

FAST FACTS AND CONCEPTS #72
OPIOID INFUSION TITRATION ORDERS**David E Weissman MD**

Introduction This *Fast Fact* will discuss appropriate ways to write opioid infusion titration orders. See *Fast Fact* # 34 for further information on the appropriate symptom management during a ventilator withdrawal.

A bad example: *'Morphine 2-10mg/hour, titrate to pain relief.'* This order is commonly written for terminally ill patients and in the context of terminal ventilator withdrawals.

What is wrong with this order?

1. It places full responsibility for dose titration upon the nurse.
2. It provides no guidance regarding how fast to titrate (e.g. every hour, every shift?) or dose titration intervals (e.g. for poorly treated pain, should the dose be raised from 2 to 3 mg, 2 to 10 mg, other?).
3. It poses the potential for overdosage by too zealous dose escalation and provides only one option for poorly controlled pain – increasing the continuous infusion rate.
4. Given that it takes at least 8 hours to achieve steady-state blood levels after a basal dose change, it makes no pharmacological sense to dose escalate the basal dose more frequently than q 8 hours.

A better way to write this order: *'Morphine 2 mg/hour and morphine 2 mg q 15 minutes for breakthrough pain (or 2 mg via PCA dose). RN may dose escalate the PRN dose to a maximum of 4 mg within 30 minutes for poorly controlled pain.'*

Why is this better?

1. This order is preferred as it provides a basal rate and a breakthrough dose. The breakthrough dose has a peak effect within 5-10 minutes. Thus, if the breakthrough dose is inadequate it can be safely increased, as often as every 15-30 minutes, to achieve analgesia – without a need for rapid upward titration of the basal rate.
2. Reassess the need for a change in the basal rate no more frequently than every 8 hours; use the number of administered bolus doses as a rough guide when calculating a new basal rate. However, never increase the basal rate by more than 100% at any one time. When increasing the basal rate, always administer a loading dose so as to more rapidly achieve steady-state blood levels.

References

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