Preparing for large-scale community transmission of COVID-19

Guidance for countries and areas in the WHO Western Pacific Region

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World Health Organization
Western Pacific Region

1. Background

On 7 January 2020, Chinese authorities confirmed the identification of a novel coronavirus from a cluster of pneumonia cases of unknown etiology in Wuhan city, Hubei province. The virus has now spread throughout China and has also been identified in a growing number of countries around the world.

The coronavirus disease 2019 (COVID-19) outbreak was declared a public health emergency of international concern on 30 January 2020. The situation continues to evolve rapidly in China and internationally, and further spread of the virus should be anticipated.

There are still many unknowns about the virus, including the clinical spectrum of disease, its severity and transmissibility. These factors are critical to enable evidence-informed risk assessments to be conducted and to determine appropriate and proportional public health responses. Absent this knowledge, countries and areas are encouraged to leverage the core capacities required under the International Health Regulations (IHR, 2005) and national influenza pandemic plans to prepare for multiple scenarios, including large-scale community transmission of COVID-19 within their borders.

This document is a guide for national authorities who are responsible for managing public health responses to COVID-19.

2. Priority Areas

To strengthen health systems in line with APSED III, countries and areas should prepare to rapidly adapt strategies when local epidemiological data indicate that large-scale community transmission is occurring. In this scenario, intensive efforts to identify and trace individual cases are no longer the main priority. Resources should instead be focused on monitoring the spread and characteristics of the virus, identifying and managing severe cases, preventing onward transmission of the virus, alleviating strains on health-care services, informing the public, and reducing overall social and economic impact.

Actions to manage large-scale community transmission of COVID-19 are suggested in these priority areas:

- Incident management, planning and multisectoral coordination
- Surveillance and risk assessment
- Laboratory
- Clinical management and health-care services
- Infection prevention and control
- Non-pharmaceutical public health measures
- Risk communication
- Points of entry
- Operational logistics

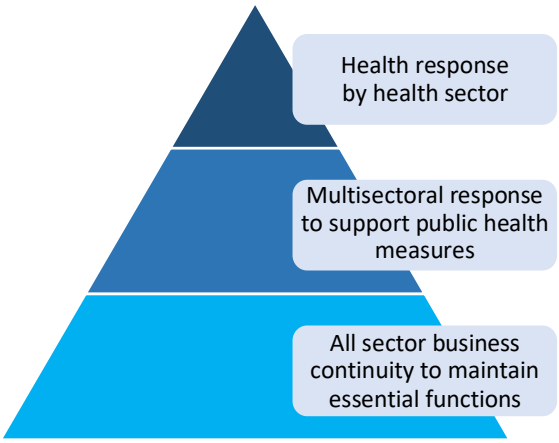
2.1. Incident management, planning and multisectoral coordination

National public health emergency management mechanisms should be activated to provide coordinated management of the evolving situation. Plans and structures developed for a pandemic influenza scenario are likely to be applicable to the COVID-19 event.

Recommended actions

- Ensure that the national public health emergency plan is activated and in use.
- Ensure that an incident management system (IMS) and an emergency operations centre (EOC) for event management are activated and in use.
- Ensure multisectoral coordination mechanisms managed by national emergency platforms are in place between government departments, agencies, civil society organizations and other relevant bodies. All sectors should be prepared to support the implementation of public health measures and the health sector response and to maintain essential business continuity.

Fig. 1. Overall multisectoral response



- Assess and fill incident management staffing needs.
- Identify funding sources and mechanisms for event management activities.
- Review regulatory requirements and legal basis of all public health measures that may be implemented.

2.2. Surveillance and risk assessment

In a large-scale community transmission scenario, individual case identification, contact tracing, and quarantining are no longer necessary. Instead, surveillance will focus on monitoring trends for geographical spread, transmission intensity, affected populations, virological features, and impacts on health-care services. This multisource information informs ongoing risk assessments for decision making on appropriate public health measure.

Recommended actions

- Maintain international reporting to WHO via IHR reporting mechanisms.
- Review COVID-19 case definitions and disseminate to public health units, health-care facilities, surveillance sites, laboratories and points of entry.
- Develop surveillance strategies to actively monitor disease trends and impacts. Leverage existing surveillance systems to collect data (such as event- and indicator-based surveillance for influenza-like illness (ILI), severe acute respiratory illness (SARI), acute febrile illness and pneumonia, notifiable disease surveillance system) and supplement with ad hoc indicators if needed (such as school absenteeism at sentinel sites, sales of over-the-counter medications).
- Develop sampling strategies for virological testing to monitor transmission intensity, in coordination with laboratory and clinical management focal points.
- Prepare staff and establish procedures to conduct systematic risk assessments. Use approaches that synthesize multiple sources of information for risk assessment to inform response decisions (for example epidemic analysis for response decision-making).
- Establish mechanisms to use surveillance analysis and risk assessments to review control measures and response plans.

