services.			
	6	Ensure a procedure for the management of work teams, including cleaning services, rest areas, safe transportation and staff well-being.			
	7	Ensure a mechanism for the prompt maintenance and repair of all equipment required for essential services.			
	8	Ensure a procedure for managing ambulances for transportation between hospitals and for the inventory of available vehicles, and a procedure to protect ambulance crew and disinfect ambulance vehicles and equipment after each use.			
	9	Ensure there is a policy in place for managing donations of medical supplies, food for staff, etc.			
	10	Ensure the availability of appropriate back-up arrangements for essential life-lines, including water, power and oxygen.			
	11	Solicit the input of hospital security in identifying potential security constraints and optimizing the control of facility access, essential pharmaceutical stocks, patient flow, traffic and parking; seek support from local security forces to augment hospital security, if needed.			
	12	Formulate a postmortem care contingency plan with appropriate partners (e.g. undertakers, funeral services).			
Information	**1**	Establish and make available procedures and assign personnel to collect, confirm and validate data and information related to the emergency.			
	2	Provide a standardized form for reporting on emergency activities, hospitalizations (including critical care), incidence of suspected and confirmed cases, clinical situation and deaths.			

Communication	**1**	Establish internal and external communication mechanisms, with a dedicated team, including one person responsible for streamlining information sharing in real time; target staff, existing patients, visitors, local authorities, public and the media with information.			
	2	Appoint a public information spokesperson plus back-up to coordinate and ensure consistent communication with the public, the media and health authorities.			
	3	Brief hospital staff on their roles and responsibilities in managing COVID-19 under the incident management system.			
	4	Communicate regularly with staff and stakeholders about clinical triage, patient prioritization and management (e.g. adapted admission and discharge criteria), infection prevention and control measures, hospital epidemiology, reporting requirements and security measures.			
	5	Ensure that all internal protocols, communication lines and standard operating procedures are easily accessible for all staff and information is readily available, concise, targeted and updated regularly (minimize information overload).			
	6	Ensure the collection, processing and reporting of information to supervisory stakeholders (e.g. public health authorities).			
	7	Ensure reliable and sustainable primary and back-up communication systems (e.g. landlines, the internet, mobile devices, pagers, satellite telephones, two-way radio equipment, unlisted numbers) and access to updated contact lists.			
	8	Ensure that migrant-friendly communication activities/products (e.g. leaflets, posters, etc.) are in place.			
Human resources	**1**	Adapt human resource management to ensure adequate staff capacity and continuity of operations in response to an increased demand for human resources, while maintaining services identified as essential.			
	2	Prioritize staffing needs by unit or service and distribute personnel accordingly.			
	3	Estimate staff absenteeism in advance and monitor it continuously.			
	4	Review policies and procedures for screening and work restrictions for exposed or ill health care personnel, and develop sick leave policies for health care personnel that are non-punitive, flexible and consistent with public health guidance.			
	5	Inform and train staff who are planned to be reallocated, in accordance with their anticipated roles and responsibilities.			
	6	Recruit and train additional staff (e.g. retired staff, reserve military personnel, university affiliates/students, community volunteers) according to the anticipated need and in line with related legal requirements.			
	7	Identify domestic support measures (e.g. travel, child care, care of ill or family members with disabilities) that could enhance staff flexibility for shift work and longer working hours, and define off-work time for recuperation.			

