The Law of Unintended Consequences When Pain Management Leads to Medication Errors

Steven Hanks, MD, MMM, FACP

Introduction

Pain has been described as “the fifth vital sign” since the late 1990s. Unlike the traditional vital signs of temperature, pulse, blood pressure, and respiratory rate, pain is not a sign per se but rather a symptom; as such, it is entirely subjective. When clinicians make treatment decisions for patients, objective signs can be reliably monitored, they are typically reproducible, and the effects of interventions on such objective measures can be precisely observed. However, when the same approach is applied to an entirely subjective symptom like pain, hazards are bound to result if there is overreliance on the subjective measurement.

Pain is most commonly measured on a 10-point Likert scale, ranging from zero to 10, with 10 being the worst pain the patient can conceive and zero being pain-free. Yet we have all seen patients who seem to be in little distress when they rate their pain as a 10, whereas others with obvious painful conditions seem to be more judicious in their ratings. Even obviously somnolent patients have been observed to call out a 10 through an oversedated haze.

Actually, a subjective measurement through use of a Likert scale has inherent limitations. There is no simple way to deduce whether an intervention to reduce pain has “good” or “bad” effects. The patient’s subjective rating can assist a clinician only in determining what the effect has been. Many other variables must be considered, such as other sympathomimetic signs and the level of sedation or consciousness, for a complete assessment of pain and response to interventions to alleviate it. If clinicians rely too much on only the subjective numbers, the risk of overdosing or underdosing is increased.

Undertreatment of Pain Leads The Joint Commission to Act

Recognition of the undertreatment of pain in the inpatient setting dates to the early 1970s, yet it was not until the mid-1990s that the breadth and depth of this problem drew the interest of a larger audience and that treatment guidelines and policies began to attract larger attention. Not long after that, The Joint Commission (then known as the Joint Commission on Accreditation of Healthcare Organizations) accelerated the response to the problem by releasing new pain-management standards for hospitals. These standards, which became effective in 2001, require hospitals to:

- recognize the right of individuals to receive appropriate assessment and management of pain.
- assess the existence of, and (evaluate) the nature and intensity of, pain in all patients, residents, or clients.
- establish policies and procedures that would support the appropriate prescribing or ordering of effective pain medications.
- educate patients, residents, clients, and their families about effective pain management.
- address the patient’s needs for managing symptoms in the discharge-planning process.
- incorporate pain management into the organization’s performance measurement and improvement program.

This enhanced focus of The Joint Commission has been reflected in perceptions of the public. Extensive education campaigns have been conducted to inform people that pain reduction is a “right” to expect from health care providers. Indeed, in one case, a well-meaning clinician was found liable for elder abuse as a result of cautious dosing of pain medication in an 85-year-old patient who had sustained a near-respiratory arrest in the emergency department following administration of morphine. During the subsequent admission, the patient’s pain was consistently rated between 7 and 10 despite treatment with multiple opioids through several routes. The fact that the patient’s pain score had not diminished, however, was enough for a jury to levy a $1.5 million judgment against the attending physician for criminal elder abuse. This case illustrates the need for clinicians to actively manage the expectations of patients and families when it comes to pain reduction. If pain is not adroitly handled, clinicians may find themselves between a rock and a hard place.

Opioid Use Is on the Rise

Coinciding with this collective recognition of inadequately treated pain, the prevalence of opioid prescribing has grown in the U.S. every year since the mid-1990s. Table 1 shows the dramatic increase in the number of grams distributed per 100,000 persons for the eight most commonly prescribed opioids in the U.S. between 1997 and 2005, with a near-doubling in the total distribution. Over this time period, only codeine and meperidine (Demerol, Sanofi-Synthelabo) distribution fell, with stunning increases in the distribution of the six others (oxycodone, hydromorphone, hydrocodone, methadone, morphine, and fentanyl).

Disclosure: The author has no financial or commercial relationships to disclose in regard to this article.
The drop-off in the usage of meperidine probably represents better recognition of this drug’s neuropsychiatric side effects. These adverse effects are mediated by a toxic metabolite (normeperidine), which tends to accumulate because of its relatively long half-life, particularly in patients with impaired renal function.\(^\text{11}\) As the only active metabolite of meperidine, normeperidine has excitatory central nervous system effects that can lead to anxiety, hyperreflexia, myoclonus, seizures, and mood changes.\(^\text{12}\) Because of these concerns, meperidine has been supplanted by hydromorphone as the first-line parenteral opioid alternative to morphine in some institutions.