2.3. Laboratory

Countries should prepare laboratory capacity to manage large-scale testing for COVID-19 – either domestically or through arrangements with international reference laboratories. If testing does not occur in a domestic laboratory, samples should be sent to a regional or international reference laboratory with COVID-19 detection capacity. If large-scale community transmission is occurring, testing strategies should shift towards monitoring the intensity of transmission, and surge plans should be prepared to manage increased volume. Reference laboratories may also be overwhelmed by increased testing demands and unable to meet international requests. WHO can provide support to access relevant reference laboratories, protocols, reagents and supplies.

Recommended actions

- Identify national laboratories with capacity to test for COVID-19 and source reagents and other supplies.
- If domestic capacity does not exist, establish arrangements with an international reference laboratory for testing or confirmation.
- Develop sampling strategies to monitor transmission intensity, in coordination with surveillance and clinical management focal points.
- Develop surge plans to manage increased testing volume.
- Assess the need to refine laboratory biosafety protocols and ensure that protocols are properly implemented. Provide appropriate biosafety and biosecurity training to staff.
- Ensure staff are trained. Implement protocols to pack, store and ship specimens according to national regulations. International shipments must comply with international transport regulations.

2.4. Clinical management and health-care services

Health-care facilities should prepare for large increases in the number of COVID-19 cases as well as people presenting with similar symptoms. Staff should consider COVID-19 for any patient presenting with respiratory illness—they should be prepared to recognize signs and symptoms of known complications and to administer appropriate care. Triage systems should prioritise severe and high-risk patients to manage demands on staff, facilities and supplies. Mild cases should be managed at home or in the community. Plans to ensure business continuity and provision of other essential health-care services should also be reviewed.

Recommended actions

- Identify and review capacity of health-care facilities to manage and treat increased numbers of patients with suspected COVID-19, including intensive care unit (ICU) capacity.
- Review procedures to recruit and train surge capacity staff.
- Identify alternative facilities that may be used to provide treatment (such as community halls or sport facilities). Determine feasible and safe levels of care.
- Establish triage systems and algorithms to identify priority cases for treatment and ICU admission, both before and at presentation to health-care facilities (for example staffed telephone hotlines, triage counters). The needs of patients with COVID-19 should be assessed and prioritized in consideration of patients requiring treatment for other causes.
- Review, update and disseminate national guidance and protocols for clinical management of respiratory illnesses and complications related to COVID-19.
- Consider COVID-19 as a possible etiology of these conditions; triage patients and initiate treatment based on disease severity.
  - SARI
  - Hypoxemic respiratory failure
  - Acute respiratory distress syndrome (ARDS)
  - Septic shock

- Ensure medical staff at all levels are trained to update treatment protocols.
- Immediately implement appropriate infection prevention and control measures (see 2.5. Infection prevention and control).
- Orient and/or train relevant clinicians and other staff on updated guidance and protocols, including safe collection of clinical samples.
- Ensure that national or WHO protocols for the safe collection and transport of respiratory specimens and blood are implemented.
- Ensure that referral systems for severe cases are in place.
- Establish dedicated teams and ambulances to transport suspected and confirmed cases to minimize contact risk.
- Coordinate or join a network of clinical experts to address uncertainties around the clinical management of COVID-19. Establish methods to share updated knowledge (for example teleconferences, videoconferences, bulletins).
- Review protocols to treat and manage potentially infectious patients in primary care settings, non-health facilities and the community.
- Ensure that guidance is made available for home and community care of mild COVID-19 cases, including advice on triage.
- Review and update business continuity plans at key health-care facilities to ensure continuation of essential health services.
- Review stock management and procurement procedures for medicines, supplies and medical devices needed to provide treatment for patients with COVID-19 and to maintain essential health services.
- Ensure provision of health services for people with chronic health conditions such as heart disease, lung disease and diabetes.
- In preparation for potential pharmaceutical interventions, review risk group prioritization and mechanisms for the use of off-license or experimental therapeutics.

2.5. Infection prevention and control

Infection prevention and control (IPC) practices in facilities should be reviewed and enhanced to prepare for increased numbers of people with COVID-19 and to prevent onward transmission to staff, patients, and visitors.