	8	Ensure the availability of the services of multidisciplinary psychosocial support teams for the families of staff and patients, including social workers, counsellors, interpreters and clergy.			
	9	Ensure that there are policies in place to manage volunteer workers (vetting, accepting, rejecting, addressing liability issues, etc.).			
	10	Use occupational health mechanisms that ensure the well-being and safety of personnel during the response to monitor burnout and other stress-related impacts on staff due to extended working hours.			
	11	Establish a clear policy to monitor and manage staff suspected or confirmed of having COVID-19 or who have been exposed to a confirmed, probable or suspected COVID-19 patient.			
	12	Consider training and education on clinical management, use of PPE and the handling and disposal of contaminated waste.			
Continuity of essential services and surge capacity	1	Calculate maximum case admission capacity and estimate increase in demand for hospital services during a COVID-19 outbreak.			
	2	Identify areas that can be used to increase patient care capacity (surge capacity) (e.g. use of hospital corridors, lobby and other non-essential spaces and also parking areas and open spaces as a last resort), bearing in mind the necessary physical space, staff, supplies and processes.			
	3	Indicate the criteria for reassigning normal rooms as isolation rooms once the number of patients reaches the threshold, and plan to reallocate non-isolated patients to other rooms.			
	4	List all hospital services in priority order and identify non-essential services that could be suspended if necessary, (e.g. cancelling specialty consultations, outpatient appointments and non-emergency surgical procedures) in order to surge capacities (human and material resources, equipment and physical space).			
	5	Determine strategies to maintain services for at-risk patients during the outbreak period (e.g. pregnant women and those on dialysis) that are unrelated to COVID-19.			
	6	Identify the resources (human resources and logistics) needed to ensure continuity of those hospital services identified as essential.			
	7	Identify alternative or secondary care sites other than the existing hospital facilities (e.g. gymnasiums, hotels, community centres, etc.) in coordination with local authorities to surge capacity.			
	8	Adapt admission and discharge criteria and prioritize patients and clinical interventions according to available treatment capacity and demand.			
	1	Establish a communications and monitoring system, preferably under supervision of a hospital epidemiologist, that allows for timely alerts and reporting of suspected cases in any area of the hospital, including the facility's points of entry and patient arrival, in accordance with standardized case definitions.			
	2	Establish a triage space with optimal conditions for the prevention and control of infections to triage patients with acute respiratory symptoms (isolation area for suspected patients, availability of PPE, disposal of contaminated supplies and linens, etc.).			

Rapid identification	**3**	Provide signs and information displays at the entrance and in waiting rooms regarding questions and answers about COVID-19, hand hygiene and respiratory hygiene.			
	4	Provide an option, if possible, for patients to wait in their cars instead of the waiting room (provided they are well enough to do so); this also requires a system to call them in.			
	5	Establish a triage protocol aimed at ensuring that cases of acute respiratory infection are rapidly recognized and reported.			
	6	Train health workers to identify suspected cases rapidly and accurately in accordance with standardized case definitions to enable timely reporting to the corresponding level in any area of the hospital.			
	7	Use alternative triage protocols, for example, telephone triage in which the patient needs to call first before going to hospital.			
	8	Ensure that hospital clinicians, front-line workers and other relevant decision-makers receive information obtained through monitoring and reporting activities and/or laboratory and epidemiological data.			
Diagnosis	**1**	Ensure the continuous availability of laboratory and imaging services for diagnosis of COVID-19.			
	2	Develop procedures and train staff in taking samples, proper handling, packaging and transporting them (with biosafety measures in line with transport regulations and requirements) to the designated laboratory.			
	3	For hospital-based surveillance, ensure mechanisms for the prompt provision of laboratory data to the physicians and health authorities responsible for clinical management and surveillance.			
	4	Establish a laboratory referral pathway for the identification, confirmation and monitoring of COVID-19.			
Isolation and case management	**1**	Develop and implement a hospital strategy, in coordination with local health authorities, for the admission, referral, internal transfer and discharge of patients with severe acute respiratory infections, in line with relevant criteria and protocols.			
	2	Estimate the maximum capacity for isolating patients (maximum number of rooms that can be converted into isolation rooms and maximum number of patients that can be cohorted in isolation rooms).			
	3	Identify, sign and equip areas for the medical care of suspected and confirmed cases in secure and isolated conditions.			
	4	Provide guidelines/protocols for the management of suspected or confirmed cases and ensure they are correctly followed.			
	5	Have trained staff and equipment available for the initial and continued medical care of suspected or confirmed patients (primary screening, resuscitation, initial stabilization, mechanical ventilation and hospitalization), with access to PPE.			
	6	Plan installed capacity for the medical care of suspected or confirmed patients requiring intensive care (mechanical ventilation, haemodynamic monitoring and multi-organ support).			
	7	Review, update and test procedures for receiving and transferring patients within the hospital to authorized isolation areas, and to other diagnostic and therapeutic support services; establish the best routes for moving patients and limit the movement of patients within the hospital.			

