



COVID-19

MedStar Clinical Guide for Weaning Off Oxygen Therapy for COVID19

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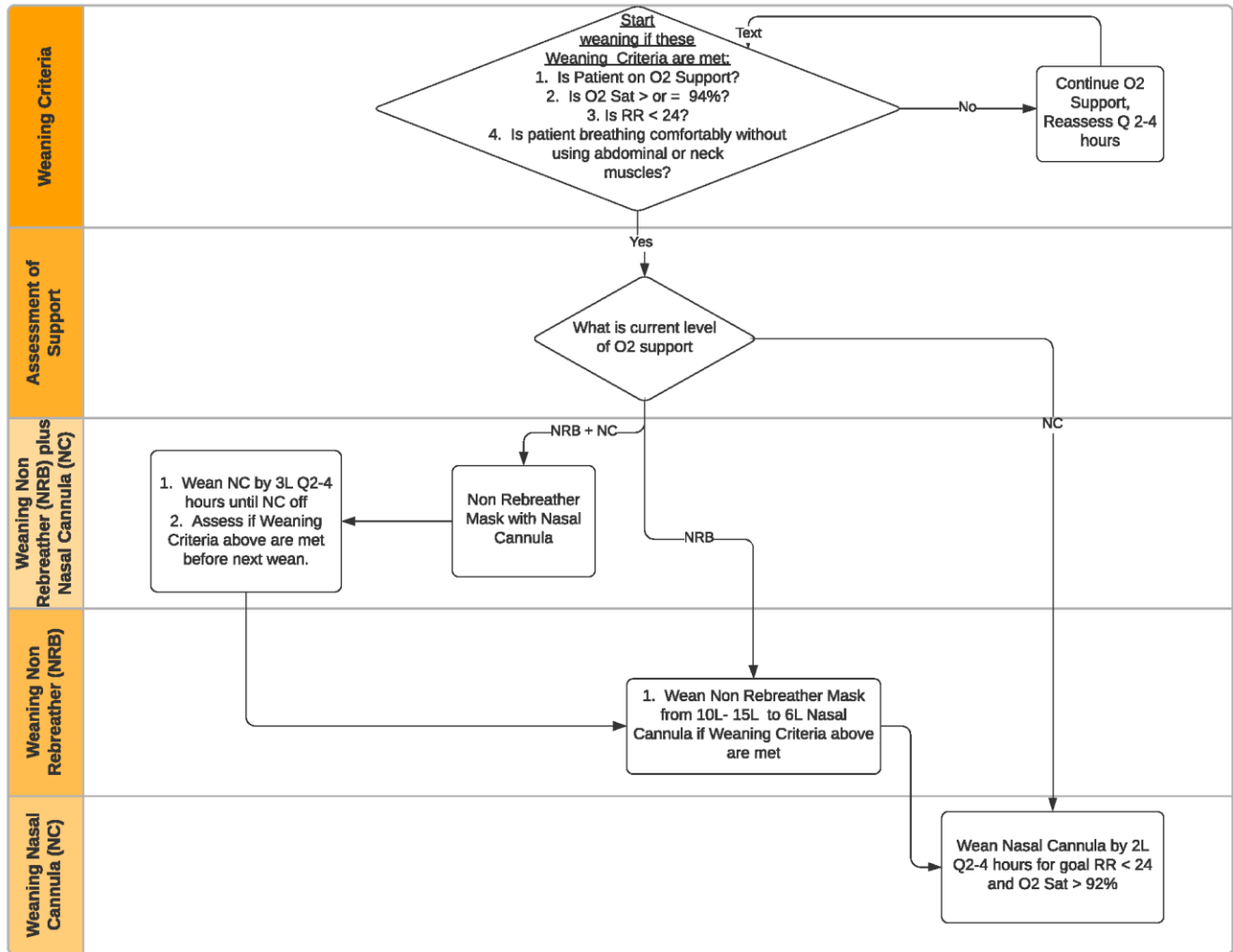


Figure 1: Algorithm for Oxygen Weaning Off Oxygen Therapy for COVID-19

Oxygen Therapy in the COVID Population

Supplemental oxygen therapy is recommended for patients with moderate or severe COVID-19 disease. The Surviving Sepsis Campaign (SSC) COVID-19 subcommittee (Alhazzani, et al., 2020) recommends:

- Target oxygen saturation (SpO₂) of 90-94% for patients with COVID-19 hypoxemic respiratory failure who are not at risk for hypercapnic respiratory failure.
- Oxygen use should be minimized by actively weaning in patients with SpO₂ of > 96%.

