

## **Guide and resource materials for hospital readiness for and response to COVID-19 (linked to related checklist)**

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Hospitals are complex institutions which play a fundamental role in the provision of health services. During rapidly evolving outbreaks, the provision of care by hospitals and health care facilities tends to become interrupted. Proactive and systematic implementation of a preparedness and response action plan is therefore essential to improve and facilitate management within the hospital.

This guide provides a list of recommended readings and resource materials to help hospitals prepare for and respond to the COVID-19 pandemic. All the guidelines listed are directly relevant to the response activities proposed in the WHO Regional Office's hospital readiness checklist.

This guide includes guidelines related to leadership and coordination, logistics management, information, communication, human resources, rapid identification of cases, diagnosis, isolation and case management, and infection prevention and control.

| <b>Response Function</b>                                    | <b>Response Guidance and resource Material</b>  |
|---|---|
| <b>Leadership and coordination</b>                          | <b>Hospital Incident Management System</b>  |
|   | <p><i>Considerations in the investigation of cases and clusters of COVID-19</i></p> <p><a href="https://www.who.int/publications-detail/considerations-in-the-investigation-of-cases-and-clusters-of-covid-19">https://www.who.int/publications-detail/considerations-in-the-investigation-of-cases-and-clusters-of-covid-19</a></p> <p><i>Operational considerations for case management of COVID-19 in health facility and community</i></p> <p><a href="https://apps.who.int/iris/bitstream/handle/10665/331492/WHO-2019-nCoV-HCF_operations-2020.1-eng.pdf">https://apps.who.int/iris/bitstream/handle/10665/331492/WHO-2019-nCoV-HCF_operations-2020.1-eng.pdf</a></p> <p><i>Global surveillance for COVID-19 caused by human infection with COVID-19 virus</i></p> <p><a href="https://apps.who.int/iris/bitstream/handle/10665/331506/WHO-2019-nCoV-SurveillanceGuidance-2020.6-eng.pdf">https://apps.who.int/iris/bitstream/handle/10665/331506/WHO-2019-nCoV-SurveillanceGuidance-2020.6-eng.pdf</a></p> |
|   | <b>Hospital Readiness and Response</b>  |
|   | <p><i>Critical preparedness, readiness and response actions for COVID-19</i></p> <p><a href="https://www.who.int/publications-detail/critical-preparedness-readiness-and-response-actions-for-covid-19">https://www.who.int/publications-detail/critical-preparedness-readiness-and-response-actions-for-covid-19</a></p> <p><i>Responding to community spread of COVID-19</i></p> <p><a href="https://www.who.int/publications-detail/responding-to-community-spread-of-covid-19">https://www.who.int/publications-detail/responding-to-community-spread-of-covid-19</a></p>   |
| <b>Operational support, logistics and supply management</b> | <b>Operational Guidelines</b>   |
|   | <p><i>Operational planning guidelines to support country preparedness and response</i></p> <p><a href="https://www.who.int/docs/default-source/coronaviruse/covid-19-sprp-unct-guidelines.pdf?sfvrsn=81ff43d8_4">https://www.who.int/docs/default-source/coronaviruse/covid-19-sprp-unct-guidelines.pdf?sfvrsn=81ff43d8_4</a></p> <p><i>National capacities review tool for a novel coronavirus</i></p> <p><a href="https://www.who.int/publications-detail/national-capacities-review-tool-for-a-novelcoronavirus">https://www.who.int/publications-detail/national-capacities-review-tool-for-a-novelcoronavirus</a></p>  |