Consistent with the trend of increasing opioid use, a study by Fletcher et al. demonstrated that opioid-prescribing rates for patients presenting with pain in emergency departments have increased markedly.\(^\text{13}\) Documented increases in average consumption of opioids have also been reported in the perioperative setting in the time period before and after The Joint Commission’s standards were implemented (see Table 1).\(^\text{14}\)

Unfortunately, a significant amount of this increase in the U.S. reflects the growing problem of illicit abuse of prescription opioids. According to a February 2007 study from the Office of National Drug Control Policy,\(^\text{15}\) prescribed medications, most frequently Purdue’s OxyContin (oxycodone) and Abbott’s Vicodin (hydrocodone/acetaminophen), are now the second most common drugs of abuse among teenagers, trailing only marijuana. At our institution, there has been a growing recognition, as well as discomfort, that our hospital’s formulary is the source of a considerable amount of this type of drug abuse, mainly via diversion of drugs obtained through visits to our emergency department. It is also known that teenagers are obtaining opioid medications from their parents’ prescription bottles and online via the Internet.\(^\text{16}\)

### Opioid-Related Adverse Consequences Are Also Increasing

In addition to the growing number of problems associated with drug diversion and addiction, there is concern that this increased focus on pain and the attendant increased opioid use have been accompanied by a greater number of adverse drug events (ADEs) in hospitals. Vila et al. reported more than a two-fold increase in the incidence of adverse drug reactions (ADRs) from opioid oversedation, from 11 per 100,000 inpatient hospital days before implementation of The Joint Commission’s pain standards to 24.5 per 100,000 afterward.\(^\text{17}\) During that period, pain satisfaction scores increased by a modest but statistically significant 5.7%.\(^\text{17}\)

The same investigators noted a similar pattern over the same time period in an analysis of the MedMarx database, which tracks hospital medication errors nationwide.\(^\text{17}\) Their analysis was unlikely to be confounded by secular trends in reporting frequency, because the rates of ADRs reported over the comparable time period for other dangerous drugs such as insulin and heparin were unchanged.\(^\text{17}\) In 2002, the Institute for Safe Medication Practices (ISMP) published a paper in response to an increased number of reports it had received concerning opioid-related respiratory depression and deaths.\(^\text{18}\)

In an analysis of ADEs reported to the Adverse Event Reporting System of the Food and Drug Administration (FDA), Moore et al. found a 2.6-fold increase in serious ADEs and a comparable 2.7-fold increase in fatal ADEs between 1998 and 2005.\(^\text{19}\) Four of the six drugs (oxycodone, fentanyl, morphine, and methadone) most commonly associated with fatal ADEs were opioids.\(^\text{19}\)

An observational study of 53 patients at the University of Connecticut demonstrated that patients had reached dangerous levels of sedation in the first 24 hours postoperatively, particularly in those who were using patient-controlled analgesia (PCA) devices.\(^\text{20}\) By contrast, among 1,082 postoperative patients in a postanesthesia care unit, Frasco et al. found no association between their observed increase in opioid use, expressed in morphine equivalents, after The Joint Commission’s pain standards were implemented, in terms of length of stay, naloxone use, or postoperative nausea and vomiting.\(^\text{14}\)

Whether or not opioid-related ADEs have increased in real numbers, they have been reported to be not only common but also costly.\(^\text{21–23}\) In the postoperative setting, problems associated with opioids have been the most common sequela in the early hours following surgery.\(^\text{20,24}\)

### Lessons Learned from the Recent Experience Of a Community Teaching Hospital

In our hospital, we have experienced a number of opioid-related ADEs that have heightened our concern that the intense “focus on the pain score number,” engendered by Joint Commission standards, might be having an unintended negative effect.\(^\text{25}\) Several of these ADEs have resulted in mandatory reports to our state Department of Health because of the severity of the outcomes. In reviewing these events, we have discovered several common themes.

