



# A checklist for COVID-2019 pandemic risk and impact management

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## Introduction

On 30 January 2020, the Director-General of WHO declared the coronavirus disease 2019 (COVID-19) outbreak a public health emergency of international concern (PHEIC) under the International Health Regulations (IHR 2005), following advice from the IHR Emergency Committee. On 4 February 2020, the Director-General of WHO briefed the Secretary-General of the United Nations and requested the activation of the United Nations crisis management policy to establish a Crisis Management Team (CMT) to coordinate the UN system-wide scale up to assist countries prepare for and respond to COVID-19. A pandemic is the worldwide spread of a new disease. Pandemics are unpredictable but recurring events that can significantly affect health, communities and economies worldwide. Planning and preparation are critical to help mitigate the risk and impact of a pandemic, and to manage the response and recovery.

## Purpose

This document is a tool to help national authorities to develop or revise national pandemic preparedness and response plans to COVID-19. This document has been developed to take into account the following pillars and based on the COVID-19 interim guidelines and the WHO guidance on topics related to pandemic influenza and public health emergency planning.

### Pillars:

1. Preparation for an emergency
2. Surveillance, outbreak investigation and risk assessments
3. Health services, clinical management and infection prevention and control
4. Maintaining essential services and recovery
5. Preventing illness in the community

## How to use this document

Each section of this document presents a checklist of suggested planning actions that countries can take in order to be better prepared for a pandemic. This document is intended to be used by national authorities responsible for pandemic preparedness and response:

- Countries with an existing national pandemic preparedness plan can use this document as a guide when updating and revising their plan.
- Countries that do not have an existing national pandemic plan can use this document as a guide when developing a pandemic plan.
- All countries may consider coordinating capacity strengthening efforts across different initiatives by integrating national pandemic plans with other disease-specific preparedness and response plans.

## Preparing for an emergency

### Planning

Develop or revise a national pandemic response plan as part of a multi hazard public health emergency plan. The plan should bring together many elements described in this checklist, including:

- **Context** – An overview of the country, health and other systems; multisectoral and health sector coordination mechanisms to manage risks of emergencies; and relevant legislation and policy frameworks, including any international agreements.
- **Authority** – Clear authority regarding the development, approval, implementation and review of the plan.
- **Concept of operations** – Establishes roles, responsibilities and how organizations will work together and coordinate at national, subnational and local levels of pandemic response. This includes government agencies and departments, and other public, private and nongovernmental partners.
- **Risk assessment and resource mapping** – Summary of existing risk assessments pertaining to pandemics, including sources of pandemic risk, in-country vulnerabilities and capacities, and identification and mapping of available resources and supply systems in health and other sectors.
- **Alert, detection, rapid risk assessment and grading** – A description of the processes and responsibilities for surveillance, early warning and rapid risk assessments.
- **Stakeholders** – Description of roles and responsibilities of the key stakeholders in the multisectoral aspects of pandemic preparedness, response and recovery.
- **Scale-down** – Process for scaling down the pandemic response and planning for recovery.

### Coordination

- Apply and strengthen multisectoral coordination mechanisms between government ministries, competent authorities, nongovernmental organizations and nonstate actors involved in pandemic activities, at subnational and local levels.
- Apply and strengthen health sector coordination and communication mechanisms with pandemic preparedness, response and recovery partners (e.g. national emergency management agencies and other government agencies, and the healthcare sector at subnational and local levels).
- Apply and strengthen a public health emergency operations centre linked to the national emergency management structure, including legal framework, operating procedures, physical infrastructure, information and communications technology infrastructure, information systems and data standards.

- Apply and strengthen a common organizational model (e.g. an incident management system) across all sectors of pandemic response to coordinate functions, including management, planning, operations, logistics, finance and administration.
- Apply and strengthen coordination and communication mechanisms with neighboring countries and other international stakeholders.

## Resources

- Assess human resource requirements to implement, manage and coordinate pandemic response activities. Ensure that human resources are available for essential routine services and pandemic response.
- Commit resources to support capacity development for response and recovery, building on capacities for health-emergency risk management.
- Identify sources and funding mechanisms for pandemic response activities at national, subnational and local levels.
- Apply and strengthen surge capacity and deployment mechanisms at all relevant levels.