Recommended actions

- Ensure appropriate triage counters are in place before entry to facilities.
- Ensure isolation and transportation systems and resources are in place at health-care facilities. (see 2.4. Clinical management and health-care services).
- Assess IPC practices and compliance in health-care settings and other relevant facilities (for example elderly homes, long-term care facilities, points of entry). Address identified gaps.
- Review and update existing national IPC guidance for COVID-19 and disseminate to major hospitals and health-care facilities. Guidance should include:
  - **Triage, early recognition and source control.** Clinical triage including early recognition and source control (isolation of patients with suspected infection) is essential for rapid identification, appropriate isolation and care of patients with suspected COVID-19.
  - **Standard precautions for all patients.** Standard precautions include hand and respiratory hygiene, appropriate use of personal protective equipment (PPE) and safe waste management.
  - **Additional precautions for COVID-19.** In addition to standard precautions, all individuals (health-care workers, visitors, family members etc.) should apply contact and droplet precautions for patients with suspected and confirmed COVID-19. Health-care workers performing aerosol-generating procedures should also apply airborne precautions.
  - **Administrative controls.** Ensure sustainable IPC infrastructure and activities (for example convene an IPC committee,

review existing PPE stockpiles, estimate future needs, facilitate procurement).

- **Environmental and engineering controls.** Basic infrastructure of health-care facilities (including ambulances) must be maintained, including adequate ventilation, environmental cleaning and disinfection.

- If needed, implement additional education and training for staff.
- Ensure that IPC guidance is available for home and community care providers. Guidance should reflect locally accessible resources.

2.6. Non-pharmaceutical public health measures

Management strategies will largely rely on non-pharmaceutical public health measures to reduce the level of transmission, as there are currently no vaccines or specific therapeutics available for COVID-19. Some measures, particularly social distancing interventions, can be severely disruptive and should be carefully evaluated for public health benefit versus social and economic cost. Others such as quarantine of exposed individuals and border closures may be of limited use once large-scale community transmission has been established and so should be evaluated for effectiveness. Any decision to implement a non-pharmaceutical public health measure must also be guided by risk assessments that take into consideration clinical severity, transmissibility and impact of the disease.

Recommended actions

- Define public health rationale and trigger criteria to deploy each planned non-pharmaceutical public health measure.
- Evaluate planned measures for public health benefit versus social and economic cost, taking current risk assessments into account.
- Coordinate with risk communication teams to prepare messages and information materials for affected people, the public and other stakeholders.
- Consider establishing metrics and monitoring and evaluation systems to assess the effectiveness and impact of planned measures.

Table 1. Non-pharmaceutical public health measures to reduce transmission of COVID-19

Situation	Intervention
Recommended in **all** situations	• Hand hygiene • Respiratory etiquette • Face masks for symptomatic individuals • Voluntary isolation of ill individuals • Surface and object cleaning • Health advice for travellers
Consider, based on local evaluation	• Avoiding crowding (e.g. mass gatherings) • School closures and other measures[1] • Workplace closures and measures[2]

[1] School measures include exclusion policies for ill children, increasing desk spacing, reducing mixing between classes, and staggering recesses and lunchbreaks. School closures are suggested during a severe epidemic and should be coordinated and proactive, rather than reactive.

[2] Workplace measures include teleworking, staggering shifts and expanding policies on sick leave.

2.7. Risk communication

As the situation evolves, it is critical to communicate to the public what is known, what is unknown and what is being done. Changes in strategy and interventions should be announced and explained ahead of time. Responsive, transparent and consistent messages will be essential to establish authority and trust in the management of the event. Systems should also be proactively established to detect and respond to rumours and misinformation.

Recommended actions

- Ensure that the national risk communication plan for public health emergencies has been activated. Procedures developed for a pandemic influenza scenario are likely to be applicable.
- Identify one or more official spokespeople and provide training if needed.
- Prepare mechanisms to rapidly clear and disseminate messages and materials.
- Prepare communication materials on COVID-19 and current public health measures for target groups and the public.
- Prepare communication materials to explain changes in response strategy and to set public expectations.
- Establish systems to collect and respond to public concerns, frequently asked questions, rumours and misinformation (for example monitoring media coverage, social media, health-care work networks).
- Identify at-risk communities, their networks, communication channels and potential influencers.
- Consider establishing a webpage or telephone hotline to provide information.
- Access the WHO website for latest information on COVID-19 (www.who.int/emergencies/diseases/novel-coronavirus-2019).

2.8. Points of entry (POE)

If large-scale community transmission of the virus has been established in the country or area, any entry restrictions intended to stop the importation of COVID-19 cases are no longer necessary and should be withdrawn. Instead, leverage POE resources to disseminate information and manage ill travellers.

Recommended actions

- Review the POE public health emergency plan.
- Participate in COVID-19 surveillance and reporting systems.
- Ensure health assessment, management and transport of ill travellers/staff to previously designated hospitals.
- Provide travellers with information on potential health risks, preventive measures and when to seek medical care.

2.9. Operational logistics

Logistic arrangements to support event management and operations should be reviewed. Expedited procedures may be required in key areas (such as surge staff deployment, procurement of essential supplies, staff payments).

