



नेपाल मेडिकल काउन्सिल

(नेपाल मेडिकल काउन्सिल ऐन २०२० अन्तर्गत स्थापित)

Nepal Medical Council

(Under Nepal Medical Council Act, 1964)

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Annex to NMC Treatment Guidelines:

Documented Date: 12 May 2021

Management of Patients during Shortage Created by COVID-19 Surge

1. Personal Protective Equipment (PPE):

During the shortage created by COVID-19 surge, use of PPE including N95 respirators, gowns and face covers should be extended between COVID-19 patients and reused following standard guidelines for reuse.

2. Oxygen supplementation and Ventilators:

Oxygen supplementation is an important life-sustaining measure for hypoxemic patients. Ensuring sufficient supply of oxygen to admitted patients is the responsibility of hospitals and the state. During oxygen shortage, the following steps are recommended as crisis management.

- Start therapeutic oxygen supplementation only when $SpO_2 < 90\%$ on room air or patient is dyspneic at rest with $SpO_2 < 92\%$ on room air. The goal of SpO_2 saturation should be 92-94%.
- In patients with chronic lung disease, such as COPD, oxygen supplement should begin when SpO_2 is $< 88\%$ on room air. The target SpO_2 should be 88-92%.

3. Therapeutics

During the period of shortage, drugs should be reserved and administered to those who are likely to benefit the most. Based on this principle, the following recommendations are made:

3a) Antivirals and immunomodulators

- **Remdesivir** should be preserved for those with severe disease who are within the first 10 days from symptom onset, but have rapidly progressing hypoxia in spite of systemic corticosteroid use, or for immunocompromised patients requiring low flow oxygen, or severe infection requiring ICU admission who are not on ventilators.
- Antivirals have not been shown to improve mortality outcomes but only shown to decrease the length of hospitalization.
- Remdesivir has not been shown to improve outcome in patients who are on ventilators.
- **Tocilizumab**: Tocilizumab may be considered, when available, in patients with severe or critical COVID-19, who have rapidly increasing oxygen needs and systemic inflammation despite use of systemic corticosteroids.

3b) Convalescent Plasma (CP):

- Convalescent plasma therapy is NOT recommended in hospitalized patients with COVID-19.
- There is insufficient evidence to recommend for or against convalescent plasma in ambulatory patients with mild or moderate COVID-19.

3c) Systemic Corticosteroids: Start corticosteroids early when SpO_2 is less than 93% on room air. During surge and lack of available beds, start oral corticosteroids in outpatient settings when $SpO_2 < 93\%$. Options of corticosteroids are oral Dexamethasone 6 mg OD or Prednisolone 40 mg OD or oral Methylprednisolone 32 mg OD, depending on availability. When starting corticosteroids in outpatient setting, ensure follow up in the form of tele-consultation or in person

follow up at “fever” clinic within 2-3 days to decide on duration of steroid therapy. Admit patient when $\text{SpO}_2 < 90\%$ on room air despite initiation of corticosteroid therapy. **Systemic corticosteroids should NOT be started in mild or moderate disease when SpO_2 is $\geq 93\%$.**

- 3d) Inhaled Corticosteroids:** For adults with mild to moderate disease, within 7 days from onset of symptoms, inhaled budesonide 800 micrograms twice a day may be considered. The treatment can be discontinued upon resolution of symptoms, or if patient is started on systemic steroids.
- 3e) Antibiotics:** Empiric antibiotic therapy in the absence of clear evidence of bacterial infection is NOT recommended.

References:

1. CDC: Optimizing the Supply of PPE in Healthcare Facilities; Updated Dec. 29, 2020
2. NIH COVID-19 Treatment Guidelines, updated May 2021
3. <https://www.idsociety.org/practice-guideline/covid-19-guideline-treatment-and-management/>
4. Recovery collaborative group. Tocilizumab in patients admitted to hospital with COVID-19 (RECOVERY): a randomised, controlled, open-label, platform trial. Lancet. May 2021. DOI: [https://doi.org/10.1016/S0140-6736\(21\)00676-0](https://doi.org/10.1016/S0140-6736(21)00676-0)
5. Ramakrishnan et al. Inhaled budesonide in the treatment of early COVID-19 (STOIC): a phase 2, open-label, randomised controlled trial. April 2021. Lancet [https://doi.org/10.1016/S2213-2600\(21\)00160-0](https://doi.org/10.1016/S2213-2600(21)00160-0)
6. Professional Ethics during COVID-19 Pandemic, NMC, March 2020
7. Interim Guidance for Management of COVID-19, NMC, updated Oct 2020





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Notice to all physicians and health professionals

2077.01.29 (2021 May 12)

COVID-19 pandemic has caused a huge crisis in our health care system and it is our duty to contribute as professionals and individuals in saving lives and minimizing suffering of our people.

- Please be rational in prescribing drugs: Remdesivir, Steroids and antibiotics.
- NOT every patient with covid needs them and or benefits them. Please refer to NMC guidelines on management of COVID-19 for exact indications and contraindications.
- Tocilizumab is not currently available in Nepal and is not registered yet. Please hold off prescribing it until it is available in Nepal, so that patients and families don't suffer unnecessarily.

COVID-19 triage/management algorithm for PHC

2077.01.29 (2021 May 12)

Objectives:

The purpose of this guideline is to help health care professionals in primary health care centers/setting, during the COVID-19 pandemic surge, to:

- Triage suspected or proven COVID cases,
- Manage moderate COVID cases in their centers
- Recognize severe cases and refer appropriately after initial stabilization
- Comply with appropriate infection control measures when managing COVID -19 cases

Target group:

Physicians, nurses, other healthcare providers involved in management of COVID-19 infection in the Primary Health Care Centers of Nepal.

