

# MSIC CONSENSUS STATEMENT

## A Clinical Guide to Decision-making for Critically Ill COVID-19 Patients *ICU Admission and Withholding/Withdrawing Life-sustaining Treatments*

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### **ICU Admission**

The COVID-19 pandemic has resulted in many health systems coming under great strain. Increasing surge numbers of severe and critically ill COVID-19 patients will necessitate triaging when ICU bed capacity is exceeded.

There is no perfect triaging algorithm but there are principles that can be considered to provide guidance for clinicians making complex admission decisions. All critically ill or rapidly deteriorating COVID-19 patients will be considered for ICU admission with some exceptions.

Every decision to admit is to be individualised. Senior clinicians within the primary and intensive care teams should discuss cases that may not benefit from intensive care admission. It is noted that COVID-19 has a disproportionate impact on the elderly.<sup>1</sup> Age should not preclude ICU admission unless associated with advanced comorbidities or frailty. Increasing frailty in the elderly is associated with a poorer outcome due to poor physiological reserves in these patients.<sup>2,3,4</sup> Similarly, individuals with disabilities (e.g. learning, visual or mobility) should not be precluded from ICU admission unless also associated with advanced comorbidities.

The factors to consider when triaging include:

- a. Likelihood of benefit
- b. Prognosis (based on severity of illness, existing comorbidities, and physical and cognitive status)
- c. Life expectancy due to underlying disease (e.g. advanced cancer on palliative chemotherapy, NYHA class 3 or 4 despite optimal treatment)
- d. Anticipated quality of life that does not match patient's values and expectations (loss of independence or high level of care post discharge)
- e. Wishes of patient

The urgency of admission is further determined by the patient's clinical status (stable vs. unstable) and specific needs such as life supportive therapies e.g. urgent dialysis for metabolic acidosis. Priority status may change when clinical condition of the patient evolves and a clearer history of functional status or comorbidities is acquired.

### **Priority 1**

- Critically ill, unstable patients
- Require life support for organ failure and intensive monitoring. This includes high flow nasal cannula (HFNC), non-invasive (NIV) or invasive ventilation, renal replacement therapy, invasive haemodynamic monitoring and other interventions
- Do not have limitations of treatment
- High likelihood of benefit

*Note: Patients with acute respiratory failure requiring HFNC or NIV or invasive mechanical ventilation will require intensive care. As numbers increase, patients on HFNC may be relegated to priority 2. Hence a patient on invasive mechanical ventilation due to severe hypoxaemia would supersede a patient requiring HFNC and close monitoring – the premise being the latter can wait and be managed in an interim facility temporarily.*

### **Priority 2**

- Acutely ill but relatively stable
- Require intensive monitoring and/or therapies, who can be managed in a ward with close monitoring or intermediate care facility e.g. high dependency unit
- Admit to ICU if early management fails to prevent deterioration or there is no intermediate care facility in the hospital
- Examples:
  - Post-operative COVID-19 patients who require close monitoring
  - COVID-19 patients with pneumonia, on oxygen therapy via facemask and self-proning

### **Priority 3**

- Have advanced comorbidities
- Acutely ill with high risk for further deterioration
- Require some intensive monitoring and/or therapies. They may be managed at a ward level or intermediate care facility e.g. high dependency unit
- Examples:
  - COVID-19 patients with NYHA class 3 or 4 requiring NIV
  - Exacerbations of COAD in COVID-19 patients with GOLD Grade 3-4 Group C-D

*Note: It would not be in the best interest of these patients to receive non-beneficial intervention that are invasive and prolonged, if further deterioration occurs. Other elements that will assist decision-making include 2 to 3 hospital admissions in the last year or more than 1 month hospital-stay during current admission.<sup>5</sup> Such patients need to be recognised early for limitations of treatment. A discussion on this needs to be followed through by the primary team with families (and patients where possible). This is important to address expectations, to elicit preferences and clarify resuscitation status. These patients may be treated with best ward care alongside palliative care principles.*

Lastly, the following category of critically ill COVID-19 patients will not benefit from intensive care. Discussions on direction of care and limitation of therapy ought to be made between the primary team and the families (and patients where possible). Such patients should be accorded comprehensive palliative care if limitation of therapy has been agreed upon.

- Severe disability with poor quality of life e.g. elderly with Clinical Frailty Scale > 6
- Advanced dementia with physical or cognitive dependence
- Severe irreversible brain pathology impairing cognition and consciousness or in a persistent vegetative state
- Advanced or metastatic cancer unresponsive to chemotherapy and/or radiotherapy
- End-stage cardiac, respiratory or liver disease with no options for transplant
- Advanced disease of a progressive life-limiting condition e.g.
  - Motor neuron disease or multiple sclerosis with rapid decline in physical status
  - Advanced Parkinson's disease with reduced independence
- End-stage renal disease with no option or refusal for renal replacement therapy
- Those who have explicitly stated their wish not to receive life-support therapy

### **Withholding and Withdrawing Life-Sustaining Treatments in COVID-19**

Withholding and withdrawing life-sustaining treatments (LSTs) are common practices among critically ill patients who are unlikely to survive despite therapy, following consensus made between medical teams and patients and/or families. Continuing medically inappropriate care in these patients can lead to burdens of disease and treatment for patients and families, moral distress for healthcare professionals (HCP) and depletion of finite resources. However challenging this area of practice may be, similar principles apply when managing patients with COVID-19.

