Promoting Evidence-Based Practice and Dispelling Urban Legends to Achieve Safer Pain Management

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TODAY, MANY NURSES in the perianesthesia setting help patients control their pain by administering pain medications prescribed by orders in which the analgesic medication is dosed according to pain intensity (either number or descriptive word). Many nurses find this practice challenging, particularly when patients are stirred and then report high numeric pain ratings, yet are noted to be somnolent. This practice of tying an analgesic dose to a pain intensity rating is relatively new, beginning early in the 21st century when a movement started to eliminate as needed (prn) range orders.[1,2] One argument made for eliminating prn range orders was to improve patient safety.[1] This argument is fraught with irony, contradiction, and misinformation. It is ironic because despite a search of PubMed, the US National Library of Medicine, Medline Plus, Centers for Disease Control and Prevention, the Institute for Safe Medication Practices (ISMP), ScienceDirect, and Cumulative Index to Nursing and Allied Health Literature, no data could be found regarding any adverse events related to the use of range orders. Paradoxically, the practice of dosing to a particular number or pain intensity has caused significant adverse events.[3] An interesting statement from ISMP in 2002 called for elimination of orders with dosage ranges, but, in the same article, encouraged clinicians to use their professional judgment to assess patients for objective criteria and safety factors as opposed to only linking medication dosages to the self-assessment of pain by the patient.[4] Considering the misinformation and confusion, it is important to clarify the terms used.

Clarification of Terms

Range orders are orders in which the dose interval varies over a prescribed range, depending on the situation or the individual's status.[5] An example of a range order is hydromorphone 0.5 to 1 mg intravenously (IV) every 4 hours prn for pain or oxycodone 5 to 20 mg every 4 hours prn for pain. Implementing prn range orders is important for nurses to administer the most appropriate dose of medication within the prescribed order based on a critical assessment of the patient's condition.[6]

Although the concept of prn range orders is very old and has long been part of usual clinical nursing practice,[7] the actual term is relatively new. The first instance in which the term, *range order*, was used in health care literature was in 1999. The term was used in a column written on how to prepare for future surveys by the then Joint Commission on Accreditation of Hospitals (JCAHO).[2] In the column, the author recommended avoidance of range orders. It is important to note that this was not an official column written by JCAHO, but rather by an individual who did surveys for JCAHO and worked as a resource for the Standards Interpretation Group.[8]

Dosing to numbers is the practice in which medication, such as an opioid, is prescribed at a specific dose based solely on the pain intensity score (0 to 10 on the numeric pain scale) as reported by the patient.[9] Typically, such orders are written as hydromorphone 0.5 mg IV pain for a pain score of 2 to 4; 1 mg for pain ranging from 5 to 7; and 2 mg for pain ranging from 8 to 10. These orders require the nurse to administer a specified dose of medication dependent only on the subjective pain

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intensity as reported by the patient. Because pain is whatever the patient says it is, the nurse must administer the dose of medication prescribed for the specific number reported. If based on nurse assessment of the patient, the nurse believes the dose is not safe, the appropriate recourse is to contact the prescriber. The alternative to this is when a nurse *works around* this by documenting a number that is different from what the patient reported to keep the patient safe.[10] Although the intention may be laudable in wanting to insure patient safety, this creates a situation in which the nurse has falsified documentation in a medical record and could subsequently face licensure and legal repercussions.

Dosing to intensity is similar to dosing to numbers; however, rather than using numbers, word descriptors of mild, moderate, and severe are used.[3] With words, medication orders may be oxycodone 5 mg for moderate pain and 10 mg for severe pain. A variation of this is prescribing a nonopioid such as acetaminophen prn for mild pain with an oral opioid for moderate pain and an IV opioid for severe pain. This practice is potentially riskier than dosing to numbers because it is even more ambiguous to interpret what is mild versus moderate pain and moderate versus severe pain. In addition, many patients have learned to report pain intensity as a number that is required in most medical documentation. It can be confusing for patients to need to discriminate whether a pain intensity of 4/10 is mild or moderate pain and if a 7/10 is moderate or severe. Such interpretation is very individualized, constituting a second level of subjectivity and ambiguity. The same requirements for implementing the prescribed order are true with intensity as described with numbers, and the same danger of workarounds is also true.

Therapeutic duplication of orders occurs when two or more medications, which have an equal generic composition, or are of the same category, are prescribed when more than one is not necessary.[11-13] This can occur when a new medication is prescribed without discontinuing a previous one that was intended for the same purpose.[14] Because it requires deciding which medication should be used, there is a prescribing component that is not within the scope of practice for nurses. This is different from assessing a patient to implement an appropriate dose of a prescribed medication.

Correcting the Misconceptions and Using Evidence-Based Practice for Patient Safety

The Joint Commission (TJC) clearly stated that there are no Joint Commission standards that prohibit the use of range orders as long as such orders are permitted by the organization's medication management policy.[5] TJC does require organizations to incorporate laws, regulations, and recommendations to determine and then educate clinicians how range orders are prescribed, entered into medical records, and interpreted.[5] Historically, TJC has required that the organization has a policy identifying the types of medication orders acceptable and that all orders be reviewed by pharmacy for therapeutic duplication.[6] Physicians from TJC clarified that pain should be assessed in a comprehensive holistic manner, including pain intensity as part of the comprehensive assessment to provide compassionate pain management, which does not necessarily correlate with any numeric score.[15]

Judgments have been made that using range orders constitute nursing practicing outside their scope of practice; however, no state board in the United States has supported that allegation.[3] Many state boards of nursing (BONs) have issued statements supporting range orders. Because each state BON may have somewhat different statements, directions, or provisions, it is important to be aware of the requirements in the state where you are practicing.

ISMP included as a recommendation for standard order sets that range orders need to include objective measures for the right dose to be determined[16] and that statement was reiterated in 2015. Because pain intensity and the number or descriptor assigned to it are highly subjective, pain intensity is not appropriate as the sole criteria for deciding an appropriate dose of pain medication.[3]

Another paradox is that in some institutions, range orders are not used for patients while hospitalized; however, nurses are often responsible for discharge education, which includes teaching patients or family members how to administer analgesic medications that are often prescribed with