

You respond priority 4 to a residence for a 78 year old female patient on home O2. On arrival, the patient is experiencing difficulty breathing consistent with an acute COPD exacerbation. The patient complains of an increased cough and shortness of breath over a couple of days with no fever or chills. She denies having any chest pain or discomfort.

Findings and history upon presentation:

- Accessory muscle use, tachypnea, prominent expiratory wheezes upon auscultation
- Vital signs: P – 90; RR – 32; SPO2 – 88% on 2L/min via cannula; BP – 140/80; T – 37.0C; ETCO2 – 46 (shark fin appearance); 12LECG – non-diagnostic
- PMHx – COPD, hypertension, smoking

You recognize this patient to be a candidate for CPAP. While your partner begins to set up for CPAP, you initiate salbutamol treatment under the Bronchoconstriction Medical Directive (PCP Medical Directives Version 3.3, blue airway/breathing section, pages 21-23 and ACP Medical Directives Version 3.3, blue airway/breathing section, pages 33-35). What is your initial CPAP pressure setting for this patient?

If you answered 5 cmH2O you are correct. You explain the procedure to the patient and successfully apply and secure the mask at the initial pressure setting. The patient tolerates the mask well.

**At what point can you increase the pressure?** The correct answer, as per the CPAP Medical Directive (PCP Medical Directives Version 3.3, blue airway/breathing section, pages 31-36 and ACP Medical Directives Version 3.3, blue airway/breathing section, pages 44-49) is:

- ☒ 5 minute intervals (used for assessment and vitals) **AND**
- ☒ the patient continues to tolerate the mask **AND**
- ☒ is still having respiratory distress

The patient remains unchanged following an increase to 7.5 cmH2O and subsequent increase to 10 cmH2O. What other treatment options would you consider?

- ☒ Salbutamol MDI - When managing a COPD patient with CPAP remember that salbutamol can be administered through an MDI adapter without needing to remove the CPAP. This allows for the patient to benefit from both treatments.
- ☒ Increase the FiO2.
- ☒ If the patient worsens despite adequate CPAP support, consider discontinuing CPAP and move to BVM.

The important thing to remember is to continually assess your patient to determine the effectiveness of the treatment and adjust the CPAP pressure and FiO2 accordingly. Remember to document all assessment findings and reasoning for pressure increases and/or discontinuing treatment.