# One Size Does NOT Fit All: Opioid Dose Range Orders

Chris Pasero, MS, RN-BC, FAAN

## Q & A

**Q: JC site visitor wants MD/prescriber's order intent clear; i.e. computer system does not have drop down boxes for, may give prior to therapy services, may give before discharge, may titrate from x amount to max. dose of xxx. Do you have any advice in how to achieve this within the system or specific language that would assist? Q: How can the order sets be written to not tie to the pain scale, but does not allow each nurse to possibly choose something different each time? This is what JC does not wish to see.**

A: All EMR systems allow modifications. It is important for nurses to be members of the team that develops the EMR to ensure it supports nursing actions that will keep patients safe and that do not increase their liability. TJC has no problem with nurses selecting a dose from a properly written range order (e.g., in accordance with guidelines in the ASPMN position paper). Many hospitals have passed survey with this approach. While it makes sense to assign various analgesics to pain intensity (i.e., acetaminophen and NSAIDs for mild to moderate pain; opioids for moderate to severe pain), there is no research to support assigning a specific opioid dose to a specific pain intensity rating. The relationship between the two is not linear and can lead to a dangerous scenario. Contact me at cpasero@aol.com so that I can provide you with a multimodal order set that will make this clearer and that may work with your EMR.

**Q: We recently had a Joint Commission survey and our surveyors did not like range orders or orders that do not have specific pain scores. They did not like nurses using any subjective assessment to decide which order to follow. How can an organization successfully address this?**

A: I know that some surveyors like the approach of one size fits all because it gives the impression that there will not be any variation and thus fewer errors; however, the nature and treatment of pain do not lend itself to this approach without introducing dangerous consequences. Nurses must be able to use their judgment at any given moment to do what keeps patients safe.

I have a feeling your policy/procedure on range orders and especially the nursing educational process and the way your nurses articulate the decision making process with regard to selecting doses from a range might be loose. Hospitals across the country pass survey when they have a strong policy/procedure that is in line with the ASPMN position paper and nurses know how to implement it.

You might want to contact me at cpasero@aol.com for more information on this. I also suggest you contact TJC's Director of Standards Interpretation Group, Pat Adamski, RN, MS, MBA, at *padamski@jointcommission.org* for clarification. She will tell you that surveyors should not be telling you that range orders are unacceptable. Ellyn Schreiner, the ASPMN liaison to TJC, has confirmed this many times as well. Be sure to note that TJC reviewed the ASPMN position paper (see end of paper).

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# Q & A

**Q: Fixed time interval vs. rolling clock for range orders: thoughts on best practice?**

A: Personally, I have used fixed interval for many years without any problems, but the letter of the law suggests that we use a rolling clock. I teach nurses to use the rolling clock to establish the analgesic requirement at the beginning of therapy, then rather than constantly chasing the pain, administer that amount via a fixed time interval. I hope this makes sense. If not, contact me at cpasero@aol.com.

**Q: Is there anything being done related to how the HCAHPS questions are worded?**

A: I'm not certain about this, but organizations such as ASPMN, APS, and AAPM (with the encouragement of their members) should express their concerns to CMS about the wording. I do want to make the point that the wording would be less dangerous if every patient with pain was treated with a multimodal approach that incorporates a strong nonopioid foundation. The wording is dangerous when opioid-only treatment plans are used and nurses feel compelled to administer more and more opioid in an effort to "do everything they could to help you with your pain."

**Q: Have you seen what you suspect as opioid induced hyperalgesia in the acute setting? We know it's fairly common in Chronic Pain.**

A: Yes, I think hyperalgesia is a (relatively rare) reality in all settings. It is important to insure a good differential diagnosis has been made before assuming a patient has hyperalgesia, however. The condition should be distinguished from tolerance and addiction to ensure appropriate treatment. If you have a copy of *Pain Assessment and Pharmacologic Management*, see page 294-297 (Table 11-3, taken from Peggy Compton's work, addresses the differential diagnosis process). If you don't have the book, contact me at cpasero@aol.com.