First, we found that opioid prescribing trends varied widely among individual physicians and also among specialties. This variance is likely to be found in any clinical setting where there has not been a concerted effort to standardize the approach to pharmacological pain management. Because variance in clinical practice often contributes to a risk of errors, standardization of ordering practices (e.g., as in Figure 1) can

### Table 1 Distribution of Opioids in Grams per 100,000 U.S. Population

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Codeine</td>
<td>9,396</td>
<td>6,826</td>
<td>0.7</td>
<td>−27.4%</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>1,668</td>
<td>11,027</td>
<td>6.6</td>
<td>561.1%</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>90</td>
<td>281</td>
<td>3.1</td>
<td>212.2%</td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>3,249</td>
<td>9,290</td>
<td>2.9</td>
<td>185.9%</td>
</tr>
<tr>
<td>Meperidine</td>
<td>2,161</td>
<td>1,538</td>
<td>0.7</td>
<td>−28.8%</td>
</tr>
<tr>
<td>Methadone</td>
<td>194</td>
<td>1,931</td>
<td>10.0</td>
<td>895.4%</td>
</tr>
<tr>
<td>Morphine</td>
<td>2,220</td>
<td>5,420</td>
<td>2.4</td>
<td>144.1%</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>28</td>
<td>140</td>
<td>5.0</td>
<td>400.0%</td>
</tr>
<tr>
<td>Total</td>
<td>19,006</td>
<td>36,453</td>
<td>1.9</td>
<td>91.8%</td>
</tr>
</tbody>
</table>

From Automation of Reports and Consolidated Orders System (ARCOS). Available at: www.deadiversion.usdoj.gov/arcos/index.html.\(^\text{10}\)
Acetaminophen or Ibuprofen may be ordered either PRN for mild pain or ATC to maintain analgesia

**Acetaminophen (Tylenol®)**

- **Acetaminophen** _______mg (325mg or 650 mg) PO q 4 hours _______(PRN or ATC) pain
- **Caution with Acetaminophen:**
  - Do not exceed more than 650 mg of Acetaminophen or APAP containing opioid in 4 hours
  - Omit or limit Acetaminophen to 2 grams/day if patient has hepatic insufficiency

**NSAID**

- Omit in patients with renal insufficiency/failure, PUD/UGI bleed, anticoagulation/coagulopathy, thrombocytopenia, severe asthma

**Ibuprofen** _______mg (400 mg, 600 mg, or 800 mg) PO q _______hours (4, 6 or 8 hrs)______ (PRN or ATC) pain
- Maximum daily dose 2400 mg

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**FOR MILD PAIN (Pain score 1-3)**

Acetaminophen or Ibuprofen may be ordered either PRN for mild pain or ATC to maintain analgesia

- Acetaminophen (Tylenol®) _______mg (325mg or 650 mg) PO q 4 hours _______ (PRN or ATC) pain
- Caution with Acetaminophen:
  - Do not exceed more than 650 mg of Acetaminophen or APAP containing opioid in 4 hours
- Omit or limit Acetaminophen to 2 grams/day if patient has hepatic insufficiency

**NSAID:**

- Omit in patients with renal insufficiency/failure, PUD/UGI bleed, anticoagulation/coagulopathy, thrombocytopenia, severe asthma

- Ibuprofen _______ mg (400 mg, 600 mg, or 800 mg) PO q _______ hours (4, 6 or 8 hrs)______ (PRN or ATC) pain
- Maximum daily dose 2400 mg

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**FOR MODERATE (Pain score 4-7) or SEVERE PAIN (Pain score 8-10)**

Select ONE box from table below:

<table>
<thead>
<tr>
<th>Patient Category and Medication</th>
<th>Moderate Pain</th>
<th>Severe Pain</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Normal Renal / Hepatic function</strong> (Choose Percocet® or Vicodin®, not both)</td>
<td>1 tab PO q 4 hours PRN</td>
<td>2 tabs PO q 4 hours PRN</td>
</tr>
<tr>
<td>Oxycodeone/APAP 5mg/325mg (Percocet 5/325®)</td>
<td>1 tab PO q 4 hours PRN</td>
<td>2 tabs PO q 6 hours PRN</td>
</tr>
<tr>
<td>Hydrocodone/APAP 5mg/500mg (Vicodin 5/500®)</td>
<td>1 tab PO q 4 hours PRN</td>
<td>2 tabs PO q 6 hours PRN</td>
</tr>
<tr>
<td><strong>Hepatic Insufficiency</strong> (or history of ethanol abuse) or Acetaminophen-free Option</td>
<td>1 tab PO q 3 hours PRN</td>
<td>2 tabs PO q 3 hours PRN</td>
</tr>
<tr>
<td>Oxycodeone 5 mg</td>
<td>1 tab PO q 3 hours PRN</td>
<td>2 tabs PO q 3 hours PRN</td>
</tr>
<tr>
<td><strong>Renal Insufficiency / Failure</strong></td>
<td>1 tab PO q 3 hours PRN</td>
<td>2 tabs PO q 3 hours PRN</td>
</tr>
<tr>
<td>Hydromorphone (Dilaudid R®) 2 mg</td>
<td>1 tab PO q 3 hours PRN</td>
<td>2 tabs PO q 3 hours PRN</td>
</tr>
<tr>
<td><strong>Elixir Formula</strong> (Choose Oxycodeone or Morphine, not both)**</td>
<td>5 mg (5 ml) PO or feeding tube q 3 hours PRN</td>
<td>10 mg (10 ml) PO or feeding tube q 3 hours PRN</td>
</tr>
<tr>
<td>Oxycodeone 5mg/5ml Elixir</td>
<td>5 mg (5 ml) PO or feeding tube q 3 hours PRN</td>
<td>10 mg (10 ml) PO or feeding tube q 3 hours PRN</td>
</tr>
<tr>
<td>Morphine Sulfate 10mg/5ml Elixir</td>
<td>10 mg (5 ml) PO or feeding tube q 3 hours PRN</td>
<td>20 mg (10 ml) PO or feeding tube q 3 hours PRN</td>
</tr>
</tbody>
</table>

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**MD/PA/APRN ORDERS:**

Select the following orders by checking box:

- Senokot-S 2 tabs PO q HS (Do Not order in pt with diarrhea, ileostomy or fistula)
- Metoclopramide (Reglan®) 10 mg IV q 6 hrs PRN nausea
- Ondansetron (Zofran®) 4 mg IV q 6 hrs PRN refractory nausea

For Acute Severe Respiratory Depression, call RRT/Dr. Quick

- Naloxone (Narcan®) IVP 0.4 mg diluted in 10 ml NS slow IVP x one PRN acute severe respiratory depression

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**NURSE INSTRUCTIONS:**

DISCONTINUE IV OPIOIDS when oral opioids begun.

CALL MD/PA/APRN IF:
1. Patient has altered level of alertness,
   DO NOT ADMINISTER OPIOID:
   “C” or “D” (“C”=Confused/impaired or arousable only with stimulation, “D”=Disoriented)
2. Patient has a respiratory rate less than 8/min.
3. Consider Rapid Response or Dr. Quick for numbers 1 and 2 above.

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**FOR MODERATE (Pain score 4-7) or SEVERE PAIN (Pain score 8-10)**

Select ONE box from table below:

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**Summary:**

- Pain management focusing on mild, moderate, and severe pain.
- Acetaminophen and Ibuprofen are primary options for mild pain.
- Opioids like Oxycodone and Hydrocodone are used for moderate to severe pain.
- Considerations for hepatic and renal insufficiency.
- Medication errors prevention strategies.

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**Conclusion:**

This pain management protocol emphasizes individualized treatment based on pain score and patient condition, ensuring appropriate medication selection and monitoring for safety.

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**Figures:**

- Figure 1: Example of a pain-order set developed with input from University of Connecticut faculty at the Hospital of Central Connecticut, New Britain.

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**References:**

## Pain Management and Medication Errors

### PARENTERAL IV OPIOID: For patients who are unable to take oral opioids.

**NURSING INSTRUCTIONS:**
Administration: Use the Checked Table and Opioid

- **Initial Test Dose:** FIRST IV opioid dose: give the reduced dose per pain score. Assess patient at 15-30 minutes and if unsatisfactory relief (pain score ≥ 4), may repeat initial reduced dose x one.
- **Standard dose:** If the last dose of IV opioid was given 2 or more hours ago, administer standard dose.
- **Reduced dose:** If the last dose of IV opioid (standard or reduced dose) was given ½ - 2 hrs ago, administer reduced dose for pain score ≥ 4. Patient is NOT eligible for a standard dose until at least 2 hours have elapsed since last dose.
- Utilize all assessment parameters to verify patient’s reported pain score truly reflects the severity level: notify MD/PA for specific order if discrepancy exits.
- **MAXIMUM 3 doses total (either standard or reduced)** in 4 hours.
- **DISCONTINUE IV OPIOID when ORAL begun**

CALL MD/PA/APRN IF:
1. Patient has received the maximum of 3 doses in any 4 hour period without satisfactory relief.
2. Patient has altered level of alertness,
3. Patient has a respiratory rate less than 8/min.
4. Consider Rapid Response or Dr. Quick for # 2 or 3.