## Legal and policy issues

- Review existing legislation, policies or other government instruments relevant to pandemic risk management, including multihazard emergency risk management, and pandemic preparedness and response.
- Assess the legal basis for all public health measures that are likely to be proposed during a pandemic response, such as:
  - isolation or quarantine of infected individuals, people suspected of being infected, or people from areas where pandemic infection is established;
  - travel or movement restrictions (i.e. on leaving or entering areas where pandemic infection is established);
  - closure of educational institutions and prohibition of mass gatherings.
- Establish ethics committees to advise on pandemic preparedness and response activities, coordinating with existing national ethics structures.
- Review existing and proposed pandemic policies and interventions to take ethical concerns into consideration, for example:
  - policies to restrict movement (e.g. isolation, quarantine and travel restrictions).

## Risk communication and community engagement

- Ensure that formal structures and agreed procedures are in place to conduct risk communication and community engagement (RCCE).
- Develop mechanisms, including clearance processes, to ensure coordinated and consistent actions, messages and community engagement across partners at national, subnational and local levels.
- Identify and train a public communication unit and individuals who can be pandemic spokespeople. Ensure that this team can conduct proactive public outreach on a mix of social and traditional media platforms, using locally relevant languages and technologies; this includes the ability to communicate uncertainty.
- Identify influential community leaders, networks, groups and other influencers. Develop mechanisms to involve them in decision-making to ensure that interventions are collaborative and contextually appropriate, and that communication is community owned.
- Establish and use systems and networks to monitor and proactively address misinformation.

# Surveillance, outbreak investigation and risk assessments

## Surveillance

- Establish surveillance systems and capacities to monitor and characterize activity, linking epidemiological and virological information. That systems should include surveillance for influenza-like illness (ILI) and severe acute respiratory infections (SARI), and event-based surveillance.
- Establish or strengthen systems to manage and report surveillance data, including data collection, data cleaning, database management and standards template for reporting (i.e FluNet / FluID) of aggregated data. Ensure that surveillance data are reported regularly, daily or weekly basis depending the epidemiological situation.
- Actively monitor and report disease trends, impacts, population perspective to global laboratory/epidemiology systems including anonymized clinical data, case fatality ratio, high-risk groups (pregnant women, immunocompromised) and children.
- Ensure reporting capacities and coordination with the national IHR focal point to notify WHO of cases of novel virus infection, under the requirements of the IHR.
- Develop surveillance strategies to detect further cases of human-to-human transmission of novel virus.
- Establish protocols for active case finding (e.g. contact tracing).
- Establish a process to review case definitions and public health interventions, based on surveillance findings.
- Establish channels to share surveillance analysis with decisionmakers and stakeholders.
- Maintain reporting capacities and coordination to report daily or weekly updates of the pandemic situation to PAHO/WHO.
- Develop surveillance strategies to monitor the pandemic during the pandemic and transition phases. Include criteria to trigger changes in strategy (e.g. when to discontinue case-based reporting and when to monitor for trends).
- Establish mechanisms to review control measures, public health interventions and pandemic response plans, based on surveillance analysis.

## Laboratories

- Ensure that laboratory biosafety protocols are properly implemented and assess the need to refine these protocols in a pandemic situation.
- Establish at least one laboratory that can perform routine diagnosis using reverse transcription polymerase chain reaction (RT-PCR).
- Ensure that a system is in place to transport referred specimens from health facilities to testing laboratory, taking into consideration possible disruption of the routine transport system during a pandemic.
- Identify systems to collect, manage and back up laboratory data.
- Establish access to a designated WHO COVID-19 reference laboratory.
- Identify needs for additional facilities, trained staff, equipment (including personal protective equipment [PPE]) and reagents to operate during a pandemic.
- Outline testing strategies to test specimens during the interpandemic, alert and pandemic and indicate when testing should be discontinued.
- Strategies should be based on national surveillance objectives for each pandemic phase, considering the level of available resources.
- Develop surge plans to manage increased demand for testing and transport of clinical specimens during potential widespread COVID-19 transmission.

