

PAIN

Pain is a complex biopsychosocial phenomenon described as an unpleasant sensory and emotional experience associated with actual or potential tissue damage.

Acute pain is a brief, often adaptive, and beneficial response with a clear cause and possibility of reversal. There may be observable signs (tachycardia, increase in blood pressure, grimacing, muscle tension), which may not be present with chronic pain.¹

Patients with COVID-19 may experience headache, myalgias, or chest pain with accompanying dyspnea.

Nursing Assessment:

- Clinical assessment: Complete a comprehensive nursing history and careful physical exam, including self-reported history of symptoms, psychosocial history (including history of substance use disorder), medication history, and results of laboratory/diagnostic tests.¹
- A patient's self-report of pain should include onset, location, referral, radiating pattern, duration, characteristics, other associated symptoms, aggravating factors, relieving factors, treatment response, functional changes, and interference with daily activities.²
- Accurate pain assessment is essential to optimal pain management and is a continual process.²
 - ▶ Various tools can measure severity and other aspects of pain (e.g., numeric rating scale, WILDA® Pain Assessment Guide, FACES Pain Scale–Revised).²
 - ▶ Multiple scales are also available to evaluate patients who are unable to self-report (e.g., Pain Assessment in Advanced Dementia Scale).²
- Determine the type of pain (somatic, visceral, or neuropathic), which will inform decisions related to use of adjuvant analgesics.² In patients with COVID-19, pain is usually somatic.

Nonpharmacological Management:

- Physical modalities include heat and cold and massage, if able.³
- Cognitive behavioral modalities include relaxation, guided imagery, distraction, meditation, prayer, and reframing.³

Pharmacological Management*:

- Optimize treatment for underlying etiology.
 - ▶ Nonopioids: Consider acetaminophen 500–1,000 mg every four to six hours as needed.³
 - May be used as an antipyretic in COVID-19
 - Dose limit of 4,000 mg in 24 hours (2,000–3,000 mg if used chronically)³
 - Consider dosing in older adults, individuals with kidney or liver failure, and those with alcohol use disorder.
 - Note: Currently, opinions vary regarding use of nonsteroidal anti-inflammatory drugs (NSAIDs) in patients with COVID-19. The U.S. Food and Drug Administration is further investigating the use of NSAIDs during COVID-19 infection.⁴

- Opioids are commonly used medications such as morphine, hydromorphone, fentanyl, oxycodone, and hydrocodone. Availability depends on facility or organization.
 - ▶ In the acute care setting:
 - Some patients may be on opioids for dyspnea, and that may help pain.
 - Consider exposure to clinicians, and perhaps create long tubing to piggyback pump outside the room for boluses.
 - Consider morphine subcutaneously or intravenously 2.5–5 mg every three to four hours as needed, hydromorphone 0.2–0.6 mg subcutaneously or intravenously every two to three hours as needed, or fentanyl 25–50 mcg intramuscularly or intravenously every one to three hours as needed.⁵
 - ▶ In the community setting:
 - Patients rarely need opioids for pain related to COVID-19 symptoms. If pain is present, it may be due to other etiologies.
 - Universal precautions are necessary, as there is still an opioid epidemic and reports of increased substance use disorder in the community.
 - For acute pain in the community setting, consider morphine 5–15 mg by mouth (immediate-release tablet or oral solution) every three to four hours as needed or oxycodone 5–10 mg by mouth every three to four hours as needed.⁴
 - ▶ Start low, go slowly, monitor carefully, and decrease starting dose for elderly patients and patients with severe kidney or liver disease.⁴
 - ▶ Avoid morphine in patients with renal insufficiency as much as possible.⁴
 - ▶ Monitor for adverse effects of opioids, including respiratory depression (which can cause further respiratory issues in patients with COVID-19), sedation, constipation, nausea, vomiting, pruritus, and myoclonus.³
 - Anticipation, prevention, and treatment of adverse effects should be part of each patient’s care plan.³
- Patients who are opioid tolerant may require additional titration.
- Patients with a history of substance use disorder may require referral for pain or palliative care.

Opioid Conversions:

- Changing opioids or routes may be necessary due to access. Use equianalgesic dosing tables when converting.
- Incomplete cross-tolerance may occur, leading to decreased requirements of new opioids.³
- Use morphine milligram equivalents (MMEs) as common denominators for all dose conversions.³

Medication	Parenteral Route (intravenous/intramuscular/subcutaneous)	Enteral Route (by mouth)
Morphine	10 mg	30 mg
Oxycodone	Not available	20 mg
Hydrocodone	Not available	30 mg
Hydromorphone	1.5 mg	7.5 mg
Fentanyl	100 mcg	Patch dosing conversion

Interprofessional Team:

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

Patient and Family Education:

- Clarify patient and family goals frequently during the course of illness.
- Provide education on underlying etiology of pain, treatment options, medications, and anticipated side effects.
- Utilize bowel medications proactively when prescribing opioids for pain.
- 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.⁶

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

REFERENCES

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