Recommended actions

- Prepare staff surge capacity and deployment mechanisms.
- Map available resources and supply systems in health and other sectors.
- Review procurement processes (including importation and customs) for medical and other essential supplies.
- Assess capacity of suppliers to meet increased demand for medical and other essential supplies.
- Review stockpiling, storage, security, transportation and distribution arrangements for medical and other essential supplies.

Resources

COVID-19	Technical guidance on COVID-19 is currently being developed and will be regularly updated as the situation evolves. Please refer to the latest documents published online at www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance. Guidance is available on the following topics: - Country readiness - Surveillance and case definitions - Laboratory - Patient management - Infection prevention and control - Early investigations - Risk communication and community engagement - Disease commodity package - Reduction of transmission from animals to humans - Points of entry/mass gatherings
Frameworks	International Health Regulations (2005) (3rd ed.). Geneva: World Health Organization; 2016. www.who.int/ihr/publications/9789241580496/en/ Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies (APSED III). Manila: World Health Organization Regional Office for the Western Pacific; 2017. https://iris.wpro.who.int/handle/10665.1/13654
Incident management and planning	Pandemic influenza risk management. Geneva: World Health Organization; 2017. www.who.int/influenza/preparedness/pandemic/influenza_risk_management/en/ A checklist for pandemic influenza risk and impact management. Geneva: World Health Organization; 2018. www.who.int/influenza/preparedness/pandemic/influenza_risk_management_checklist_2018/en/ Framework for a public health emergency operations centre. Geneva: World Health Organization; 2015. www.who.int/ihr/publications/9789241565134_eng/en/
Surveillance and risk assessment	Protocol to investigate non-seasonal influenza and other emerging acute respiratory diseases. Geneva: World Health Organization; 2018. www.who.int/influenza/resources/publications/outbreak_investigation_protocol/en/ WHO guidance for surveillance during an influenza pandemic. Geneva: World Health Organization; 2017. www.who.int/influenza/preparedness/pandemic/guidance_pandemic_influenza_surveillance_2017/en/ Rapid risk assessment of acute public health events. Geneva: World Health Organization; 2012. www.who.int/csr/resources/publications/HSE_GAR_ARO_2012_1/en/

Laboratory	Guidance on regulations for the transport of infectious substances 2017–2018. Geneva: World Health Organization; 2017. www.who.int/ihr/publications/WHO-WHE-CPI-2017.8/en/ Laboratory biosafety manual (3rd ed.). Geneva: World Health Organization; 2004. www.who.int/csr/resources/publications/biosafety/WHO_CDS_CSR_LYO_2004_11/en/
Clinical management and health-care services	Core medical equipment. Geneva: World Health Organization; 2011 www.who.int/medical_devices/publications/med_dev_core_equipt/en/
Infection prevention and control	Guidelines on core components of infection prevention and control programmes at the national and acute health care facility level. Geneva: World Health Organization; 2016. www.who.int/gpsc/ipc-components-guidelines/en/ Infection prevention and control of epidemic- and pandemic-prone acute respiratory infections in health care. Geneva: World Health Organization; 2014. www.who.int/csr/bioriskreduction/infection_control/publication/en/
Non-pharmaceutical public health measures	Non-pharmaceutical public health measures for mitigating the risk and impact of epidemic and pandemic influenza. Geneva: World Health Organization; 2019. https://www.who.int/influenza/publications/public_health_measures/publication/en/ Public health for mass gatherings: key considerations. Geneva: World Health Organization; 2015. www.who.int/ihr/publications/WHO_HSE_GCR_2015.5/en/
Risk communication	Communicating risk in public health emergencies: a WHO guideline for emergency risk communication (ERC) policy and practice. Geneva: World Health Organization; 2018. www.who.int/risk-communication/guidance/download/en/ Communication for behavioural impact (COMBI): A toolkit for behavioural and social communication in outbreak response. Geneva: World Health Organization; 2012. www.who.int/ihr/publications/combi_toolkit_outbreaks/en/ World Health Organization outbreak communication planning guide. Geneva: World Health Organization; 2008. www.who.int/ihr/publications/outbreak-communication-guide/en/
Points of entry	Guide for public health emergency contingency planning at designated points of entry. Geneva: World Health Organization; 2012. www.who.int/ihr/publications/9789290615668/en/ Handbook for the management of public health events in air transport. Updated with information on Ebola virus disease and Middle East respiratory syndrome coronavirus. Geneva: World Health Organization; 2015. https://www.who.int/ihr/publications/9789241510165_eng/en/ Handbook for management of public health events on board ships. Geneva: World Health Organization; 2012. https://www.who.int/ihr/publications/9789241549462/en/