| <b>Response Function</b> | <b>Response Guidance and resource Material</b>  |
|--------------------------|---|
|                          | <p><i>Disease commodity package - Novel Coronavirus (nCoV)</i></p> <p><a href="https://www.who.int/publications-detail/disease-commodity-package---novel-coronavirus-(ncov)">https://www.who.int/publications-detail/disease-commodity-package---novel-coronavirus-(ncov)</a></p>   |
|                          | <p><b>Procedure for the management of work teams</b></p>  |
|                          | <p><i>Coronavirus disease (COVID-19) outbreak: rights, roles and responsibilities of health workers, including key considerations for occupational safety and health</i></p> <p><a href="https://www.who.int/publications-detail/coronavirus-disease-(covid-19)-outbreak-rights-roles-and-responsibilities-of-health-workers-including-key-considerations-for-occupational-safety-and-health">https://www.who.int/publications-detail/coronavirus-disease-(covid-19)-outbreak-rights-roles-and-responsibilities-of-health-workers-including-key-considerations-for-occupational-safety-and-health</a></p>                         |
|                          | <p><b>Maintenance and Repair</b></p>  |
|                          | <p><i>Implementing an equipment maintenance programme</i></p> <p><a href="https://extranet.who.int/lqsi/sites/default/files/attachedfiles/LQMS%203-4%20Equipment%20maintenance%20programme.pdf">https://extranet.who.int/lqsi/sites/default/files/attachedfiles/LQMS%203-4%20Equipment%20maintenance%20programme.pdf</a></p>  |
| <b>Information</b>       | <p><b>Reporting Guideline and forms</b></p>   |
|                          | <p><i>Revised case report form for Confirmed Novel Coronavirus COVID-19 (report to WHO within 48 hours of case identification)</i></p> <p><a href="https://apps.who.int/iris/bitstream/handle/10665/331234/WHO-2019-nCoV-SurveillanceCRF-2020.2-eng.pdf">https://apps.who.int/iris/bitstream/handle/10665/331234/WHO-2019-nCoV-SurveillanceCRF-2020.2-eng.pdf</a></p>   |
|                          | <p><i>Global COVID-19 Clinical Platform NOVEL CORONAVIRUS (COVID-19) - RAPID VERSION</i></p> <p><a href="https://www.who.int/docs/default-source/coronaviruse/who-ncov-crf.pdf?sfvrsn=84766e69_4">https://www.who.int/docs/default-source/coronaviruse/who-ncov-crf.pdf?sfvrsn=84766e69_4</a></p> <p><i>standardized form for reporting on emergency activities:</i></p> <ul style="list-style-type: none"> <li>• <a href="#">Data Dictionary for case-based reporting form</a></li> <li>• <a href="#">Template for Line list for Case-based Reporting</a></li> <li>• <a href="#">Aggregated weekly Reporting Form</a></li> </ul> |

| <b>Response Function</b> | <b>Response Guidance and resource Material</b>  |
|--------------------------|---|
| <b>Communication</b>     | <b>Mechanisms internal and external communications</b>  |
|                          | <i>Risk Communication and Community Engagement (RCCE) Action Plan Guidance COVID-19 Preparedness and Response</i>   |
|                          | <a href="https://www.who.int/publications-detail/risk-communication-and-community-engagement-(rce)-action-plan-guidance">https://www.who.int/publications-detail/risk-communication-and-community-engagement-(rce)-action-plan-guidance</a>   |
|                          | <i>Risk communication and community engagement (RCCE) readiness and response to the 2019 novel coronavirus (2019-nCoV)</i>  |
| <b>Human Resources</b>   | <a href="https://www.who.int/publications-detail/risk-communication-and-community-engagement-readiness-and-initial-response-for-novel-coronaviruses-(-ncov)">https://www.who.int/publications-detail/risk-communication-and-community-engagement-readiness-and-initial-response-for-novel-coronaviruses-(-ncov)</a>               |
|                          | <i>The Covid-19 risk communication package for healthcare facilities</i><br><a href="https://iris.wpro.who.int/handle/10665.1/14482">https://iris.wpro.who.int/handle/10665.1/14482</a>   |
|                          | <b>Mental Health and Psychosocial Support</b>   |
|                          | <i>Mental health and psychosocial considerations during the COVID-19 outbreak</i>   |
|                          | <a href="https://www.who.int/publications-detail/mental-health-and-psychosocial-considerations-during-the-covid-19-outbreak">https://www.who.int/publications-detail/mental-health-and-psychosocial-considerations-during-the-covid-19-outbreak</a>   |
|                          | <i>Social Stigma associated with COVID-19</i>   |
|                          | <a href="https://www.who.int/docs/default-source/coronaviruse/covid19-stigma-guide.pdf">https://www.who.int/docs/default-source/coronaviruse/covid19-stigma-guide.pdf</a>   |
|                          | <b>Staff Safety</b>   |
|                          | <i>Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected</i>   |
|                          | <a href="https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected-20200125">https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected-20200125</a> |

