A comprehensive approach to pain management

The writer C. S. Lewis called it "God's megaphone." Most physicians, however, view pain as a major cause of human suffering, a condition that threatens patients' psychological and social well-being long after its value as a diagnostic sign has passed.

Pain and suffering are even more closely linked when pain is overwhelming, when the etiology of the pain is unknown, when pain signals a grave or terminal illness, or when pain is apparently endless.

As pain management becomes more sophisticated, hospitalists need a comprehensive and systematic approach to pain care. Patients and their families expect empathic, effective management of pain. Yet research has shown that pain is often inadequately treated because physicians and staff fail to routinely assess pain and provide adequate relief.

This *ACP Guide for Hospitalists* primer is designed to educate physicians on how to screen, evaluate, and treat pain.

Assessing pain

Because pain is subjective, physicians need to listen to and believe patients' reports of pain. Screen all new patients for evidence of pain at the initial evaluation.

When assessing chronic pain, remember that autonomic responses—tachycardia, hypertension, tachypnea, diaphoresis, and facial grimacing—are not reliable pain indicators. They may be entirely absent despite the presence of pain, particularly chronic pain.

A thorough history and physical examination are the cornerstones of accurate pain evaluation. Determine the site of pain, its onset, temporal pattern, exacerbating and relieving factors, and associated symptoms. A good history can also tell you how much the pain may be interfering with patients' daily activities or affecting their psychological state.

There are a number of tools—body maps or 0-10 numeric scales—you can use to help patients report pain. Tailor assessment tools to patients' culture, preferences, and literacy level. Also evaluate family perceptions of pain because many families ascribe spiritual or cultural significance to a loved one's suffering.

Other key parameters in evaluation include patients' psychosocial factors and response to prior and current treatments. Pay particular attention to the impact of treatment on patients' ability to function and to their expectations for relief.

The physical exam should always include close attention to the painful and related areas. Look for signs such as hyperalgesia, alodynia, and neurologic dysfunction. You may also need laboratory, X-ray, CT, and other imaging studies for proper evaluation.

Guiding principles of pain management

1. Assess all patients for pain.
2. Recognize groups at high risk for under-reporting pain.
3. Individualize the route, dosage, and frequency of analgesic administration.
4. Administer analgesics regularly (not "PRN") if pain is present most of the day.
5. Become familiar with the dose and half lives of several strong opioids. Know about both immediate release and sustained release formulations, and make these the main tools in your pain management toolbox.
6. Frequently re-evaluate patients, particularly when beginning or changing analgesic regimens.
7. When changing opioid medications, use the "Dosing and conversion chart for opioid analgesics" on page 7 to first estimate the new dose and then modify that dose based on the clinical situation.
8. Anticipate side effects such as opioid constipation.
9. Seek, recognize, and treat less common side effects as they occur.
10. If possible, avoid meperidine and mixed agonist-antagonist analgesics.
11. Watch for the development of tolerance and treat accordingly.
12. Be aware of the development of physical dependence and prevent withdrawal.
13. Avoid labeling a patient as "addicted" if simply tolerant or physically dependent.
14. Be alert to the patient's psychological state.

Souce: Modified from "Principles of Analgesic Use in the Treatment of Acute Pain and Cancer Pain." American Pain Society, 1999

Managing pain

The World Health Organization (WHO) has published a simple and validated three-step approach to pain management. (See "WHO analgesic ladder," opposite page). At any step of the ladder, adjuvant therapy may be useful.

Treating mild pain

Mild pain ranks as 1-3 on a 0-10 pain intensity scale. Mild pain can usually be adequately treated with aspirin, acetaminophen, or nonsteroidal anti-inflammatory drugs (NSAIDs).

These drugs differ from opioids in two key ways: Analgesia has a ceiling effect, so greater amounts of the drug are not associated with greater pain control, and they do not produce tolerance or physical dependence. Unless contraindicated, manage all levels of pain with a drug from this category, even if pain is moderate to severe and requires adding an opioid. Some drugs in this category are available in parenteral and rectal forms.

Aspirin is a useful nonopioid analgesic with a predictable side-effect profile. The two most common side effects are gastric disturbances—such as nausea, dyspepsia, abdominal pain, and ulceration—and bleeding diathesis.

Aspirin hypersensitivity does occur and may present with rhinitis and asthma or with urticaria, wheals, angioneurotic edema, and hypotension. Patients who have sensitivity to aspirin may also be sensitive to NSAIDs, and aspirin should not be used in children because of the possible association with Reye's syndrome.