## Outbreak investigation

- Ensure that outbreak investigation and rapid response personnel have appropriate capacities and training (e.g. field epidemiology, data collection and analysis, risk assessment, use of PPE), and are familiar with their terms of reference and expected tasks.
- Establish trigger criteria to investigate unusual cases or clusters of acute respiratory diseases.
- Establish multidisciplinary outbreak investigation and rapid response teams (including terms of reference), and identify team members who can be deployed.
- Develop guidance on how to define and manage possible contacts of the cases. Ensure that contacts are informed of and understand proposed management measures (e.g. isolation, medical follow-up and hygiene measures).
- Assess the need to enhance existing surveillance systems in locations where cases reside, where animal outbreaks are occurring or where the source of infection is suspected. If needed, target surveillance at groups with greater occupational risk of exposure.



## Risk and severity assessment

- Establish SOPs to conduct systematic pandemic risk and severity assessments and use assessment findings to inform public health actions.
- Enhance capacities for pandemic risk and severity assessment including at national, subnational and local levels if possible.
- Identify parameters to assess indicators of pandemic severity (transmissibility, seriousness of disease and impact) using the pandemic severity assessment (PISA) framework. Determine thresholds or defined ranges for each parameter using historical data.
- Establish mechanisms to review control measures, public health interventions and pandemic response plans, based on pandemic risk and severity assessment findings.
- Consider links with risk communication specialists to communicate assessment findings to affected populations.

# Health services, clinical management and infection prevention and control

## Management of the hospital response to the emergency and coordination

- Activate the emergency response mechanism: Hospital Committee for Emergencies and Disasters and/or Hospital Incident Management System.
- Designate a response operations manager.
- Establish a secure and well-equipped physical area that is protected and easily accessible, with immediate operational capacity to coordinate the response (Emergency Operations Center), paying attention to internal and external communications.
- Assign roles and responsibilities for the different response functions, with enough trained staff available to ensure operational continuity; include up-to-date directory of telephone numbers and email addresses.
- Designate official spokespersons.
- Use occupational health mechanisms that ensure the well-being and safety of personnel during the response, including monitoring of exposed personnel.
- Distribute information to all staff about the emergency and the roles and responsibilities of personnel and the hospital, as well as current and future actions.
- Identify and establish coordination mechanisms with health and disaster management authorities.
- Activate mechanisms for coordination, communication, and collaboration with the integrated health services network at the level local, considering patient care, the necessary drugs, supplies and equipment, and patient transfer.

## Logistical capacities of the facility

- Establish a physical space to triage patients with acute respiratory symptoms. Locate a space with optimal conditions for the prevention and control of infections.
- Identify areas that can be used to increase patient care capacity (expanded capacity), considering the necessary personnel, equipment, and supplies.
- Identify nonessential services that could be suspended, if necessary, in order to increase hospital capacities (human and material resources, equipment, and physical space).

- Have a procedure in place and someone responsible for supply chain management (medicines and supplies), considering increased demands on the supply and distribution chain, and respecting technical specifications and established protocols.
- Have a procedure in place and someone responsible for the management of work teams, including rest areas, safe transportation, and staff well-being.
- Test the facility's telecommunications systems.
- Have a procedure in place and someone responsible for the management of ambulances for transportation between hospitals and for the inventory of available vehicles.

## Case management

- Provide protocol for management of suspected or confirmed cases
- Have trained staff and equipment available for initial medical care of suspected or confirmed patients (primary screening, resuscitation, initial stabilization, mechanical ventilation), with access to personal protective equipment.
- Have trained staff for continuous care of suspected or confirmed patients requiring hospitalization, with access to personal protective equipment. Consider training and education in the use of personal protective equipment and in the handling and disposal of contaminated waste during procedures, in addition to ensuring the safety of patients and personnel.
- Plan installed capacity for medical care of suspected or confirmed patients requiring intensive care (mechanical ventilation, hemodynamic monitoring, multiorgan support); list of equipment for medical care (orotracheal cannulas, NIV masks, n95 masks, personal protective equipment); equipment (volumetric ventilators to meet invasive and non-invasive mechanical ventilation needs)

## Infection prevention and control

- Have a triage procedure in place in the emergency department for isolation of suspected and confirmed cases.
- Identify, sign, and equip available areas for medical care of suspected and confirmed cases in secure and isolated conditions.

