World Health Organization

Infection Prevention and Control (IPC) in health-care facilities in the event of a surge or resurgence in cases of COVID-19

Target audience – Emergency operations centre focal persons for health facilities, incident managers, health care managers and administrators, and infection prevention and control focal persons

GOALS

1 To reduce transmission of health-care associated infections and thereby to enhance the safety of all who are present in a health-care facility, including patients, staff and visitors.

2 To enhance the ability of a health-care facility to respond to an outbreak.

3 To lower or eliminate the risk of the health-care facility itself amplifying the outbreak.

IMMEDIATE ACTIONS – WITHIN 2 WEEKS OF IDENTIFICATION OF SURGE/RESURGENCE AND ONGOING

STEP 1

COORDINATE INCIDENT COMMAND GROUP TO DIRECT ACTIONS AND CASCADE COMMUNICATIONS
The Incident Command Group identifies and coordinates key actions and risk communications to staff, external services, and referral networks to mitigate risks associated with increased need for care capacity within the health-care facility.

- Include representation in Incident Command Group from hospital administration, triage/screening, clinical teams, occupational health and safety, environmental services, building/facilities, logistics and supply coordination, and all other relevant stakeholders.
- Assess current capacities to perform care safely, manage expected surge influx, and existing or expected barriers to safe case management.
- Plan for recruitment of additional staff across all areas to safely manage increased caseload, coverage for paid sick leave and breaks, and additional human resources for contingency capacities during emergency situations.

■ Assess available funding mechanisms and resources needed to enhance the capacity of the hospital to respond to a surge in cases while prioritizing the safety of staff and patients from increased transmission risks.

WHO REFERENCE RESOURCES:
• Hospital Preparedness for Epidemics (https://apps.who.int/iris/handle/10665/151281)
• Rapid hospital readiness checklist for COVID-19 (https://apps.who.int/iris/handle/10665/332778)
• Adaptt Surge Planning Support Tool (https://www.euro.who.int/en/health-topics/Health-systems/pages/strengthening- the-health-system-response-to-covid-19/surge-planning-tools/adaptt-surge-planning-support-tool)

STEP 2

MANAGE SAFE FLOW OF PATIENTS AND STAFF
Managed facility flow ensures efficient use of available space and expedites isolation of suspected cases.

■ Ensure adequate space and resources to manage incoming patients safely within screening and triage areas.
■ Designate normative care and COVID-19 triage areas and care units and designate staff to these areas with minimal crossover.
■ Screen patients, provide education on IPC measures and facilitate transfer to isolation or non-isolation pathways.
■ Designate staff-only spaces throughout the facility; including bathrooms, changerooms, charting areas, break rooms, clean/low traffic areas for storage of PPE and other supplies, and designated areas for storage of dirty equipment
■ Designate and manage space for disinfection of devices, laundering, areas for doffing PPE, appropriate containment of waste and safe routing for the removal and disposal of used cleaning products, PPE, and other waste from patient care areas.
■ Ensure infrastructural capacity to safely manage increased hygienic requirements of clean water and management of excreta.
■ Ensure regular environmental cleaning and adequate ventilation of all occupied facility areas proportional to occupancy and use.
■ Ensure access to necessary supplies in all areas, including availability of resources for all occupants of the health-care facility to perform frequent hand hygiene.
■ Ensure mortuary capacity for safe dead body management without impeding bed flow.

If overcrowding of clinical space and care capacity cannot be managed through clinical pathway planning and efficient use of bed space (cohorting, anticipation of critical care needs, discontinuation of transmission-based precautions when appropriate, and discharge planning), additional space and care capacity must be developed through referral to other facilities, repurposing of existing facility space, and/or construction of temporary infrastructure.

WHO REFERENCE RESOURCES:
• Severe acute respiratory infections treatment centre manual (https://apps.who.int/iris/handle/10665/331603)
• Community facilities for preparedness and response to COVID-19 (https://extranet.who.int/emt/sites/default/files/200828%20COMMUNITY%20FACILITIES%20for%20preparedness%20and%20response%20to%20COVID-19_compressed.pdf)

STEP 3

ENSURE SAFE CARE ENVIRONMENT AND REMEDIATE WHERE NEEDED
Evaluating flow, occupancy, and activities of staff and patients as well as critical infrastructure capacities in facility spaces allows for the management and/or remediation of transmission risks.

■ Ensure physical distancing and avoid crowding points in all waiting rooms, triage areas, hallways, and patient care areas.

- Reduce continuous close contact by ensuring that pathways in corridors will allow for continuous movement.
- Assess all designated staff spaces for transmission risks; including spaces for care preparation/administrative work, clean and dirty equipment storage areas, space for the doffing of PPE, pathways for the removal of waste, etc.
- Ensure general and infectious waste are appropriately segregated, safely collected, treated and disposed.
- Assess and mitigate contamination risks in clean storage areas, areas used for decontamination of equipment, and waste collection areas.
- Assess environmental/engineering controls throughout facility; cleaning/disinfection, mechanical/natural/hybrid ventilation air exchange rates, remediate as needed to meet the occupancy and use of spaces in the health-care facility.