### MD/PA/APRN INSTRUCTIONS & ORDERS:
1. **Patient Category** (Select One and Check Table below):
   - **Category 1:** Elderly / Frail, Opioid Naive Adult, or Renal Impairment
   - **Category 2:** Standard Adult, Major Surgery / Injury
   - **Category 3:** Opioid Tolerant Adult or if Category 2 ineffective

*Warning: If pt is on any medication which is known to produce CNS depression, (i.e. benzodiazepenes, tricyclic antidepressants, phenothiazines: Phenergan® or Compazine®): use lower Category

2. **Opioid** (Select One and Check Table below):
   - Morphine Sulfate: Patients with normal renal function
   - Hydromorphone (Dilaudid®): Indicated in patients with renal insufficiency/failure or intolerance to Morphine

If patient consistently requires 3 doses in any 4 hour period

**Pain Management and Medication Errors**

| CATEGORY 1: ELDerkY/FRAIL, OPIOID NAIVE ADuLT, or Renal Impairment (Hydromorphone for Renal Impairment) |
|-----------------|-----------------|-----------------|
| **PAIN SCORE** | **MORPHINE** | **SULFATE** | **HYDROMORPHONE** |
| **standard dose (2 or more hrs since last dose)** | **reduced dose (½ - 2 hrs since last dose)** | **standard dose (2 or more hrs since last dose)** | **reduced dose (½ - 2 hrs since last dose)** |
| 1– 3 mild | 1 mg IV | 0.5 mg IV | 0.2 mg IV | 0.1 mg IV |
| 4 – 7 moderate | 2 mg IV | 1 mg IV | 0.4 mg IV | 0.2 mg IV |
| 8 – 10 severe | 4 mg IV | 2 mg IV | 0.6 mg IV | 0.3 mg IV |

### CATEGORY 2: STANDARD ADULT, Major Surgery / Injury

<table>
<thead>
<tr>
<th>PAIN SCORE</th>
<th>MORPHINE</th>
<th>SULFATE</th>
<th>HYDROMORPHONE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>standard dose (2 or more hrs since last dose)</strong></td>
<td><strong>reduced dose (½ - 2 hrs since last dose)</strong></td>
<td><strong>standard dose (2 or more hrs since last dose)</strong></td>
<td><strong>reduced dose (½ - 2 hrs since last dose)</strong></td>
</tr>
<tr>
<td>1– 3 mild</td>
<td>2 mg IV</td>
<td>1 mg IV</td>
<td>0.4 mg IV</td>
</tr>
<tr>
<td>4 – 7 moderate</td>
<td>5 mg IV</td>
<td>2 mg IV</td>
<td>0.8 mg IV</td>
</tr>
<tr>
<td>8 – 10 severe</td>
<td>8 mg IV</td>
<td>4 mg IV</td>
<td>1.2 mg IV</td>
</tr>
</tbody>
</table>

### CATEGORY 3: OPIOID TOLERANT ADULT or Category 2 ineffective (evaluate patient)

<table>
<thead>
<tr>
<th>PAIN SCORE</th>
<th>MORPHINE</th>
<th>SULFATE</th>
<th>HYDROMORPHONE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>standard dose (2 or more hrs since last dose)</strong></td>
<td><strong>reduced dose (½ - 2 hrs since last dose)</strong></td>
<td><strong>standard dose (2 or more hrs since last dose)</strong></td>
<td><strong>reduced dose (½ - 2 hrs since last dose)</strong></td>
</tr>
<tr>
<td>1– 3 mild</td>
<td>4 mg IV</td>
<td>2 mg IV</td>
<td>0.6 mg IV</td>
</tr>
<tr>
<td>4 – 7 moderate</td>
<td>8 mg IV</td>
<td>4 mg IV</td>
<td>1.2 mg IV</td>
</tr>
<tr>
<td>8 – 10 severe</td>
<td>12 mg IV</td>
<td>6 mg IV</td>
<td>2 mg IV</td>
</tr>
</tbody>
</table>

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ADULT ACUTE PAIN

HCC Form # 1595 Rev. 6/08  Signature / Print Name  Date / Time  Parenteral IV Medication Orders
be one route an organization may take toward reducing risk for opioid-related ADEs.