**Q: What is your opinion of using scheduled Tramadol (mu-opioid / serotonergic properties) PO q6-8 hours to provide baseline pain control after orthopedic/spine surgeries?**

A: Tramadol is certainly a viable option for this type of pain. It is used for acute pain and is considered a second-line drug for neuropathic pain so is appropriate for this surgical procedure. Scheduled doses should be administered for pain of a continuous nature, so this is appropriate as well. However, be aware that there is a dose limitation with tramadol, i.e., 300 mg/day in older adults and 400 mg/day in younger adults. See an excellent table in Dworkin RH et al. Recommendations for the pharmacological management of neuropathic pain: An overview and literature update. *Mayo Clin Proc* 2010;85(3):S3-S14. The table is a great resource that can be posted as a guide for prescribers.

# Q & A

**Q: If you don't anchor a dose of an analgesic to a pain rating scale and you use a dose range - how is the nurse to decide what is moderate vs. severe pain?**

A: The nurse certainly should consider the patient's pain intensity when determining a dose, but she/he should also be able to consider multiple other factors related to opioid dose requirement in addition to pain intensity, e.g., level of sedation, respiratory status, age, co-morbidities. Pain intensity is just one of many factors. Orders that require nurses to give a specific dose for a specific pain intensity do not allow for consideration of these other important factors. For example, an order that requires a nurse to give 6 mg of IV morphine q 2 h for pain ratings greater than 6 limits the nurse's ability to safely manage a 90 year old frail patient who has severe pain. The nurse would have to call the prescriber for new orders if she/he thinks 6 mg is excessive. On the other hand, an order for 2-6 mg of IV morphine q 2 h PRN for pain ratings greater than 6 would allow the nurse to start with 2 mg and assess response. If tolerated, the nurse can administer up to 4 mg more in the 2-hour time interval. This type of order respects the nurse's ability to make sound decisions and avoids wasting valuable nursing time (which is very costly).

**Q: Is it possible to have a reference list that would support not using a pain score to decide a dose?**

A: See below for some references. I'm sure there are more. Also watch for the June issue of *Journal of PeriAnesthesia Nursing* for an article I wrote that summarizes the content presented on this webinar. It is entitled the same as the webinar.

References

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# Q & A

**Q: Please comment on opioid specific underlying mechanisms of action contributing to over sedation with unrelieved pain simultaneously.**

A: As you know, sedation precedes clinically significant opioid-induced respiratory depression. Opioids impact ventilation by (1) direct depression of the respiratory center of the brain stem, (2) a decrease in cognitive function, and (3) the reduction in muscular tone of the oropharynx leading to upper airway obstruction. The combination of these factors causes a decrease in ventilation and respiration and the accumulation of carbon dioxide, which is clinically evident with observation of increasing sedation (this is on a continuum). Analgesia is unrelated to these mechanisms, which is why we often see patients who are excessively sedated and still in pain. An excellent reference for the underlying mechanisms is: MacIntire PE, Loadsman JA, Scott DA. Opioids, ventilation and acute pain management. *Anaesth Intensive Care*. 2011;39:545-558.

**Q: What is the reference for the equianalgesic chart where it recommends Morphine 2.5mg/hour or 10mg over 4 hour period for opioid naive patient?**

A: There are many, but the most authoritative is probably the American Pain Society's *Principles of Analgesic Use* (see http://www.americanpainsociety.org/library/content/apprinciplesofanalgesicuse.html).

If you have the book *Pain Assessment and Pharmacologic Management*, see page 444-446 for an extensive equianalgesic chart. There are many references at end of that table. If you don't have the book, contact me at cpasero@aol.com. It is important to remember that the doses in the equianalgesic chart are based on single-dose (given over a 4-hour period) studies in opioid-naïve patients and are estimates of analgesic requirements. Calculating equianalgesic doses provides a starting point for us, particularly when switching from one opioid to another, but dosing must always be individualized based on patient response.