Acetaminophen is similar to aspirin in its analgesic effect but lacks the gastric and bleeding side effects. However, overdosage with acetaminophen can cause hepatic necrosis in normal individuals in doses of more than 4 grams per day. Lesser dosages, but well within the therapeutic range, can cause hepatic necrosis in high-risk individuals, who include heavy alcohol drinkers, patients with liver disease, and fasting patients.

The analgesic efficacy of **NSAIDs** ranges from equivalent to somewhat superior to aspirin. Like aspirin, NSAIDs inhibit platelet aggregation—but unlike aspirin, the effect is reversible and lasts only as long as there is an effective serum drug concentration.

NSAIDs are also associated with gastrointestinal disturbances that range from nausea and pain to gastric bleeding and perforation.

Meta-analyses have suggested that low-dose ibuprofen (less than 1.6 gram per day) may have the lowest gastric risk. Aspirin, indomethacin, naproxen, and sulindac have an intermediate risk; tolmetin, ketoprofen, and piroxicam have the highest risk. High-dose ibuprofen is associated with an intermediate risk of gastric complications.

Pain management experts recommend using the lowest-risk drugs at the lowest possible dose needed to control pain. Prophylactic use of proton-pump inhibitors, histamine-2 blockers, and misoprostol has been recommended for individuals at high risk for gastric complications.

Selective cox-2 inhibitors have been used to treat chronic pain in individuals at high risk. The selective inhibition of the enzyme cyclooxygenase 2 produces the desired therapeutic effect while minimizing adverse effects on the stomach and kidneys. This advantage, however, becomes less prominent with long-term cox-2 use.

NSAIDs are also associated with liver damage and are not recommended for patients with liver disease. Monitor transaminase levels of patients taking chronic NSAIDs.

Treating moderate and severe pain

Moderate pain ranks between 4-6 on the 0-10 pain intensity scale.

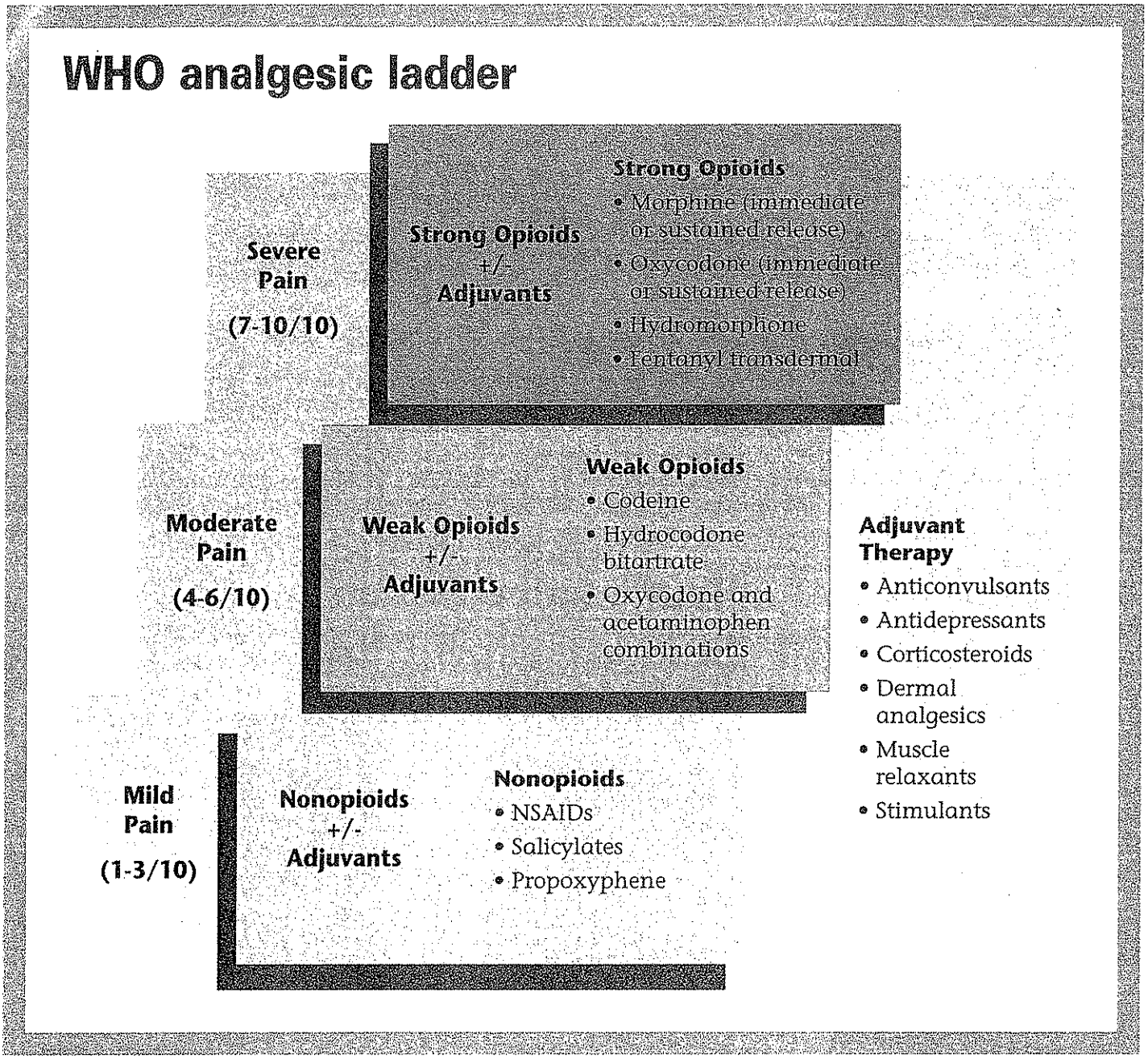
When treating moderate pain, add low-dose opioid drugs to aspirin, acetaminophen, or NSAID regimens. For patient convenience, many opioids are marketed as combination products containing one of these agents.