- Have 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.
- Train health workers in the use of personal protective equipment and consider additional precautions for specific transmission mechanisms (droplets, contact, aerosols, fomites).
- Have protocols or procedures available for cleaning and hygiene of clinical areas, including training in the use of decontamination materials.
- Ensure the health facility has protocols for disinfection and sterilization of biomedical equipment and material devices
- Have an area in the facility for disinfection and sterilization of biomedical equipment and material devices
- Ensure the healthcare facility has a protocol and a marked route for management and final disposal of infectious biological waste, including sharps.
- Ensure the facility has infrastructure and procedures for proper hand hygiene, including handwashing, continuous training, and supplies.
- Ensure physical space and guidelines for disposal of corpses resulting from the emergency.

# Maintaining essential services and recovery

## Essential service continuity

- Establish a central authority to oversee continuity of essential services during a pandemic (e.g. national emergency committee). Identify similar coordinating authorities at subnational levels.
- Coordinate with the business sector to define services considered as essential, and the geographical and administrative levels where they are delivered (e.g. state, regional and community).
- Identify emergency budget and finance mechanisms to ensure financing of essential services during a pandemic.
- Work with essential service providers to develop, review and test business continuity plans (or pandemic annexes to existing plans) to ensure essential service continuity during a pandemic.
- Identify key essential service staff and their roles and responsibilities during a pandemic.
- Inform essential service staff of pandemic plans and staff welfare policies.

## Recovery

- Establish a central authority to oversee and coordinate all-of-society recovery operations (e.g. national recovery committee). Identify similar coordinating authorities at subnational levels.
- Establish criteria to de-escalate emergency response operations and initiate recovery of normal services and business.
- Develop recovery plans for the health-care sector and other essential services. Include steps to prepare for future pandemic waves and review pandemic and business continuity plans.
- Develop support services and programs for communities affected by the pandemic including financial support, social support, emergency housing and counselling.

## Preventing illness in the community

### Non-pharmaceutical interventions

- Coordinate with risk communication authorities to prepare messages and information materials for affected people, the general public and other stakeholders to explain the rationale for non-pharmaceutical interventions and how to implement each intervention:
  - Address issues including intended benefits, limitations, anticipated impact and expected duration, in the context of public health objectives.
- Establish legal authority to implement non-pharmaceutical interventions proposed in the national public health emergency or pandemic preparedness and response plan.
- Assess the legal and ethical bases of each non-pharmaceutical intervention proposed in the national public health emergency or pandemic preparedness and response plan, particularly those that impose on personal freedoms:
  - Ensure that national authorities involved in decisions to select non-pharmaceutical interventions and when to implement them have a clear understanding of the legal and ethical bases and implications.
- Define the public health rationale and trigger criteria to deploy non-pharmaceutical interventions.

### Non-pharmaceutical interventions - Person

- Develop key messages, information, education and communication (IEC) materials and a communications strategy to promote personal non-pharmaceutical interventions to **reduce the risk of transmission in the community**, such as:
  - staying home when ill,
  - voluntary isolation,
  - respiratory etiquette,
  - hand hygiene,
  - using face masks in community settings and
  - reducing social contact.
- Promote routine environmental cleaning of frequently touched surfaces and objects in homes, childcare facilities, schools, workplaces and public settings.

## Non-pharmaceutical interventions - Community

- Assess the anticipated impact of closing childcare facilities and educational institutions (e.g. schools and universities). Discuss strategies and criteria for implementation with the education sector and other partners.
- Prepare social distancing recommendations for workplaces on measures such as teleworking or replacing in-person meetings with teleconferences or virtual meetings.
- Identify types of mass gathering events that may need to be suspended (e.g. sport events, festivals and markets). Discuss strategies and criteria for implementation with event organizers and other partners.
- Prepare recommendations and guidance for the home care of ill persons and infection prevention among their household members (e.g. hand hygiene, respiratory etiquette, cleaning frequently touched surfaces and items frequently, recognizing symptoms, and when and where to seek care).
- Ensure that any planned mandatory quarantine measures can be implemented legally, ethically and practically:
  - identify legal and ethical bases for quarantine measures.
  - identify facilities where people can be quarantined in appropriate conditions, including provision of medical care, food and psychosocial support; and
  - establish transport resources to safely transport people to and from quarantine facilities.

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Reference Number: PAHO/PHE/IHM/COVID-19-20-0013

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