MANAGEMENT OF ADULTS WITH SEVERE TO CRITICAL COVID-19

NATIONAL COVID-19 CLINICAL EVIDENCE TASKFORCE

LEGEND

EBR: Evidence-Based Recommendation
CBR: Consensus-Based Recommendation
PP: Practice Point

Living guidance

Not prioritised for review

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Guiding principles of care

GENERAL

Increased-dose VTE prophylaxis — CONSENSUS RECOMMENDATION

Consider using increased prophylactic dosing of anticoagulants, preferably LMWH (e.g. enoxaparin 40 mg twice daily or dalteparin 5000 IU twice daily) in **adults with severe or critical COVID-19 or other indications,** unless there is a contraindication, such as risk for major bleeding or platelet count < 30 x 10⁹/L. Where eGFR (see below) is less than 30 mL/min/1.73m², unfractionated heparin or clearance-adjusted doses of LMWH may be used (e.g. enoxaparin 40 mg once daily or dalteparin 5000 IU once daily). **CBR** [Taskforce]

For body weights outside 50-90 kg or heights outside 150-180 cm, calculate the BSA and multiply the eGFR by BSA/1.73. The Taskforce notes that in critical illness, creatinine-based estimation of eGFR can be unreliable. **PP** [Taskforce]

Definition of disease severity

Severe illness

Adult patients meeting any of the following criteria:

- respiratory rate ≥ 30 breaths/min
- oxygen saturation ≤ 92% at a rest state
- arterial partial pressure of oxygen (PaO_2)/inspired oxygen fraction (FiO_2) ≤ 300

Critical illness

Adult patients meeting any of the following criteria:

Respiratory failure

- Occurence of severe respiratory failure (PaO_2/FiO_2 < 200), respiratory distress or acute respiratory distress syndrome (ARDS). This includes patients deteriorating despite advanced forms of respiratory support (NIV, HFNO) OR patients requiring mechanical ventilation

OR other signs of significant deterioration

- Hypotension or shock
- Impairment of consciousness
- Other organ failure

MANAGING RISK OF INFECTION

As per the current national guidance on the use of personal protective equipment (PPE) in hospitals during the COVID-19 outbreak:

- follow contact and droplet precautions for routine patient care of people with suspected or confirmed COVID-19
- add contact and airborne precautions when aerosol-generating procedures are required.

PP [Taskforce/AHPPC]

MONITORING AND MARKERS OF CLINICAL DETERIORATION

Monitoring — CONSENSUS RECOMMENDATION

For people with COVID-19, monitor markers of clinical progression, such as rapidly progressive respiratory failure and sepsis, especially on days 5 to 10 after onset of symptoms.
CBR [Taskforce]

HIGH-LEVEL AND ADVANCED RESPIRATORY SUPPORT

Refer to **RESPIRATORY SUPPORT FOR SEVERE TO CRITICAL COVID-19** Clinical Flowchart

Treatments

DISEASE-MODIFYING TREATMENTS

Corticosteroids — RECOMMENDED

Use dexamethasone 6 mg daily intravenously or orally for up to 10 days (or acceptable alternative regimen) in **adults with COVID-19 who are receiving oxygen** (including mechanically ventilated patients). **EBR** [Taskforce]

The suggested regimen of corticosteroid use is 6 mg of dexamethasone (oral or intravenous) daily for up to 10 days. In patients for whom dexamethasone is not available, acceptable alternative regimens include: **EBR** [Taskforce]

- hydrocortisone: intravenous (50 mg), every 6 hours for up to 10 days
- prednisolone: oral (50 mg), daily for up to 10 days.

Remdesivir — CONDITIONAL RECOMMENDATION FOR

Whenever possible remdesivir should be administered in the context of a randomised trial with appropriate ethical approval. Consider using remdesivir for adults hospitalised with COVID-19 **who require oxygen but not ventilation**. **EBR** [Taskforce]

Tocilizumab

Consider using tocilizumab for the treatment of COVID-19 in **adults who require supplemental oxygen**, particularly where there is evidence of systemic inflammation. **EBR** [Taskforce]

Corticosteroids — CONDITIONAL RECOMMENDATION AGAINST

Do not routinely use dexamethasone (or other corticosteroids) to treat COVID-19 in **adults who do not require oxygen**. **EBR** [Taskforce]

Corticosteroids may still be considered for other evidence-based indications in people who have COVID-19. **PP** [Taskforce]

Remdesivir — CONDITIONAL RECOMMENDATION AGAINST

Do not start remdesivir in adults hospitalised with COVID-19 who require ventilation.

