

The Use of “As-Needed” Range Orders for Opioid Analgesics in the Management of Pain: A Consensus Statement of the American Society of Pain Management Nurses and the American Pain Society

■ ■ ■ *Debra Drew, MS, ACNS-BC, RN-BC,
Debra Gordon, RN, DNP, FAAN, Lauren Renner, MS, RN, PNP,
Bonnie Morgan, MA, RN, CHPN,
Holly Swensen, MSN, RN-BC, APRN-NP-C,
and Renee Mamworren, PhD, APRN-BC, FAAN*

POSITION STATEMENT

Effective pain management requires careful individual titration of analgesics that is based on a valid and reliable assessment of pain and pain relief. A registered nurse, who is competent in pain assessment and analgesic administration, can safely interpret and implement properly written “as-needed” or “PRN” range orders for analgesic medications. The American Society for Pain Management Nursing (ASPMN) and the American Pain Society (APS) support safe medication practices and the appropriate use of PRN range orders for opioid analgesics in the management of pain.

BACKGROUND

As-needed (PRN) range orders for opioids (e.g., “morphine 2 to 6 mg IV every 2h PRN for pain” or “oxycodone 5-10 mg PO q 4 hrs PRN pain”) are commonly used to provide flexibility in dosing to meet individual needs. A wide variability exists in patients’ responses to analgesics. Some of the patient-specific factors influencing this variability include the individual’s prior opioid exposure (opioid naivety or tolerance), age, renal and liver function, pain severity, and comorbidities. Non-patient-specific factors include drug kinetics and concurrent administration of other sedating drugs. Clear and thoughtful consideration of all these

Address correspondence to Debra
Drew, MS, ACNS-BC, RN-BC,
University of Minnesota Medical
Center, Fairview, Minneapolis.
E-mail: ddrew1@fairview.org

1524-9042/\$36.00
© 2014 by the American Society for
Pain Management Nursing
[http://dx.doi.org/10.1016/
j.pmn.2014.03.001](http://dx.doi.org/10.1016/j.pmn.2014.03.001)

factors is necessary for safe and effective dosing. Review of evidence-based literature supports the need for individual initiation and titration of opioid dosing (Gordon, Pellino, Higgins, Pasero, & Murphy-Ende, 2008).

Range orders enable necessary and safe adjustments in doses based on individual responses to treatment. To promote patient safety and reduce medication errors, it is critical that physicians, nurses, and pharmacists share a common understanding of how to properly write, interpret, and carry out PRN range orders.

ETHICS

Health care professionals are obliged to provide pain management and comfort to all patients under the ethical principles of beneficence and nonmaleficence (Herr, Coyne, McCaffery, Manworren, & Merkel, 2011). Beneficence is defined as taking positive action to help others and the desire to do good; it is a core principle of patient advocacy (Beauchamp & Childress, 2009). The second principle of nonmaleficence is defined as the duty to do no harm.

RECOMMENDATIONS

Prescribers

- Construct orders that contain a dosage range with a fixed time interval.
- Consider patient and drug characteristics including, but not limited to, type and intensity of pain, duration of pain, patient age, past exposure and prior response to analgesics (both pain relief and side effects), comorbidities, end-organ function, concomitant administration of other drugs, and pharmacokinetics of the analgesic to be ordered.
- Prescribing a specific dose, based solely on a unimodal pain intensity rating, is not appropriate or safe. A subjective pain intensity score is just one of several factors that influence a patient's dose. (See previous bullet.)
- Provide a dosage range that is adequate enough to permit appropriate and safe dose titration based on the patient's opioid naivety or tolerance.
- Avoid therapeutic duplications of opioid medications consisting of more than one type of PRN opioid by the same route (e.g., concurrent availability of oral oxycodone and hydrocodone/acetaminophen or intravenous morphine and hydromorphone).

- If PRN opioids from different routes are ordered concurrently, give clear indications for use (e.g., "Use oral route unless patient is NPO or vomiting").
- The dosing interval should be appropriate for the drug and route of administration, taking into account usual absorption and distribution characteristics, time to onset, time to peak effect, and duration of action.
- Evaluate interactions of opioids with other adjuvant medications that may increase deleterious side effects (i.e., sedating anti-nausea medication, sedating muscle relaxers, sleeping medication, or benzodiazepines).
- Ambiguous open-ended orders such as "titrate to comfort" are not acceptable.

Nurses

- Base decisions about the implementation of range orders on a thorough pain assessment and knowledge of the drug to be administered. Assessment should include at minimum pain intensity, temporal (time or pattern) characteristics of the pain, and the patient's previous response to this or other analgesics (e.g., pain relief, side effects, and effect on function).
- Use pain assessment tools that are valid and reliable, individualized to the patient, and used consistently for that individual. In the pediatric population, use an assessment tool that is age and developmentally appropriate for the patient. In the cognitively impaired patient, use appropriate behavioral assessment tools.
- The pharmacokinetics of the opioid should be considered: absorption, bioavailability, protein binding, metabolism, excretion, half-life, accumulation. In the pediatric and geriatric populations, be aware of specific considerations related to the pharmacokinetics of the opioid in those populations (e.g., older patients present with increased fat mass, decreased muscle mass, and decreased body water, which affects drug distribution) (Kaye, Baluch, & Scott, 2010).
- Avoid administration of partial doses at more frequent intervals so as to not underdose a patient with small, frequent, ineffective doses from within a range (i.e., giving oxycodone 10 mg every 2 hours when the order reads oxycodone 10 to 20 mg every 3 hours PRN).
- Avoid making a patient wait a full time interval after giving a partial dose within the allowed range.
- Wait until peak effect of the first dose has been reached before giving a subsequent dose.
- Verify patient's drug allergy status.
- Tell the patient the name of the drug and the dose to be administered.
- Explain to the patient and/or the patient's representative the assessment and monitoring process when taking opioids. Communicate the rationale for frequent

