

DYSPNEA

Dyspnea is an uncomfortable awareness of altered breathing; it is a subjective symptom reported by patients, often referred to as trouble breathing or breathlessness.

With COVID-19, patients with mild clinical presentation (absence of viral pneumonia and hypoxia) may not require initial hospitalization. The decision to monitor a patient in an acute or outpatient setting is a case-by-case decision. Some patients will have severe illness requiring hospitalization for management.⁴

Dyspnea can appear suddenly and be life-threatening.

Nursing Assessment:

- Clinical assessment: Complete comprehensive nursing history and careful physical exam, including history of symptoms (onset, qualities, associated symptoms, precipitating and relieving events, and response to medications), psychosocial history, medication history, and results of laboratory/diagnostic tests.¹
 - ▶ The patient's self-report is the gold standard for the assessment of dyspnea. Ask the patient to use a numeric rating scale from 1–10 to rate the severity of dyspnea (0 = no breathlessness, 10 = severe breathlessness).
 - ▶ Breathing may be difficult, labored, uncomfortable, distressing, or painful with either inspiration or expiration.
 - ▶ Dyspnea may be described as breathlessness, inability to take a deep breath, “air hunger,” or chest tightness.
 - ▶ The patient may engage in pursed-lip breathing and also may express anxiety, fear, or panic, if able.
- Review advance care planning documents and goals of care with the patient and family to clarify whether the patient would want to be transferred to the intensive care unit and whether they would want other treatments such as ventilatory support.

Nonpharmacological Management:

- Ensure optimal position for lung expansion and comfort.
- As appropriate to the setting, promote a calm environment through use of resources such as music, prayer, and mindfulness.
- Teach the patient to use relaxation techniques, if able.

Pharmacological Management*:

- Dyspnea can be severe. Optimize treatments for underlying etiologies and comorbid illnesses based on goals of care.
- Low-dose opioids may be beneficial for symptomatic treatment of dyspnea after medical therapy has been optimized.¹
 - ▶ Consider morphine 5 mg by mouth, or equivalent, as a single dose, if tolerated, then every four hours around the clock. Hold for sedation. As-needed administration may be made available for severe dyspnea.²

- Start low, go slowly, and monitor carefully.³
- Titrate by 25%–50% increments to effect.²
- If a patient is acutely dyspneic or actively dying, consider intravenous morphine bolus 2–5 mg or 10% of daily dosage every five to ten minutes as needed, and titrate to effect.²
- Avoid morphine in patients with renal insufficiency. Consider oxycodone or hydromorphone with caution.²
- Monitor patients on opioids for sedation, respiratory depression, constipation, delirium, and urinary retention.²
- Treat a dyspneic patient who is anxious with low-dose opioids first to reduce shortness of breath, then consider benzodiazepines if needed.²
- Supplemental oxygen therapy should be given immediately to patients with severe acute respiratory infection and respiratory distress, hypoxemia, or shock and target > 94% O₂ saturation. The patient may require high-flow, noninvasive, or mechanical ventilatory support. Due to uncertainty surrounding potential aerosolization, high-flow and noninvasive ventilation should be used with airborne precautions and per organizational policies until further evaluation of safety can be completed.⁵

Additional Interventions:

- An interprofessional team with multiple perspectives can provide successful interventions to treat physical, social, psychological, and spiritual aspects of care.
- Consider referral to palliative care for advanced symptom management.

Patient and Family Education:

- Clarify patient's and family's goals frequently during the course of illness.
- Provide instruction on underlying etiologies of dyspnea, signs and symptoms of impending exacerbations, treatment options, medications, and anticipated effects.
- Explore realistic expectations for symptom trajectory with reassuring education on management strategies.
- Provide instruction on medication management and nonpharmacological strategies.

***DISCLAIMER:** Medication dosing for symptom management is only a recommendation for nursing to discuss with prescribers and for prescriber consideration after careful history, physical exam, and review of laboratory/diagnostic studies. Dosing should be adjusted based on each patient's clinical case, presentation, and prescriber's clinical judgment.

There are no drugs approved by the U.S. Food and Drug Administration (FDA) specifically for the treatment of patients with COVID-19. At present, clinical management includes infection prevention, control measures, and supportive care, including supplementary oxygen and mechanical ventilatory support when indicated. The Centers for Disease Control and Prevention also hypothesizes that angiotensin converting enzyme (ACE) inhibitors, angiotensin II receptor blockers (ARBs), and steroids may increase the severity of COVID-19. However, currently, there are no data to suggest a link between those medications and worse COVID-19 outcomes.⁴

For additional information, please access HPNA's COVID-19 Resource page at www.advancingexpertcare.org.

REFERENCES

1. Donesky D. Dyspnea, cough, and terminal secretions. In: Ferrell B, Paice J, eds. *Oxford Textbook of Palliative Nursing*. 5th ed. New York, NY: Oxford University Press; 2019: 224-225.
2. Quill T, Vyjeyanthi P, Denney-Koelsch E, White P, Zhukovsky D. Dyspnea. In: *Primer of Palliative Care*. Chicago, IL: American Academy of Hospice and Palliative Medicine; 2019.
3. Broglio K. Dyspnea. In: Dahlin C, Coyne F, Ferrell B, eds. *Clinical Pocket Guide to Advanced Practice Palliative Nursing*. New York, NY: Oxford University Press; 2017: 15-24.
4. Centers for Disease Control and Prevention. Interim Clinical Guidance for Management of Patients with Confirmed Coronavirus Disease (COVID-19). <https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-guidance-management-patients.html#Medications>. Accessed March 30, 2020.
5. World Health Organization. Clinical Management of Severe Acute Respiratory Infection When COVID-19 Is Suspected. [https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-\(ncov\)-infection-is-suspected](https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-(ncov)-infection-is-suspected). Accessed April 4, 2020.