However, remdesivir should be continued with the appropriate dose and duration, **if it was started prior to requiring ventilation** (invasive or non-invasive mechanical ventilation and extracorporeal membrane oxygenation (ECMO)). **PP** [Taskforce]

Disease-modifying treatments not recommended outside of clinical trials — NOT RECOMMENDED

For people with COVID-19, do not use the following disease-modifying treatments outside of randomised trials with appropriate ethical approval **EBR** [Taskforce]:

- Aprepitant
- Baloxavir marboxil
- Bamlanivimab
- Baricitinib
- Bromhexine hydrochloride
- Chloroquine
- Colchicine
- Combined metabolic cofactor supplementation (CMCS)
- Convalescent plasma
- Darunavir-cobicistat
- Dutesteride
- Favipiravir
- Fluvoxamine
- Human umbilical cord mesenchymal stem cells
- Hydroxychloroquine plus azithromycin
- Immunoglobulin plus methylprednisolone
- Inhaled Interferon β-1a
- Interferon β-1b
- Interferon gamma
- Interferon-kappa + tff2
- Ivermectin
- Intravenous Immunoglobulin
- N-acetylcysteine
- Peginterferon lambda
- Recombinant human granulocyte colony-stimulating factor
- REGN COV2
- Ruxolitinib
- Sarilumab
- Sofosbuvir-daclatasvir
- Sulodexide
- Telmisartan
- Triazavirin
- Umifenovir
- Vitamin D (calcifediol/ cholecalciferol)
- Other disease-modifying treatments

Trials are needed in special populations, including children and adolescents, pregnant and breastfeeding women, older people living with frailty and those receiving palliative care. Until further evidence is available, do not use other disease-modifying treatments in these populations unless they are eligible to be enrolled in trials. **PP** [Taskforce]

These disease-modifying treatments should still be considered for other evidence-based indications in people who have COVID-19. **PP** [Taskforce]

Treatments (cont.)

NOT RECOMMENDED

Azithromycin
Hydroxychloroquine
Lopinavir-ritonavir
Interferon β-1a

Do not use for the treatment of COVID-19. **EBR** [Taskforce]

Shock

ACUTE RESUSCITATION WITH FLUIDS

In adults with COVID-19 and shock, use dynamic parameters (skin temperature, capillary refilling time, and/or serum lactate measurement) rather than static parameters to assess fluid responsiveness. **PP** [Taskforce/SSC]

In all patients with severe to critical COVID-19, use a restrictive fluid management strategy, avoiding the use of 'maintenance' intravenous fluids, high-volume enteral nutrition, and fluid bolus for hypotension. **PP** [Taskforce/ANZICS]

For the acute resuscitation of adults with COVID-19 and shock, use buffered/balanced crystalloids rather than unbalanced crystalloids. **PP** [Taskforce/SSC]

For the acute resuscitation of adults with COVID-19 and shock, do not use synthetic colloids. **PP** [Taskforce/SSC]

USE OF VASOACTIVE AGENTS

In adults with COVID-19 and shock, use noradrenaline as the first-line vasoactive agent. If noradrenaline is not available, use either argipressin (vasopressin) or adrenaline as the first-line vasoactive agent. **PP** [Taskforce]

In adults with COVID-19 and shock, if a target mean arterial pressure (MAP) of 60-65 mmHg cannot be achieved by maximal doses of first-line monotherapy with a vasoactive agent, add a second vasoactive agent. **PP** [Taskforce]

SUPPORTIVE ANTI-INFECTIOUS THERAPY

In people who are critically ill, request an influenza PCR test and consider prescribing oseltamivir 75 mg BD (or a renally adjusted dose). If the influenza PCR is negative, cease oseltamivir. **PP** [Taskforce/ASID]

Other Treatments

OESTROGEN CONTAINING THERAPIES

Stop oral menopausal hormone therapy (MHT) in women with severe or critical COVID-19.

Before restarting oral MHT, review the indication for this and consider transitioning to a transdermal preparation. **PP** [Taskforce]

In women who are receiving care in hospital for severe or critical COVID-19 and who are taking oestrogen-containing contraception, manage these medications as per usual care. **PP** [Taskforce]

In women who stop or suspend contraception when they have COVID-19, restart contraception at the time of discharge or when acute symptoms have resolved. **PP** [Taskforce]

Discharge planning

In patients with severe COVID-19 offer appropriate rehabilitation to optimise recovery, including early hospital rehabilitation. Plan transition of care to the community, including handover to general practice. **PP** [Taskforce]

Follow up care

- Assist people to connect to a GP if they do not have one.
- When the acute phase of the illness has resolved, and the patient is mobile, undertake a comprehensive review to assess their ongoing and rehabilitation needs.
- Review medications that were stopped or started.

PP [Taskforce]

Sources

AHPPC – Australian Health Protection Principal Committee (AHPPC). Guidance on the use of personal protective equipment (PPE) in hospitals during the COVID-19 outbreak. Updated 12 November 2020

ANZICS - The Australian and New Zealand Intensive Care Society (ANZICS) COVID-19 Guidelines. V1.0, 16 March 2020

ASID – Interim guidelines for the clinical management of COVID-19 in adults. Australasian Society for Infectious Diseases (ASID). Vl.0, 20 March 2020

SSC – Surviving Sepsis Campaign: Guidelines on the Management of Critically Ill Adults with Coronavirus Disease 2019 (COVID-19)

Taskforce – Current guidance from the National COVID-19 Clinical Evidence Taskforce