Any form of LST should be considered a trial and should continue as long as there is a reasonable prospect of recovery to a meaningful patient-centred quality of life.<sup>6</sup> This plan of treatment should be informed and discussed with families prior to or on ICU admission.

### **Patients to be considered for withdrawal or withholding LST**

Continuation of treatment in ICU is based on daily assessments of the patient's response to treatment and other factors that influence the outcome e.g. current diagnosis, complications, comorbidities, and general health status.

The minimum duration of time to assess for effectiveness of treatment should take into account the natural history of the disease. In COVID-19 patients, most studies found a median duration of invasive ventilation to be 10 to 12 days, thus considering this as the minimum duration before assessment would be appropriate.<sup>7</sup> However, the decision to withdraw or withhold LST can be considered earlier if the condition is worsening significantly.

### **Factors in decision-making on withdrawing or withholding LST:**

1. Imminent death
  - Despite aggressive intervention, patients deteriorate and are expected to die in the near future, regardless of whether treatment is continued or stopped.
2. Poor response to treatment or development of severe complications

- Poor response implies not only worsening or prolongation of the disease state, but also when further intervention is expected to have a negligible impact on recovery of independence or pre-admission quality of life.
  - Examples:
    - (i) recurrent cardiac arrest
    - (ii) persistent multi-organ dysfunction despite optimal treatment
3. Expected poor neurological outcome resulting in severe cognitive and physical disability.
    - Examples:
      - (i) hypoxic ischaemic encephalopathy post cardiac arrest
      - (ii) massive stroke
  4. Presence of severe systemic disease that predicts poor short-term survival e.g. advanced dementia or malignancy, end-stage cardiac, respiratory or liver disease.
  5. Age
    - Current data show a strong correlation between elderly with COVID-19 and mortality. However, age should not be the sole factor in decision-making but weighed together with other factors e.g. severity of current disease, frailty and comorbidities.
    - Ascertain if patients have expressed wishes on end-of-life (EOL) decisions (advance directives or from surrogate).

### **Practical issues of withholding and withdrawal of LST**

1. Medical team consensus
  - The intensive care team and the other managing team(s) should agree on EOL decisions made. In complex cases, where consensus cannot be reached, allow for repeated discussions and time-limited trial of therapy.
2. Communication difficulties with patient and relatives
  - Important discussions with families done through phone or video calls, often behind the impersonal personal protective equipment (PPE) may result in conflict and stress.
  - Acknowledge that families are anxious from not being able to contact and converse with their loved ones and knowing that they may feel alone and isolated.
  - Make the first communication as early as possible with a minimum once daily contact at a pre-specified time to build trust and rapport.
  - Allow families the opportunity to ask questions and check their understanding of the conversation frequently as phone communications have limitations.
  - The same clinician involved in the active care of the patient should deal with the family, if possible.
  - While families require sufficient time to reach and accept EOL decisions, the pressure of bed allocation in a pandemic may compromise this.
  - If conflicts do occur, the principles of handling conflicts at the EOL remain the same. Face-to-face family meetings may still be arranged if required, especially for family members not restricted by quarantine.

3. Management plan for withdrawal of LST  
(Refer to page 67 – 73 on Withholding and Withdrawal of Life-Sustaining Treatment in ICU Management Protocols)
  - Approach to management plan is no different than in non Covid-19 patients.
  - A clear plan is essential to ensure that the withdrawal process occurs smoothly.
  - Terminal weaning of the ventilator is preferred over terminal extubation which carries risk of aerosolisation.
  - Terminal sedation use may be considered if opioids are insufficient for comfort and, rarely, neuromuscular blockade.
  - Families request to be with the patient during the last hour through video call should be facilitated whenever possible. This may be distressing to some families and HCPs. When death ensues, allow a quiet moment between the families and the deceased (through video call).
  - Document all EOL decisions.
  
4. Complicated bereavement
  - Families may not have closure after the deaths of their loved ones and may suffer guilt, post-traumatic stress disorder and anxiety.
  - Psychological support and spiritual care may be offered by way of tele-counseling or face-to-face meeting with counselor.
  
5. Support for staff
  - Acknowledge the difficult conditions the staff caring for the critically ill COVID-19 patients are placed in. Delivering far from ideal palliative care can result in emotional distress, helplessness and burnout.
  - Debrief as soon as possible and as often as needed by senior HCP.
  - Encourage feedbacks to improve delivery of care and relief distress.
  - Consider rotation or breaks in work schedule.

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