As shown in figure 1 on page 1, this clinical guide utilizes a weaning indication of ≥94% to begin/continue weaning and a target to maintain SpO₂ of >92% that is consistent with the SSC COVID-19 recommendations.



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Inclusion/Scope

All non-intubated patients with moderate or severe COVID-19 disease receiving supplemental oxygen therapy via non-rebreather (NRB) mask, conventional nasal cannula (NC), and a combination of NRB and NC, who are cared for in critical-care and non-critical-care inpatient settings.

Critical-care settings include intensive care units and intermediate care units.

Non-critical-care settings include medical-surgical units and medical-surgical telemetry units.

Exclusion

Patients receiving oxygen therapy via:

1. Venti-mask because it is not a recommended oxygen therapy device for COVID-19 disease.
2. Patients on high flow oxygen via high-flow nasal cannula or a ventilator.
3. Intubated patients.

Recommendations (See figure 1 on page 1)

General Recommendations

1. Start/continue weaning if the following criteria are met at rest:
 - a. Patient on O₂ support device including: NRB plus NC, NRB alone, or NC alone.
 - b. SpO₂ ≥ 94%.
 - c. RR < 24 breaths per minute.
 - d. Patient breathing comfortably without using abdominal or neck muscles.
2. If weaning criteria in recommendation #1 are not met, continue current supplemental oxygen support and reassess every 2 hours in critical-care settings and every 4 hours in non-critical-care settings to determine if criteria are met.
3. Once weaning has begun, reassess to determine if further weaning is appropriate every 2 hours in critical-care settings and every 4 hours in non-critical-care settings.
4. Monitor SpO₂ for five minutes after each oxygen decrease. If SpO₂ decreases to ≤ 92%, return to previous oxygen setting and monitor until SpO₂ > 92%. After 5 minutes of monitoring, if SpO₂ has not increased to > 92%, notify primary team physician or advanced practice provider. If patient is clinically deteriorating despite increased oxygen, call Rapid Response per hospital policy.
5. If SpO₂ decreases to ≤ 92% with activity, including ambulation, instruct patient to rest and monitor for five minutes to observe that SpO₂ > 92%. After 5 minutes of monitoring, if SpO₂ has not increased to > 92%, return to previous oxygen setting and notify primary team physician or advanced practice provider. If patient is clinically deteriorating despite rest and/or increased oxygen, call Rapid Response per hospital policy.

Oxygen Support Device-Specific Recommendations

6. NRB with NC
 - a. Start/continue weaning if the criteria in recommendation #1 are met.
 - b. Wean NC by 3L every 2 hours in critical-care settings and every 4 hours in non-critical care settings.



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- c. Once nasal cannula is off, leaving only NRB, observe for 2 hours in critical-care settings and 4 hours in non-critical-care settings, then follow recommendation #7.
- 7. NRB without NC
 - a. Start/continue weaning if the criteria in recommendation #1 are met.
 - b. If tolerating NRB for four hours, remove NRB and apply 6L NC, then follow recommendation #8.
- 8. NC without NRB
 - a. Start/continue weaning if the criteria in recommendation #1 are met.
 - b. Wean NC by 2L every 2 hours in critical-care settings and 2L every 4 hours in non-critical-care settings.
 - c. Once NC is off, re-assess in 2 hours in critical-care settings and 4 hours in non-critical-care settings to verify the criteria in recommendation #1 are met.

References

Alhazzani, W., Møller, M. H., Arabi, Y. M., Loeb, M., Gong, M. N., Fan, E., . . . Rhodes, A. (2020). Surviving Sepsis Campaign: Guidelines on the management of critically ill adults with coronavirus disease 2019 (COVID-19). *Critical Care Medicine*(March 27, 2020 Online Issue), 1-32.
doi:10.1097/CCM.0000000000004363

Government of Western Australia North Metropolitan Health Service, Women and Newborn Health Service. (2020). *Oxygen therapy clinical practice guideline*. Retrieved May 11, 2020, from Government of Western Australia North Metropolitan Health Service, King Edward Memorial Hospital Web Site: <https://www.kemh.health.wa.gov.au/~media/Files/Hospitals/WNHS/For%20health%20professionals/Clinical%20guidelines/OG/WNHS.OG.OxygenTherapy.pdf>

University of Toledo Medical Center. (2019). *Oxygen weaning procedure*. Retrieved May 11, 2020, from University of Toledo Medical Center Web Site: https://www.utoledo.edu/policies/utmc/respiratory_care/pdfs/3364-136-03-05.pdf