Second, standard monitoring is insufficient for the reliable detection of respiratory depression from opioids. Oximetry alone is limited in its ability to establish the presence of hypoventilation. Although supplemental oxygen is quite sensitive for detecting hypoventilation in patients who are breathing room air,25,26 its use, which is nearly uniform in high-risk patients, can impair the ability to detect apnea via continuous pulse oximetry monitoring.27

Third, the potency of hydromorphone is generally underappreciated and is relatively new to many physicians. Since our hospital’s renewed interest in this agent, we learned of an internist who prescribed intravenous (IV) hydromorphone 4 mg for an opioid-naive patient who had complained of a migraine. Fortunately, an astute nurse questioned the order, and the pharmacist discussed the problem with the physician, who had thought that hydromorphone was relatively equivalent to morphine on a milligram-for-milligram basis. On the contrary, hydromorphone is roughly eight to 10 times more potent than morphine. Even with appropriate awareness of dosing equivalency, however, problems can still occur. Patanwala warned that opioid conversion tables do not always accurately reflect dose ratios that are firmly evidence-based, particularly when these medications are used in the acute-care setting.28

Fourth, patients can develop respiratory depression and respiratory compromise relatively quickly, often without first manifesting signs of difficulty related to opioids. In a study of opioid ADEs in an inpatient setting, Vila et al. found that in 29 events resulting in the need for naloxone, intubation, or both, the respiratory rate averaged 18 breaths/minute just before the event.18 In fact, in only three of the 29 cases was the respiratory rate noted to be low.18 Relying on the respiratory rate and pulse oximetry alone, particularly in patients receiving supplemental oxygen, is fraught with hazards, because the enhanced oxygen concentration can mask desaturations that might signal hypoventilation; in addition, measurements of respiratory rate often do not take into account the adequacy of the ventilations.29

Fifth, clinical staff personnel should be aware that the numerical pain ratings are only one dimension of the patient’s subjective experience of pain. Full assessments must consider the multiple components of the experience of pain, including the physiological,29 behavioral,30 sociocultural,31 and cognitive32 components.

Recommendations for Managing Pain Safely

Having recognized the growing risk of ADEs related to the pain-management process, the ISMP issued the following recommendations:30

1. It should be determined how well organizations are managing pain.
2. Staff personnel should seek to uncover episodes of oversedation by monitoring ADE reports, investigating all uses of reversal agents, and conducting chart reviews.
3. The number of various types of analgesics prescribed should be reduced.
4. Caution must be used when combinations of medications with sedative properties are prescribed.
5. Institutions should actively involve pharmacists in pain-management programs.

Our experience argues for adding the following recommendations to the list:

1. All staff members should be instructed about the dosing equivalency of the various opiates on formularies.
2. The goal of pain management should be redefined. The goal is not a subjective pain score of zero; rather, it is the best possible subjective experience of pain that can be safely achieved with a multimodality approach.
3. Pain orders should be standardized. Figure 1 presents an example of the pain-management order set we developed in response to recent events at our hospital.

4. It might be prudent to acquire capnography for monitoring, particularly for high-risk patients (e.g., those with a history of sleep apnea, upper-airway disorders, or extremes of age and weight). Capnography can be more sensitive than closely monitored routine anesthesia care in detecting hypoventilation.33 Our hospital has purchased new monitors with noninvasive capnographic capability for high-risk areas, as recommended by our Departments of Anesthesia and Critical Care.

Conclusion

The Joint Commission has the right idea. Patients have the right to optimal pain relief, and we need to continue to work toward that end—but without sacrificing safety. Organizations should assess their practice of pain assessment and pharmacological pain control with the goals of (1) ensuring that all clinicians are appropriately educated about the need to assess pain on a multifactorial basis and not to simple rely on the patient’s subjective rating, and (2) standardizing health care delivery in order to reduce unnecessary variance that can contribute to error and risk.

References