| <b>Response Function</b>                                   | <b>Response Guidance and resource Material</b>   |
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|  | <b>Infection Among Health Care Workers</b>   |
|  | <p><i>Protocol for assessment of potential risk factors for 2019-novel coronavirus (2019-nCoV) infection among health care workers in a health care setting</i></p> <p><a href="https://www.who.int/publications-detail/protocol-for-assessment-of-potential-risk-factors-for-2019-novel-coronavirus-(2019-ncov)-infection-among-health-care-workers-in-a-health-care-setting">https://www.who.int/publications-detail/protocol-for-assessment-of-potential-risk-factors-for-2019-novel-coronavirus-(2019-ncov)-infection-among-health-care-workers-in-a-health-care-setting</a></p> <p><i>Coronavirus disease (COVID-19) outbreak: rights, roles and responsibilities of health workers, including key considerations for occupational safety and health</i></p> <p><a href="https://www.who.int/publications-detail/coronavirus-disease-(covid-19)-outbreak-rights-roles-and-responsibilities-of-health-workers-including-key-considerations-for-occupational-safety-and-health">https://www.who.int/publications-detail/coronavirus-disease-(covid-19)-outbreak-rights-roles-and-responsibilities-of-health-workers-including-key-considerations-for-occupational-safety-and-health</a></p> <p><i>Risk assessment and management of exposure of health care workers in the context of COVID-19</i></p> <p><a href="https://apps.who.int/iris/bitstream/handle/10665/331496/WHO-2019-nCov-HCW_risk_assessment-2020.2-eng.pdf">https://apps.who.int/iris/bitstream/handle/10665/331496/WHO-2019-nCov-HCW_risk_assessment-2020.2-eng.pdf</a></p> |
|  | <b>Training and Education</b>  |
| <b>Continuity of essential services and Surge Capacity</b> | <p><i>Clinical Care Severe Acute Respiratory Infection</i></p> <p><a href="https://openwho.org/courses/severe-acute-respiratory-infection">https://openwho.org/courses/severe-acute-respiratory-infection</a></p> <p>ePROTECT Respiratory Infection</p> <p><a href="https://openwho.org/courses/eprotect-acute-respiratory-infections">https://openwho.org/courses/eprotect-acute-respiratory-infections</a></p>   |
|  | <b>Discharge Criteria for confirmed cases</b>  |
|  | <p><i>Discharge criteria for confirmed COVID-19 cases – When is it safe to discharge COVID-19 cases from the hospital or end home isolation?</i></p> <p><a href="https://www.ecdc.europa.eu/sites/default/files/documents/COVID-19-Discharge-criteria.pdf">https://www.ecdc.europa.eu/sites/default/files/documents/COVID-19-Discharge-criteria.pdf</a></p> <p><i>COVID-19 Hospital Discharge Service Requirements</i></p> <p><a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/874213/COVID-19_hospital_discharge_service_requirements.pdf">https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/874213/COVID-19_hospital_discharge_service_requirements.pdf</a></p>  |

| Response Function    | Response Guidance and resource Material  |
|----------------------|--|
| Rapid Identification | <p><b>Early Investigation</b></p>  |
|                      | <p><i>COVID-19 Early Epidemiologic and Clinical investigations for public health response</i><br/> <a href="https://www.who.int/docs/default-source/coronaviruse/200218-early-investigations-one-pager-v1-eng.pdf?sfvrsn=8aa0856_14">https://www.who.int/docs/default-source/coronaviruse/200218-early-investigations-one-pager-v1-eng.pdf?sfvrsn=8aa0856_14</a></p> <p><i>Coronavirus disease (COVID-19) technical guidance: Early investigations protocols</i><br/> <a href="https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/early-investigations">https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/early-investigations</a></p> <p><i>The First Few X (FFX) Cases and contact investigation protocol for 2019-novel coronavirus (2019-nCoV) infection</i><br/> <a href="https://www.who.int/publications-detail/the-first-few-x-(ffx)-cases-and-contact-investigation-protocol-for-2019-novel-coronavirus-(2019-ncov)-infection">https://www.who.int/publications-detail/the-first-few-x-(ffx)-cases-and-contact-investigation-protocol-for-2019-novel-coronavirus-(2019-ncov)-infection</a></p> |
| Diagnosis            | <p><b>Biosafety</b></p>  |
|                      | <p><i>Laboratory biosafety guidance related to coronavirus disease 2019 (COVID-19)</i><br/> <a href="https://www.who.int/publications-detail/laboratory-biosafety-guidance-related-to-coronavirus-disease-2019-(covid-19)">https://www.who.int/publications-detail/laboratory-biosafety-guidance-related-to-coronavirus-disease-2019-(covid-19)</a></p> <p><i>Surface sampling of coronavirus disease (COVID-19): A practical “how to” protocol for health care and public health professionals</i><br/> <a href="https://apps.who.int/iris/bitstream/handle/10665/331058/WHO-2019-nCoV-Environment_protocol-2020.1-eng.pdf">https://apps.who.int/iris/bitstream/handle/10665/331058/WHO-2019-nCoV-Environment_protocol-2020.1-eng.pdf</a></p>   |
|                      | <p><b>laboratory and imaging services for diagnosis of COVID-19.</b></p>   |
|                      | <p><i>Laboratory testing strategy recommendations for COVID-19</i><br/> <a href="https://apps.who.int/iris/bitstream/handle/10665/331509/WHO-COVID-19-lab_testing-2020.1-eng.pdf">https://apps.who.int/iris/bitstream/handle/10665/331509/WHO-COVID-19-lab_testing-2020.1-eng.pdf</a></p> <p><i>Laboratory testing for 2019 novel coronavirus (2019-nCoV) in suspected human cases</i></p>   |