# Q & A

**Q: Could you explain more about "Focus is on patient satisfaction, rather than pain control for improved function."?**

A: What I see across the country is hospital staff focusing great energy on patients' perceptions of their hospital experiences (survey scores). One aspect of the measured perceptions on the HCAHPS survey is how well the staff controlled pain. This is an important consideration, but with the prevalence of opioid-only treatment plans, this has resulted in aggressive and sometimes unsafe opioid dosing in an effort to improve patients' perceptions of their pain control. This is true despite the lack of any research showing a correlation between higher opioid doses and higher patient satisfaction with pain control. My feeling is that there needs to be unity among the health care team members surrounding the purpose of providing optimal pain control, i.e., to improve function and quality of life. This must also be the centerpiece of patient education regarding analgesics and pain control. I believe that a focus on function and quality of life in combination with strong multimodal pain treatment plans will improve the safety and effectiveness of pain management as well as patients' satisfaction with their pain control. Furthermore, research has shown that patient satisfaction with pain control is correlated with patient global satisfaction with hospital stay. See an excellent study on this: Gupta A, et al. (2009). Patient perception of pain care in hospitals in the United States. *J Pain Res.* 2:157–164.

# Q & A

**Q: Is there a pain assessment tool the measures function, not pain score? Is there an easily used functional scale related to pain that is in use that would help us talk the same functional language?**

A: Michael McGloth developed the Functional Pain Scale, which has been found to reliable and valid (Gloth et al. A comparative effectiveness trial between a post-acute care hospitalist model and a community-based physician model of nursing home care. J Am Med Dir Assoc. 2001;2[3]:110-114). See below. It was studied originally in a nursing home setting but has been adapted in some acute care hospitals.

- 0 No Pain
- 1 Tolerable (Doesn't interfere with activities)
- 2 Tolerable (Interferes with some activities)
- 3 Intolerable (Able to use phone, TV, or read)
- 4 Intolerable (Unable to use phone, TV, or read)
- 5 Intolerable (Unable to verbally communicate)

You might want to search pubmed.com for others; however, it is important to remember that many of the functional pain scales were developed without proper reliability and validity testing. A major problem occurs when the scale assigns specific behaviors to specific pain intensities, which discourages the clinician from appreciating each patient's unique way of expressing pain. This may also send the message to patients that they must demonstrate specific behaviors (e.g., they must be bed-bound and crying to have a pain rating of 10/10) to have their reports of pain taken seriously.

I prefer to see a focus on individualized and specific functional goals (e.g., "walk the length of the hall 3 times while I'm caring for you today." The patient should be told that she/he should be able to do this with relative ease and to let you know if this isn't possible. Use the white board to remind the patient of the functional goals and mark them off ("1, 2, 3 walks") as they are accomplished. Keep focused on function as the purpose of controlling pain. Everything else will fall into place.

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## Q & A

**Q: What is your input on capnography: high risk pts only or all patients for 1st 24 hours?**

A: Capnography measures ventilation (unlike pulse oximetry, which measures oxygen saturation) and is considered an excellent method for monitoring during opioid administration. If available, continuous $ETCO_2$ monitoring is definitely warranted in high-risk patients, and the first 24 hours of opioid therapy has been identified as a high-risk period.

The problem with assigning risk, however, is that while some patients have easily identifiable risk factors, the reality is that all patients are at risk for opioid-induced respiratory depression. Unfortunately, there are not enough $ETCO_2$ monitors in most hospitals for all of the patients receiving opioids, so elevated risk is the deciding factor. Another concern is that monitoring all patients who receive opioids can lead to alarm fatigue, lowering thresholds to reduce false alarms, ignoring alarms, and even turning off alarms; all of which can increase risk for patients and increase nursing liability. Until technology becomes more sophisticated and affordable, these are issues of great concern.