The daily cumulative acetaminophen dose will limit opioid dosing in combination medication. For this reason, separate dosing of the opioid and acetaminophen is preferred, particularly when titrating the opioid dose.

Patients taking chronic opioids have incomplete cross-tolerance to side effects. You must take this into account when changing from one opioid to another by reducing the dose of the new opioid and providing careful follow-up. (See the section on "Equianalgesic dosing" on page 6 and the "Dosing and conversion chart for opioid analgesics" on page 7.)

Severe pain ranks as 7-10 on the 0-10 pain intensity scale.

Treat severe pain with higher-dose opioid drugs, while continuing aspirin, acetaminophen, or NSAIDs as co-analgesics.



Adjuvant therapy

A number of drug and nondrug therapies can enhance the effects of nonopioid and opioid analgesics.

Tricyclic antidepressants can effectively treat diabetic neuropathy and postherpetic neuralgia, and are frequently used for neuropathic pain from other sources.

The effective analgesic dose of tricyclic antidepressants is lower than the typical antidepressant dose. Side effects include dry mouth, urinary retention, constipation, delirium, sedation, orthostatic hypotension, and blurred vision.

Use tricyclic antidepressants with caution, if at all, in patients with coronary artery disease, and avoid them in patients with electrical conduction blocks. Because of their sedating properties, these drugs can be used to enhance sleep if the entire dose is taken at bedtime.

Anticonvulsant medications can relieve the shooting electrical pains of peripheral nerve dysfunction. Clinical trials have demonstrated the drugs' effectiveness in diabetic neuropathy, postherpetic neuralgia, and trigeminal neural-

gia. While very few trials have studied the use of these drugs in cancer pain, they are often used to treat peripheral nerve syndromes caused by malignancies.

At doses of 65 mg or greater, **caffeine** can augment aspirin's effect. The optimal dose is unknown but a commonly accepted range is between 65-200 mg/day.

Corticosteroids, which can reduce edema and lyse certain tumors, can enhance the analgesic effect of nonopioid and opioid drugs. They may be particularly effective in managing malignant infiltration of brachial and lumbar plexus, spinal cord compression, and headache pain due to brain tumors. Chronic use is associated with the development of Cushing's syndrome, myopathy, and possibly an increased risk of gastrointestinal bleeding.

Psychostimulants such as methylphenidate and dextroamphetamine may enhance the analgesic effect of opioids, but they have not been thoroughly studied in cancer pain. Psychostimulants are used most frequently to counteract opioids' sedating effects.

Non-drug adjuvant therapy

Thermal, electrical, and mechanical modalities have long been used to manage pain.

Electrical impulses applied to peripheral nerves through transcutaneous electrical nerve stimulation can reduce subjective reports of nociceptive and neuropathic pain.