| <b>Response Function</b>             | <b>Response Guidance and resource Material</b>   |
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|                                      | <p><a href="https://www.who.int/publications-detail/laboratory-testing-for-2019-novel-coronavirus-in-suspected-human-cases-20200117">https://www.who.int/publications-detail/laboratory-testing-for-2019-novel-coronavirus-in-suspected-human-cases-20200117</a></p> <p><i>Diagnostic detection of 2019-nCoV by real-time RT-PCR</i></p> <p><a href="https://www.who.int/docs/default-source/coronaviruse/protocol-v2-1.pdf?sfvrsn=a9ef618c_2">https://www.who.int/docs/default-source/coronaviruse/protocol-v2-1.pdf?sfvrsn=a9ef618c_2</a></p> <p><i>Protocol: Real-time RT-PCR assays for the detection of SARS-CoV-2 Institut Pasteur, Paris</i></p> <p><a href="https://www.who.int/docs/default-source/coronaviruse/real-time-rt-pcr-assays-for-the-detection-of-sars-cov-2-institut-pasteur-paris.pdf?sfvrsn=3662fcb6_2">https://www.who.int/docs/default-source/coronaviruse/real-time-rt-pcr-assays-for-the-detection-of-sars-cov-2-institut-pasteur-paris.pdf?sfvrsn=3662fcb6_2</a></p>   |
| <b>Isolation and Case Management</b> | <p><b>Operational Consideration for Management</b></p>   |
|                                      | <p><i>Considerations in the investigation of cases and clusters of COVID-19</i></p> <p><a href="https://www.who.int/publications-detail/considerations-in-the-investigation-of-cases-and-clusters-of-covid-19">https://www.who.int/publications-detail/considerations-in-the-investigation-of-cases-and-clusters-of-covid-19</a></p> <p><i>Global surveillance for COVID-19 caused by human infection with COVID-19 virus</i></p> <p><a href="https://apps.who.int/iris/bitstream/handle/10665/331506/WHO-2019-nCoV-SurveillanceGuidance-2020.6-eng.pdf">https://apps.who.int/iris/bitstream/handle/10665/331506/WHO-2019-nCoV-SurveillanceGuidance-2020.6-eng.pdf</a></p> <p><i>Operational considerations for case management of COVID-19 in health facility and community</i></p> <p><a href="https://apps.who.int/iris/handle/10665/331492">https://apps.who.int/iris/handle/10665/331492</a></p>  |
|                                      | <p><b>Guidelines/protocols for management of suspected or confirmed cases</b></p>  |
|                                      | <p><i>Considerations for quarantine of individuals in the context of containment for coronavirus disease (COVID-19)</i></p> <p><a href="https://www.who.int/publications-detail/considerations-for-quarantine-of-individuals-in-the-context-of-containment-for-coronavirus-disease-(covid-19)">https://www.who.int/publications-detail/considerations-for-quarantine-of-individuals-in-the-context-of-containment-for-coronavirus-disease-(covid-19)</a></p> <p><i>Clinical management of severe acute respiratory infection when novel coronavirus (nCoV) infection is suspected</i></p> <p><a href="https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-(ncov)-infection-is-suspected">https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-(ncov)-infection-is-suspected</a></p> <p><i>Home care for patients with COVID-19 presenting with mild symptoms and management of their contacts</i></p> |

