



HOSPITAL MANAGEMENT

81% of people with COVID-19 have uncomplicated or mild illness. 14% will develop severe illness requiring oxygen therapy and approximately 5% will require intensive care unit treatment. Management of hospitalised patients consists of ensuring appropriate infection control and supportive care. Some patients may develop acute respiratory distress syndrome (ARDS) and warrant intubation with mechanical ventilation.

For those with mild illness, hospitalization may not be required unless there is concern about rapid deterioration or an inability to promptly return to hospital. Early identification of those with severe illness such as severe pneumonia allows for optimized supportive care treatments and safe, rapid referral and admission to a designated hospital ward or ICU. Older patients and those with comorbidities such as cardiovascular disease and diabetes mellitus have increased risk of severe disease and mortality. They may present with mild symptoms but have high risk of deterioration and should be admitted to a designated unit for close monitoring.

Infection prevention and control screening should be initiated at the first point of contact in the hospital. Suspected COVID-19 patients should be given a mask and directed to a separate area. Maintain at least 1m distance between suspected patients. Standard precautions including hand hygiene and the use of personal protective equipment should always be applied.

Patients with possible or confirmed COVID-19 should be managed in a negative-pressure single room. If not available use a single room with en-suite facilities. All room doors should be kept closed. Positive-pressure single rooms must not be used. In selecting the location of single rooms minimise the risk of inadvertent exposure to other high-risk patient groups. Provide dedicated equipment such as a blood pressure monitor, peak flow meter and stethoscope where possible. Avoid storing any extraneous equipment in the room. Display signage to control entry into the room.

In addition to standard precautions, carry out a point-of-care risk assessment at every patient contact to determine whether additional precautions are required. Additional precautions include droplet, contact and airborne precautions.

Give supplemental oxygen therapy immediately to patients with SARI and respiratory distress, hypoxaemia or shock and target SpO₂ > 94%. Adults with emergency signs such as obstructed or absent breathing, severe respiratory distress, central cyanosis, shock, coma or convulsions should receive airway management and oxygen therapy during resuscitation to target SpO₂ ≥ 94%. Initiate oxygen therapy at 5 l/min and titrate flow rates to reach target SpO₂ ≥ 93% during resuscitation; or use a face mask with a reservoir bag at 10–15 l/min if the patient is in a critical condition. Once the patient is stable, the target is > 90% SpO₂ in non-pregnant adults and ≥ 92–95% in pregnant patients. Children with emergency signs should receive airway management and oxygen therapy during resuscitation to target SpO₂ ≥ 94%; otherwise, the target SpO₂ is ≥ 90%. Use of nasal prongs or nasal cannula is preferred in young children. All areas where patients with SARI are cared for should be equipped with pulse oximeters, functioning oxygen systems and disposable, single-use, oxygen-delivering interfaces.

Closely monitor patients with COVID-19 for signs of clinical deterioration such as rapidly progressive respiratory failure and sepsis and respond immediately. Patients hospitalized with COVID-19 require regular monitoring of vital signs and utilization of early warning scores. Haematology and biochemistry laboratory testing and ECG should be performed at admission and as clinically indicated to monitor for complications such as acute liver injury, acute kidney injury, acute cardiac injury or shock. Understand co-morbidities and adjust accordingly. Patients with SARI should be treated cautiously with intravenous fluids because aggressive fluid resuscitation may worsen oxygenation, especially in settings where there is limited availability of mechanical ventilation.

Recognize severe hypoxemic respiratory failure when a patient with respiratory distress is failing to respond to standard oxygen therapy and prepare to provide advanced oxygen or ventilatory support. Endotracheal intubation should be performed by a trained and experienced provider using airborne precautions.

Patients with ARDS

Evidence-based treatment guidelines for ARDS should be followed, including conservative fluid strategies for patients without shock following initial resuscitation, empirical early antibiotics for suspected bacterial co-infection until a specific diagnosis is made, lung-protective ventilation, prone positioning and consideration of extracorporeal membrane oxygenation for refractory hypoxemia.



SOURCES*

Produced by the members of the National Health Library and Knowledge Service Evidence Team.[†] Current as at 16 March 2020. This rapid evidence review collates the best available evidence at the time of writing. Emerging literature or subsequent developments in respect of COVID-19 may require amendment to the information or sources listed in the document. Although all reasonable care has been taken in the compilation of content, the National Health Library and Knowledge Service Evidence Team makes no representations or warranties expressed or implied as to the accuracy or suitability of the information or sources listed in the document. This evidence summary is the property of the National Health Library and Knowledge Service and subsequent re-use or distribution in whole or in part should include acknowledgement of the service.

The following PICO(T) was used as a basis for the evidence summary:

P Population person location condition/patient characteristic	Person with COVID-19 requiring admission to acute hospital.
I Intervention length location type	Prevention, control and management.
C Comparison another intervention no intervention location of the intervention	
O Outcome	Optimal patient outcome. Containment of infection.

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* UpToDate. "Coronavirus disease 2019 (COVID-19)." <https://www.uptodate.com/contents/coronavirus-disease-2019-covid-19>. [Accessed 16 March 2020]. World Health Organization. Coronavirus Disease Technical Guidance: Patient Management. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/patient-management>. [Accessed 16 March 2020]. Murphy et al. "Care for Critically Ill Patients with COVID-19." <https://jamanetwork.com/journals/jama/fullarticle/2762996>. [Accessed 16 March 2020].