Infection	1	Ensure that health care workers, patients, and visitors are aware of respiratory hygiene and hand hygiene to reduce the risk of health care-associated infections.			
	2	Designate a safety officer, preferably from the IPC team, who is part of the incident management team that provide recommendations for reducing the infection risk for staff before, during and after duty.			
	3	Have a triage procedure in place in the emergency department for isolation of suspected and confirmed cases.			
	4	Identify, sign and equip available areas for the medical care of suspected and confirmed cases in secure and isolated conditions.			
	5	Train health workers in the use of PPE and consider additional precautions for specific transmission mechanisms (droplets, contact, aerosols, fomites).			
	6	Distribute protective supplies according to risk stages of clinical posts to ensure correct protection and avoid over protection; establish a registry and tracking system			
	7	Patients should be placed in adequately ventilated single rooms (60 litres/second per patient). When single rooms are not available, patients suspected of having COVID-19 should be grouped together. Avoid mixing suspected and confirmed cases.			
	8	Ensure a 1-metre distance between beds regardless of whether patients are suspected of having COVID-19.			
	9	Where possible, a team of adequately trained health care workers should be designated to care exclusively for suspected or confirmed cases to reduce the risk of transmission.			
	10	Avoid moving and transporting any patient out of their room or area unless it is medically necessary. If transport is required, ensure that procedures for receiving and transferring patients within the hospital, to and from authorized isolation areas and to other diagnostic and therapeutic support services, have been reviewed, updated and tested.			
	11	Limit visitors to those essential for patient support. Ensure that visitors apply droplet and contact precautions.			
	12	Maintain a record of all people entering each patient's room, including all staff and visitors.			
	13	Have protocols or procedures available for cleaning and hygiene of clinical areas, including training in the use of decontamination materials.			
	14	Ensure the health facility has dedicated area(s) and protocols for the disinfection and sterilization of biomedical equipment and medical devices.			
	15	Ensure the health care facility has a protocol and a marked route for the management and final disposal of infectious biological waste, including sharps.			
	16	Ensure the facility has infrastructure and procedures for proper hand hygiene, including handwashing, continuous training and supplies.			
	17	Ensure physical space and guidelines for the disposal and transport of corpses resulting from the emergency.			
	18	Ensure strict supervision on the implementation of infection prevention and control measures			

Glossary

Ambulance: A vehicle designed to transport sick or injured people, with technological resources and human personnel trained to provide health care that is appropriate to the level of complexity. Ambulances may be land, air, or water vehicles.

Clinical practice guidelines: Systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances.

Coronavirus disease 2019 (COVID-19): The global pandemic of COVID-19 was first reported by WHO on 31 December 2019 following a cluster of pneumonia cases in Wuhan City, Hubei province, China. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has been confirmed as the causative virus of COVID-19. The virus is transmitted through contact or droplet exposure.

COVID-19 case definition: A list of clinical criteria by which health professionals determine whether a person's illness is a case of COVID-19.

COVID-19 screening: The systematic application of an inquiry to identify individuals at sufficient risk of COVID-19.

Cardiopulmonary resuscitation (CPR): An emergency lifesaving procedure performed when the heart stops beating.

Emergency communication centre (also known as Emergency Operations Centre): An operations and communications centre (which does not provide care or treatment) responsible for coordinating and regulating the provision of both pre-hospital EMS and the transfer of patients between health care facilities, through call taking (receiving calls from members of the public advising of incidents or from facilities advising of need for transfer) and despatch (sending informal or formal EMS resources to the scene to provide care and transport).

Emergency medical personnel: Individuals who are trained and locally credentialled/certified/qualified to provide life support care in the out-of-hospital environment.

First responder: The first person present at the scene of an accident or emergency, usually a police officer, firefighter, or witness with training in first aid.

Inter-hospital (or secondary) transportation: The transfer of patients between health facilities, usually to provide a higher level of care or carry out specific procedures that are only available at the receiving hospital.

Patient care attendant: The emergency care personnel that will be providing care to the patient.

Personal protective equipment (PPE): Equipment worn to minimize the exposure to hazards normally found in the workplace.

Point of entry: A passage for international entry or exit of travellers, baggage, cargo, containers, conveyances, goods and postal parcels, as well as agencies and areas providing services to them on entry or exit.

Pre-arrival instructions: Guidance that emergency communication centres provide to callers (witnesses, family members, first responders, and so on). This can be general advice (on safety, facilitating access to the ambulance, and so on) or specific instructions (on use of PPE, control of bleeding, providing CPR, or assisting with childbirth, among other situations).

Pre-arrival hospital notification: A communication procedure aimed at facilitating hospital transfers when more detailed information on a patient's health condition is required which will alert the staff of the receiving service to take the appropriate measures to provide health care.

Receiving hospital: A health facility with the appropriate resources, specialties, capacity and availability to receive and treat the patient.

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