monitoring, including that it might be necessary to awaken the patient to assess the effects of the opioid medication. Instruct the patient and family to report any negative side effects such as excessive sleepiness or breathing difficulties that may be related to medication (<http://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/Survey-and-Cert-Letter-14-15.pdf>, §482.23(c) (4)(Tag A-0409)).

- Evaluate the patient's response to the analgesic dose and dosing interval.
- Ensure complete documentation and communication of patient's response to dose and dosing interval.
- Assist with the development of policies and processes that enhance patient comfort, ensure medication safety, and ensure consistent interpretation of PRN range orders.

Institutions

- Ensure that the prescriber is writing appropriate range orders for analgesics.
- Assess competency of nursing staff to interpret and implement range orders for analgesics.
- Provide ongoing education for safe medication practices for prescribers, nurses, and pharmacists.
- Ensure the implementation of policies and processes that provide safe, consistent, effective dosing of analgesics.

FURTHER RESEARCH

The continued variability in prescribing and interpretation of PRN range orders for opioids requires more scrutiny and better understanding of the barriers to standardization. Does a common interpretation and standard implementation within an institution improve patient outcomes and satisfaction with pain management?

SUMMARY

- The treatment of pain requires individual titration of analgesics by a practitioner competent in pain assessment, analgesic administration, and evaluation of response to treatment.
- PRN range orders for analgesics must be written in accordance with evidence-based clinical practice guidelines.
- Institutions should allow PRN range orders for opioid analgesics to meet the mandate for safe and effective pain management. Processes are required to ensure staff competency in the writing, interpretation, and implementation of these orders. Safety and quality of pain management practices must be monitored.

REFERENCES

Beauchamp, T. L., & Childress, J. F. (2009). *Principles of biomedical ethics*, (6th ed.) New York: Oxford University Press.

Herr, K., Coyne, P. J., McCaffery, M., Manworren, R., & Merkel, S. (2011). Pain assessment in the patient unable to self-report: Position statement with clinical practice recommendations. *Pain Management Nursing*, 12, 230-250.

Gordon, D. B., Pellino, T. A., Higgins, G. A., Pasero, C., & Murphy-Ende, K. (2008). Nurses' opinions on appropriate administration of PRN range opioid analgesic orders for acute pain. *Pain Management Nursing*, 9, 131-140.

Kaye, A. D., Baluch, A., & Scott, J. T. (2010). Pain management in the elderly population: A review. *Ochsner Journal*, 10, 179-187.

SUGGESTED READINGS

American Academy of Pediatrics (2001). The assessment and management of acute pain in infants, children, and adolescents. *Pediatrics*, 108, 793-797.

American Geriatric Society (AGS) (2009). The management of persistent pain in older persons. *The Journal of the American Geriatrics Society*, 57, 1131-1346.

American Pain Society (APS) (2008). *Principles of analgesic use in the treatment of acute pain and cancer pain*, (6th ed.) Glenview, IL: Author.

Davis, M. P., Weissman, D. E., & Arnold, R. M. (2004). Opioid dose titration for severe cancer pain: A systematic evidence based review. *Journal of Palliative Medicine*, 7, 462-468.

Gordon, D. B., Dahl, J., Phillips, P., Frandsen, J., Cowley, C., Foster, R. L., Fine, P. G., Miaskowski, I. C., Fishman, S., & Finley, R. S. (2004). The use of "as-needed" range orders for opioid analgesics in the management of acute pain: A consensus statement of the American Society for Pain Management Nursing and the American Pain Society. *Pain Management Nursing*, 5, 53-58.

Pasero, C. (2007). IV opioid range orders for acute pain management. *American Journal of Nursing*, 107, 52-59.

Pasero, C., & McCaffery, M. (2011). *Pain assessment and pharmacologic management*. St. Louis: Elsevier Mosby.

DIRECTORY OF RESOURCES

The following information was current as of March 21, 2014, and is not an exhaustive listing. Identified resources are from professional organizations, academic institutions, and the health care industry.

Professional Societies

American Academy of Pediatrics (AAP)

American Geriatric Society (AGS)

American Pain Society (APS)

Guidelines and Reports on Management of Pain

American Pain Society (APS). (2004). *Guideline for the management of cancer pain*. Glenview, IL: American Pain Society.

Informational Sites

Joint Commission on Accreditation of Healthcare Organizations. Pain assessment and management standards. Retrieved from <http://www.jcaho.org/accredited+organizations/standards+faqs.htm>; <http://www.jcrinc.com/subscribers/perspectives.asp?durki=3243&site=10&return=2897>.