# 5 Minute Consult: Dyspnea

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PalliEM
5 Minute Consult

## Assessment

- Note: dyspnea is the subjective sensation of shortness of breath and is independent of oxygen saturation, respiratory rate, or other objective indicators
- Assessment is based on patient's self-report
- If unable to self-report, assess heart rate, respiratory rate, restlessness, abdominal breathing, accessory muscle use, grunting, nasal flaring, look of fear

## Management

- Identify/treat reversible causes (pulmonary edema, anemia, bronchospasm, etc.)
- Non-pharmacologic
    - Patients often naturally lean forward, utilize pursed-lip breathing
    - Fan to provide air movement across face[1,2]
    - Administration of ↑ FiO2 not shown to be superior to administration of room air in the absence of hypoxia[3] – possible subjective benefit for patients/families
    - Noninvasive or mechanical ventilation, depending on patient's goals of care
        - Consider palliative high-flow nasal canula[4]
    - Allow for viewing of window or open space
    - Mindfulness/stress-reduction exercises
- Pharmacologic
    - Opioids are mainstay
        - No particular opioid better than another
        - Data support oral, intravenous, and subcutaneous use over nebulization
        - Effective for cough as well
        - Mechanisms: (1) alteration of chemoreceptor response to hypercapnia and hypoxia; (2) vasodilation and decreasing of pulmonary vascular congestion; (3) centrally-acting effects to reduce perception of dyspnea
        - **When appropriately dosed, no respiratory depression**
    - Disease-specific interventions such as beta-agonists, inhaled anti-cholinergics, steroids, diuretics (no evidence for nebulization), antibiotics, etc.

| Intervention | Agent | Conclusions |
|---|---|---|
| Medical Gas | Oxygen – Hypoxemic | ↑ |
| | Oxygen – Normoxemic | ↔ |
| | Medical air – Normoxemic | ↔ or ↑ |
| Pharmacologic | Opioids – oral/IV | ↑ |
| | Opioids - inhaled | ↓ |
| | Inhaled furosemide | ↔ |
| | Anxiolytics | ↔ |
| | Heliox | ↔ |
| Non-pharmacologic | Fan | ↑ |
| | Pulmonary rehabilitation (in select patients) | ↑ |
| Surgical | Pleural catheter | ↑ |
| | LVRS (in select patients) | ↑ |
| | Bronchial stenting (in select patients) | ↑ |
| Complementary | Acupuncture | ↔ or ↑ |

↑ Evidence generally supports use of intervention
↓ Current evidence does not support use
↔ Further investigation required
↔ or ↑ Further investigation is required, but emerging data are compelling to support use

Treatment options for dyspnea[5]

| Initial Opioid Dosing for Opioid-Naïve Patients (start conservatively and titrate as needed to higher dosing to obtain effect) | | |
|---|---|---|
| | Oral (IR) | IV/SC |
| Morphine | 5-10 mg q1-4h | 2-4 mg q15-30min |
| Oxycodone | 2.5-5 mg q1-4h | - |
| Hydromorphone | 1-2 mg q1-4h | 0.2-0.6 mg q15-30min |
| Fentanyl | - | 25-50 mcg q15-30min |

**References**

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