**Home Oxygen Therapy (HOT) Guideline for COVID-19 Virtual Monitoring Program (CVMP)**

*This guideline is to help standardize the use of oxygen in the home treatment of COVID-19 patients.*

1. Enrollment Criteria
   1. Criteria to consider use of supplemental 02 post discharge from **inpatient service**:
      1. Clinically improving, stable respiratory status for at least 6 hours and otherwise ready for discharge
      2. Completed remdesivir course, if indicated
      3. On 4L NC or less at rest to maintain spO2 ≥ 88%
      4. Has adequate support at home to ensure safe use of home oxygen
      5. Has ability to communicate with CVMP team for monitoring
      6. If above criteria met, RT performs exercise oximetry
         1. If requiring no more than 5L NC on exertion to maintain ≥ 88%, can be discharged with home O2
         2. If  not, repeat exercise oximetry in 24 hours provided above parameters are met
      7. Complicating factors during inpatient stay to be documented as part of discharge/home 02 orders
         1. Duration on current O2 regimen
         2. Penultimate setting and duration on that setting
         3. Highest FiO2/Flow requirements and date this setting was required
   2. Criteria to consider use of supplemental O2 post discharge from **ED, REC or other ambulatory clinic**:
      1. Clinically stable for at least 6 hours
      2. On 4L NC or less at rest to maintain spO2 ≥ 88%
      3. Has adequate support at home to ensure safe use of home oxygen
      4. Has ability to communicate with CVMP team for monitoring
2. Home O2 prescription (below) and demographic sheet are completed by the ordering provider and noted in the CVMP enrollment documentation



1. Patients will receive CVMP Care package and will be loaned a pulse oximeter if they do not have one (patients can purchase their own pulse oximeter for about $32 at the pharmacy).
2. Instructions on the basic use and safety consideration of the oxygen concentrator, tank, tubing, cart will be provided by Apria.
3. Patients enrolled into HOT-CVMP will be monitored by CVMP and supervising MD, and titrated by protocol.
   1. Onboarding checklist:
      1. Confirm risk of CO2 retentions – particularly established diagnosis of COPD, Morbid Obesity, Neuromuscular or Chest Wall disorders
      2. Visual check (telehealth visit) of equipment, settings and patient/caregiver’s ability to use it.
         1. Comfort and effectiveness measures: upright or prone positioning, water based lubricant for nares if drying effect, padding for tubing pressure points
      3. Confirm starting symptoms, temperature, pulse ox readings (sat % and pulse rate) and O2 flow rate.
4. Monitoring respiratory symptoms (dyspnea) and function and stratify as stable, improving, worsening. (ref: Centre for Evidence Based Medicine: assessing dyspnea by telephone or video[[1]](#footnote-1)):
   * 1. Ask the patient to **describe the problem with their breathing in their own words**, and assess the ease and comfort of their speech. Ask open-ended questions and listen to **whether the patient can complete their sentences**.
        1. *“How is your breathing today?”*
        2. *“Are you so breathless that you are unable to speak more than a few words?”*
        3. *“Are you breathing harder or faster than usual when doing nothing at all?”*
        4. *“Are you so ill that you’ve stopped doing all of your usual daily activities?”*
     2. Focus on change. **A clear story of deterioration**is more important than whether the patient currently feels short of breath. Ask questions like
        1. *“Is your breathing faster, slower or the same as normal?”*
        2. *“What could you do yesterday that you can’t do today?”*
        3. *“What makes you breathless now that didn’t make you breathless yesterday?”*
     3. Interpret the breathlessness in the **context of the wider history and physical signs**. For example, a new, audible wheeze and a verbal report of blueness of the lips in a breathless patient are concerning.
5. Daily titration protocol (note the experience of dyspnea can be independent of the oxygenation, dyspnea is driven more by hypercapnia and by hypoxemia only at very low saturation levels):
   * 1. At Rest
        1. Record lowest SpO2 reading at rest during 5-minute period with recommended flow rate.
        2. If <92%, increase flow by 1L/min, recheck Sp02 in 15 minutes for improvement and document new SpO2.
           1. If not improved, repeat up-titration until achieving target SpO2.
        3. If 92%, maintain current flow rate.
        4. If >92%, reduce flow by 1L/min and record lowest SpO2 reading at rest during 5-minute period.
           1. If SpO2≥ 92%, recommend reducing baseline flow rate by. 1L/m.
           2. Recheck 15 minutes post setting change and if SpO2 <92, recommend maintaining prior flow rate.
     2. If SpO2 at rest are >92%, evaluate with exertion
        1. Record lowest SpO2 reading while walking 40 steps with recommended flow rate with exertion.
        2. If <92%, increase flow by 1L/min, recheck Sp02 in 15 minutes for improvement and document new SpO2.
           1. If not improved, repeat up-titration by 1L/min until achieving target SpO2.
        3. If 92%, maintain current flow rate.
        4. If >92%, allow patient to recover and then reduce flow by 1L/min and record lowest SpO2 reading while walking 40 steps.
           1. Recheck post setting change and if SpO2 ≥ 92%, recommend reducing baseline flow rate by 1L/min. If SpO2 <92, recommend maintaining prior flow rate.

1. [www.cebm.net/covid-19/are-there-any-evidence-based-ways-of-assessing-dyspnoea-breathlessness-by-telephone-or-video/](http://www.cebm.net/covid-19/are-there-any-evidence-based-ways-of-assessing-dyspnoea-breathlessness-by-telephone-or-video/) accessed 9.3.20 [↑](#footnote-ref-1)