| Response Function                       | Response Guidance and resource Material   |
|---|---|
|   | <a href="https://www.who.int/publications-detail/home-care-for-patients-with-suspected-novel-coronavirus-(ncov)-infection-presenting-with-mild-symptoms-and-management-of-contacts">https://www.who.int/publications-detail/home-care-for-patients-with-suspected-novel-coronavirus-(ncov)-infection-presenting-with-mild-symptoms-and-management-of-contacts</a>   |
| <b>Infection prevention and control</b> | <b>Infection Prevention and Control General Guidance</b>  |
|   | <p><i>Infection Prevention and Control guidance for Long-Term Care Facilities in the context of COVID-19</i><br/> <a href="https://apps.who.int/iris/handle/10665/331508">https://apps.who.int/iris/handle/10665/331508</a></p> <p><i>Hospital hygiene and infection control</i><br/> <a href="https://www.who.int/water_sanitation_health/medicalwaste/148to158.pdf">https://www.who.int/water_sanitation_health/medicalwaste/148to158.pdf</a></p> <p><i>Infection prevention and control assessment framework at the facility level</i><br/> <a href="https://www.who.int/infection-prevention/tools/core-components/IPCAF-facility.PDF?ua=1">https://www.who.int/infection-prevention/tools/core-components/IPCAF-facility.PDF?ua=1</a></p>  |
|   | <b>Training on the use of Personal Protective devices</b>   |
|   | <p><i>Rational use of personal protective equipment (PPE) for coronavirus disease (COVID-19)</i><br/> <a href="https://apps.who.int/iris/handle/10665/331498">https://apps.who.int/iris/handle/10665/331498</a></p> <p><i>Advice on the use of masks in the community, during home care and in healthcare settings in the context of the novel coronavirus (COVID-19) outbreak</i><br/> <a href="https://www.who.int/publications-detail/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-(2019-ncov)-outbreak">https://www.who.int/publications-detail/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-(2019-ncov)-outbreak</a></p> |
|   | <b>Protocols for disinfection and sterilization of biomedical equipment and material devices.</b>   |
|   | <p><i>Decontamination and Reprocessing of Medical Devices for Health-care Facilities</i><br/> <a href="https://apps.who.int/iris/bitstream/handle/10665/250232/9789241549851-eng.pdf?sequence=1">https://apps.who.int/iris/bitstream/handle/10665/250232/9789241549851-eng.pdf?sequence=1</a></p> <p><i>Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008, updated May 2019</i><br/> <a href="https://www.cdc.gov/infectioncontrol/pdf/guidelines/disinfection-guidelines-H.pdf">https://www.cdc.gov/infectioncontrol/pdf/guidelines/disinfection-guidelines-H.pdf</a></p>  |



| <b>Response Function</b> | <b>Response Guidance and resource Material</b>   |
|--------------------------|--|
|                          | <p><i>WHO Surgical Care at the District Hospital 2003, Cleaning, Disinfection, Sterilization</i><br/> <a href="https://www.who.int/surgery/publications/OrganizationManagement.pdf">https://www.who.int/surgery/publications/OrganizationManagement.pdf</a></p>  |
|                          | <p><b>Hygiene and Waste management</b></p>   |
|                          | <p><i>Water, sanitation, hygiene and waste management for COVID-19</i><br/> <a href="https://www.who.int/publications-detail/water-sanitation-hygiene-and-waste-management-for-covid-19">https://www.who.int/publications-detail/water-sanitation-hygiene-and-waste-management-for-covid-19</a></p>  |
|                          | <p><b>Hand washing</b></p>   |
|                          | <p><i>Clean hands protect against infection</i><br/> <a href="https://www.who.int/gpsc/clean_hands_protection/en/">https://www.who.int/gpsc/clean_hands_protection/en/</a></p> <p><i>Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected</i><br/> <a href="https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected-20200125">https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected-20200125</a></p> |
|                          | <p><b>Corpse handling and transport</b></p>  |
|                          | <p><i>Infection Prevention and Control for the safe management of a dead body in the context of COVID-19</i><br/> <a href="https://apps.who.int/iris/handle/10665/331538">https://apps.who.int/iris/handle/10665/331538</a></p> <p><i>Considerations related to the safe handling of bodies of deceased persons with suspected Covid-19</i><br/> <a href="https://www.ecdc.europa.eu/en/publications-data/considerations-related-safe-handling-bodies-deceased-persons-suspected-or">https://www.ecdc.europa.eu/en/publications-data/considerations-related-safe-handling-bodies-deceased-persons-suspected-or</a></p>                       |