WHO REFERENCE RESOURCES:
- Ensuring a safe environment for patients and staff in COVID-19 health-care facilities (https://apps.who.int/iris/handle/10665/336257)
- Training (Administrative): Severe Acute Respiratory Infection (SARI) Treatment Facility Design (https://openwho.org/courses/SARI-facilities)
- IPC health care facility response for COVID-19 (https://apps.who.int/iris/handle/10665/336255)

STEP 4

ENSURE PERSONAL PROTECTIVE EQUIPMENT (PPE) AVAILABILITY, OPTIMAL USE, AND UNIVERSAL MASKING
PPE must be available, managed safely, and used optimally when needed. Universal masking (masks worn by all entering a health facility at all times) should be implemented to lower the risk of transmission and environmental contamination.

- Forecast procurement needs by measuring the utilization (burn rate) of PPE.
- Institute strategies for rational use where severe shortages are expected.
- Implement universal masking policies with mask distribution at entry to facility.
- Train/refresh health workers on best practices for the donning and doffing of PPE.
- Assess contamination risks in clean storage areas, carts, and other spaces where PPE is stored, laundered, reprocessed, or disposed of.

WHO REFERENCE RESOURCES:
- Rational use of personal protective equipment for COVID-19 (https://apps.who.int/iris/handle/10665/338033)
- WHO COVID-19 essential supplies forecasting tool (https://www.who.int/publications/i/item/WHO-2019-nCoV-Tools-Essential-forecasting-2021-1)
- Mask use in the context of COVID-19 (https://apps.who.int/iris/handle/10665/337199)
- Training: COVID-19: How to put on and remove personal protective equipment (https://openwho.org/courses/IPC-PPE-EN)

STEP 5

INCREASE ACTIVE SCREENING, TESTING, PHYSICAL DISTANCING, AND VACCINATION OF HEALTH WORKERS
Health workers may become infected with COVID-19 in the health-care environment and in the community. Identification of unprotected exposures of health workers in health-care facilities should be accompanied by investigation and mitigation.

- Prioritize vaccination of health workers.
- Screen health workers for symptoms (temperature and assessment) prior to entry to the facility.
- Remove health workers from the care environment and monitor when identified as a suspected or confirmed case.
- Perform laboratory testing of health workers routinely, and always as follow up in the event of an identified exposure to a patient or colleague with suspected or confirmed COVID-19 without adequate PPE. Consider strategies for health workers to perform routine self-testing if feasible.

- Follow up with investigation of all identified health worker infections or exposures to suspected or confirmed cases of COVID-19 within the health-care facility and mitigate the conditions which led to the exposure.
- Prioritize physical distancing, cleaning/disinfection, and ventilation in areas where health workers gather. This includes nursing desks, computer terminals, and administrative areas. Enhanced controls should be prioritized in areas where health workers remove their masks (break areas, cafeterias, etc.).

WHO REFERENCE RESOURCES:
- Prevention, identification and management of health worker infection in the context of COVID-19 (https://apps.who.int/iris/handle/10665/336265)
- Risk assessment and management of exposure of health care workers in the context of COVID-19 (https://apps.who.int/iris/handle/10665/331496)
- Training: Prevention, identification and management of health worker infection in the context of COVID-19 (https://openwho.org/courses/ipc-health-workers)

ACTIONS - WITHIN 2-4 WEEKS OF IDENTIFICATION OF SURGE/RESURGENCE AND ONGOING

STEP 6

CONTINUE TO ASSESS AND INCREASE INFRASTRUCTURAL CAPACITY FOR SAFE MANAGEMENT OF PATIENTS, CRITICAL CARE, AND DELIVERY OF ESSENTIAL HEALTH SERVICES

WHO REFERENCE RESOURCES:
- Infection prevention and control during health care when coronavirus disease (COVID-19) is suspected or confirmed (https://apps.who.int/iris/handle/10665/342620)
- Water, sanitation, hygiene, and waste management for SARS-CoV-2, the virus that causes COVID-19 (https://apps.who.int/iris/handle/10665/333560)
- Operational considerations for case management of COVID-19 in health facility and community (https://apps.who.int/iris/handle/10665/331492)
- Roadmap to improve and ensure good indoor ventilation in the context of COVID-19 (https://www.who.int/publications/i/item/9789240021280)
- Considerations for quarantine of contacts of COVID-19 cases (https://apps.who.int/iris/handle/10665/342004)

STEP 7

ENSURE ONGOING TRAINING ON INFECTION PREVENTION AND CONTROL AND OCCUPATIONAL HEALTH AND SAFETY

WHO REFERENCE RESOURCES:
- Training: Infection prevention and control (IPC) for COVID-19 (https://openwho.org/courses/COVID-19-IPC-EN)
- Training: Occupational health and safety for health workers in the context of COVID-19 (https://openwho.org/courses/COVID-19-occupational-health-and-safety)
- Training: Clinical management of patients with COVID-19: Initial approach to the acutely ill patient (https://openwho.org/courses/clinical-management-COVID-19-initial-approach)

ADDITIONAL WHO RESOURCES (GUIDANCE/POSTERS/TOOLS)

WHO REFERENCE RESOURCES:
- WHO webpage – Health Workers and Administrators (https://www.who.int/teams/risk-communication/health-workers-and-administrators#infection%20prevention%20and%20control)
- Clinical care for severe acute respiratory infection: toolkit (https://apps.who.int/iris/handle/10665/331736)