**Q: How do you manage "asking patient if they want more" in an environment of drug seeking behavior or patients that tend to be seeking more medication versus being open to non-pharmacological interventions etc.?**

A: This may not be an effective technique in all patients, but research shows that most patients want us to achieve a balance between pain relief and side effects. A great study on this is: Gan TJ, et al. Patient preferences for acute pain treatment. *Br J Anaesth* 2004;92(5):681-688.

**Q: Do you recommend start low and go slow even in the ER setting? Our ER attempts to hit hard and fast. Do you disagree with this in ER pain management?**

A: I think how quickly we titrate always depends on the situation and the patient. Certainly the ER is a unique setting. However, regardless of the clinical setting we should individualize the approach, particularly with administration of the first dose. If the patient is opioid-naïve, I start with the lower end of the dose range and go up from there. I have always found it easier to go up in dose than to correct an overdose.

**Q: What was the name of the document referenced for practice, maybe best practices?**

A: I'm not sure what document you are asking about. Contact me at cpasero@aol.com to give me more information so that I can figure out which document you want.

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## Q & A

**Q: Where can I find a good resource for developing a document to help educate patients preoperatively?**

A: If you have the book *Pain Assessment and Pharmacologic Management*, there are patient education suggestions and brochures starting on page 539. The brochures on pages 542-545 are intervention-specific, but provide some direction as to important points to make to the patient in your written material, e.g., how pain affects the body, how pain will be assessed, goals of care. A great resource for educating people with chronic pain is the American Chronic Pain Association website, which provides videos and a variety of educational materials and tools that will give you ideas for all types of pain (see http://theacpa.org). Also see the American Academy of Pain Medicine's site for an excellent presentation of numerous patient teaching points presented by Dr. Perry Fine (http://www.painmed.org/pain-awareness/). You can also Google "pain education for patients" and see several examples of resources.

**Q: Can you talk about the need to include an indication for prn meds as required by the JC? (We are being asked to define mild, moderate and severe pain.)**

A: Research varies on what pain ratings equal mild, moderate, and severe. Most guidelines rely on the suggestion that mild = 1-3; moderate = 4-6; and severe = greater than 6. Your policy/procedure can specify how you define the various intensities.

There should always be an indication for the administration of any medication. If you want to contact me at cpasero@aol.com I will send an example of a multimodal order set that provides several analgesic options for prescribers depending on intensity of pain (similar to the WHO analgesic ladder approach). The prescriber is given clear instructions for how to select from first-line nonopioid options, which are given in scheduled doses, for mild or moderate to severe pain. This serves as the foundation of the treatment plan. The prescriber is also instructed to select from opioid analgesic options for moderate and severe pain. The opioid options are provided in dose ranges for PRN administration.

It is important to emphasize again that it makes sense to assign analgesics depending on intensity of pain (e.g., acetaminophen and NSAIDs are appropriate for mild to moderate intensity pain; opioids are added for moderate to severe pain), but it can be dangerous to assign a specific single dose for a specific pain intensity (e.g., 6 mg of IV morphine for pain ratings greater than 6/10). There is no research that shows a certain dose will relieve pain of a certain intensity. The latter practice discourages nurses from considering the other important factors that influence safe opioid dosing (e.g., age, sedation level, respiratory status, co-morbidities).

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**Q: What about the indication for medicating patients for anticipatory pain to keep their pain at a satisfactory level; i.e. giving IV Dilaudid for a pain rating of 3-4 to keep it that way and not wait until it gets to "severe" i.e.: > 6 or so, so essentially you are medicating with a med indicated for severe pain when the pain is not severe at the time of assessment?**

A: I see different approaches for addressing this. I advise hospitals to develop policies/procedures that allow nurses to make assumptions supported by the principles of pain management. For example, you bring up important pain management principles, i.e., that pain is likely to increase with increased activity or a painful procedure and that supplemental analgesia should be provided to prevent pain from getting out of control. Nurses should be expected (and supported by policy/procedure) to assume pain will increase as a result of a painful activity or procedure (anticipatory pain) and administer additional analgesia to prevent this from happening. This logic is similar to a nurse telling a patient to press the PCA button prior to ambulation. Orders can be written for supplemental analgesia or policy and procedure can specify that doses may be administered from existing opioid range orders to cover anticipatory pain. Many hospitals require nurses to document "APP" (assume pain is present or pain will increase) or something similar to support the rationale for their administration of supplemental analgesia. Some more sophisticated EMRs link the APP documentation to the MAR so that the rationale and action are clear.

