

Titrating Opioid Regimens: Around the Clock and to the Rescue!

INTRODUCTION

When crafting an opioid regimen for a patient with persistent pain, we generally have one opioid strategy for the baseline pain and a different opioid strategy for breakthrough pain. In most cases, the same opioid is used, although they may be different for various reasons. ***In the face of increasing pain:***

- How does the astute healthcare practitioner know whether to increase the baseline opioid or the rescue opioid?
- How much and how quickly can we increase each opioid?
- How about the patient who needs to decrease his or her opioid dose due to the development of an adverse effect or implementation of an opioid-sparing intervention—how quickly can we decrease the dose and not cause opioid withdrawal symptoms?

Even though this chapter is not specifically about *conversion* calculations, opioid titration is a critical calculation skill. We discussed the paradigm of safety and efficacy in Chapter 1—the same principles apply here. After reading this chapter, practitioners in the know will be able to calculate dosage increases (or decreases) that allow the patient to achieve pain relief as quickly as possible, while remembering “safety first!” Why does that sound like a Boy Scout doing drug math?

OBJECTIVES

After reading this chapter and completing all practice problems, the participant will be able to:

1. Recommend and initiate opioid therapy for opioid-naïve patients with acute severe pain and transition to around-the-clock opioid dosing.
2. Describe different types of breakthrough pain and recommend and titrate an opioid regimen to treat these pains.
3. Determine an appropriate strategy to increase an opioid regimen, including both the regularly scheduled and rescue opioid for breakthrough pain.
4. Recommend a dosing strategy to wean or taper a patient from opioids when adverse effects occur or as other clinical situations dictate.

INITIATING OPIOID THERAPY

There are several excellent review articles and consensus guidelines that will be of assistance as we consider the calculations in this chapter.¹⁻⁶ In this section, we will discuss dose-finding strategies for patients moving from nonopioids, combination analgesics, or occasional opioid use to around-the-clock opioid therapy, as well as management of the opioid-naïve patients with acute, severe sudden-onset pain. Calculations specific to methadone, fentanyl, and continuous opioid infusions will be addressed in subsequent chapters.

Acute Severe Pain in the Opioid-Naïve Patient

Most patients transition to opioid therapy after nonopioid or co-analgesic therapy fails to adequately control pain. Occasionally, however, a patient who has not been taking opioids previously will experience acute-onset severe pain. Examples include patients who suffer a pathologic fracture or nerve compression.

The Cleveland Clinic guidelines for managing acute severe pain in opioid-naïve patients in a supervised inpatient setting (or very closely monitored outpatient setting) are as follows¹:

- Morphine 1 mg intravenously (IV) every minute for 10 minutes, followed by a 5-minute respite, and repeated until pain is controlled. The healthcare practitioner (physician or licensed independent practitioner) should closely monitor (really closely, meaning park yourself by the bedside and don't leave!) sensorium and pain response. It is critically important to monitor level of arousal because sedation precedes respiratory depression. If the patient has not achieved pain relief after 30 mg of parenteral morphine has been administered, and/or the patient is sedated or respiratory rate is <10 breaths per minute, further investigation of the pain complaint should commence. Alternate opioids include fentanyl 20 micrograms (mcg) per minute or hydromorphone 0.2 mg per minute.
- If subcutaneous (sub-Q) dosing is preferred, morphine 2 mg every 5 minutes (or fentanyl 40 mcg or hydromorphone 0.4 mg) until pain is managed. Follow the monitoring and precautions discussed above.
- Using the oral route of administration, 5 mg of immediate-release (IR) morphine (or 1-mg hydromorphone or 5-mg oxycodone) is given every 30 minutes until pain recedes.

Another guideline we can draw on comes from the National Comprehensive Cancer Network (NCCN) *Clinical Practice Guidelines in Oncology: Adult Cancer Pain*.⁶ These guidelines state that opioid-naïve patients who experience moderate-to-severe pain should receive between 2 to 5 mg of IV morphine (or the equivalent with a different opioid) and reassess pain at 15 minutes. If the pain has increased or persists at 15 minutes, increase dose by 50% to 100% and reassess after 15 minutes. They advise

What Do You Mean “Until Pain Is Controlled?”

FAST FACTS



It is important to describe clearly what we mean by repeating doses of the opioid “until pain is controlled. How do you know

when the pain is “controlled?” What you’re looking for is an initial two to four point drop in the pain rating, not complete pain relief. Practitioners must recognize that using a strategy such as described above (morphine 1-mg IV every minute up to 10 doses) is *dose stacking* (because the peak effect of IV morphine is no sooner than 15 minutes).

If the practitioner continues to administer the opioid until complete pain relief is achieved, this may result in overadministration of the opioid when the entire drug administered achieves peak effect.