**Q: In terms of pain management outcomes, are there any reliable and valid measures for use in Children?**

A: I think the broad outcomes are the same for all patient populations. For example, all patients should receive safe and effective pain management that allows them to achieve functional or quality of life goals with relative ease. Just as with adults, the functional goals must be individualized for children. For many children, playing and eating are often identified as functional goals. As with all aspects of pediatric pain, more good clinical research is needed to help us identify the important pain management outcomes in this vulnerable population.

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# Q & A

**Q: IV acetaminophen is very expensive, is there a position paper on this or have you seen problems with using IV Tylenol due to the cost? We are limited to 3 doses.**

A: I want to preface my answer with the disclosure that I am on the Speaker Bureaus for Cadence Pharmaceuticals and for Cumberland Pharmaceuticals.

It is important to control costs in hospitals, more so today than ever before, and every member of the health care team should feel accountable for reducing cost of care. I strongly encourage nurses to be part of what should be a multidisciplinary effort to determine whether or not a drug is "expensive". The effort should include representation and input from front-line nurses, physicians, and pharmacists. All aspects of the cost of care should be considered and a risk/benefit mentality applied. The bottom-line cost of a drug is certainly one consideration, but the cost of poor functional outcomes, higher incidences of postoperative nausea and vomiting, ileus, excessive sedation, and catastrophic respiratory events from the lack of a strong nonopioid analgesic foundation as a result of limited formulary choices or limits on the duration of their use should be considered as well. Further, the decision to transition a patient from IV to oral analgesia (regardless of the analgesic) should be based on patient readiness for oral analgesia, not on an arbitrary timeline.

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## Q & A

**Q: Have you ever experienced treating a Hospice patient who took an NSAID every day prior to exacerbation of his illness who then presents to the unit with a primary decision maker (the wife) who says she doesn't want him to get anything at all. When the nurse absolutely knows the patient is hurting?**

A: Yes, this can happen in all settings, but is particularly distressing when it happens in Hospice care. With family members such as the wife in your case, I focus less on the comfort aspect of pain management and more on function and quality of life. I establish clear functional and quality of life goals with the patient if able (and encourage the wife's input on this). For example, the patient may identify a functional goal as being able to walk unassisted up and down the halls. I would reinforce the importance of achieving the established functional and quality of life goals and that this is possible only if pain is relatively well controlled. If a behavioral tool is used, the wife can be taught how to score it so she can see for herself the impact of the pain.

Discussing pain transmission and analgesia works with some patients who don't want to take pain medication or family members who don't want them to take pain medication. For example, I show a patient-friendly diagram that illustrates nociception and give a very brief overview of how pain is transmitted. Then I point out where the various analgesics work along the pain pathway and that by using more than one analgesic, we can throw up walls against the pain. I would show this wife exactly where and how an NSAID works to provide a wall against pain. If inflammation is a concern with the patient, the benefits of the antiinflammatory characteristic can be emphasized as well. Always link the discussion back to function and quality of life. If the wife is concerned about opioids and other analgesics, I would emphasize that it is usually possible to reduce the dose of other analgesics, particularly the opioid, when we add an NSAID to the plan. Then underscore the benefits of this, i.e., less sedation and better cognition, which can improve interaction with the family, etc.

Stay focused on the purpose of pain control in these cases… address the patient's achievement of functional and quality of life goals with every interaction, particularly with the wife. Some family members respond better when the physician explains the need for analgesia. Ultimately, treat the situation as you would if the wife refused any other necessary treatment for the patient. If any other medication or treatment were deemed to be important to the patient's care and the wife refused, how would that be handled?