Heat and cold—which reduce muscle spasm, inflammation, and the transmission of pain stimuli—are invaluable adjuncts to pharmacologic and therapeutic interventions. Massage, relaxation, and biofeedback have also become part of mainstream adjunctive pain management practice, bringing significant benefits to appropriate patients.

Routes of opioid administration

☐ **Oral administration** is the preferred route for opioid analgesics because of convenience, cost, and ability to produce stable opioid blood levels. For most immediate release opioids, peak blood levels are reached in about one hour. If pain is not adequately relieved after one hour and side effects are not a limiting factor, you can safely give patients a second dose.

☐ **Intramuscular injections** are not recommended because of the associated pain, unreliable absorption, and relatively long interval to peak drug concentrations. If a parenteral route is needed, intravenous or subcutaneous administration is preferred.

☐ **Intravenous administration** is associated with the most rapid onset of analgesia—but also with the shortest duration of action. For initial intravenous dosing in opioid-naive patients, give one-half the recommended dose. It can take between five and 30 minutes for intravenous opioids to reach peak effect, depending on the specific drug. If severe pain persists but side effects are minimal at the time of the peak

Equianalgesic dosing

When switching opioids, follow these five steps:

1. Add the total dose of each opioid given during 24 hours. If both parenteral and oral doses were given, calculate the 24-hour total for each.
2. Determine the conversion ratio for each type of opioid and each route by using the "Dosing and conversion chart for opioid analgesics" on page 7. Calculate the conversion ratio as the equianalgesic dose of the current opioid (or route) divided by the equianalgesic dose of the alternative opioid (or route).
3. Divide the 24-hour dose of the current opioid (or route) by the conversion ratio to estimate the 24-hour dose of the alternative opioid (or route).
4. Modify this estimate based on the clinical situation.
5. Divide the estimated dose by the appropriate dosing interval for the appropriate opioid (or route) based upon the "Dosing and conversion chart for opioid analgesics" on page 7.

effect, give a repeat dose.

Administer repeated intravenous doses in this fashion to titrate a patient to the point of adequate pain relief, followed by a constant intravenous infusion of a maintenance dose. Continuous intravenous dosing provides steady blood levels of the opioid and the best analgesic control with the fewest side effects.

☐ **Subcutaneous constant infusion** is an alternative to intravenous infusion. It is associated with slower analgesia onset (peak effect in 30 minutes), lower blood opioid levels for comparable rates of infusion, and slower decline in blood levels after the infusion is discontinued. These differences, however, are of little clinical significance.

For pain occurring between doses of sustained release opioids, give 10% of the total daily opioid dose in an immediate release form as a rescue dose.

☐ **Patient-controlled analgesia (PCA)** can be used to help maintain patient independence and control in patients receiving parenteral opioids. The opioid may be administered via a dedicated portable pump to deliver the drug intravenously or subcutaneously.

☐ **Transdermal opioid patches** are available for treating cancer pain. The opioid fentanyl is absorbed through the skin and provides a continuous drug infusion using a 72-hour reservoir. Because of the cutaneous delivery methodology, there is a lag between application and reaching steady blood level of 17-24 hours. Control patients' pain by titrating doses of short-acting opioids before switching to a patch.

Fentanyl is also available as a solid sweetened lozenge that can be sucked like a lollipop. As with all infusion systems, patients on the transdermal patch need access to a short-acting opioid preparation to manage breakthrough pain. The immediate release opioid dose is generally calculated as 10% (5%-15%) of the total daily opioid dose. (See "Equianalgesic dosing" on page 6.)

You can also use rectal routes for certain opioids for patients unwilling or unable to take oral or parenteral medications.

Dosing and conversion chart for opioid analgesics

Drug	Equianalgesic Oral Dose	Equianalgesic Parenteral Dose	Starting Dose Adults > 50 kg		Starting Dose Adults ≤ 50 kg	
			Oral	Parenteral	Oral	Parenteral
Morphine[1]	30 mg q 3-4 h	10 mg q 3-4 h	15-30 mg q 3-4 h	10 mg q 3-4 h	0.3 mg/kg q 3-4 h	0.1 mg/kg q 3-4 h
Codeine[2]	130 mg q 3-4 h	75 mg q 3-4 h	60 mg q 3-4 h	60 mg q 2 h IM or SQ	1 mg/kg q 3-4 h[3]	Not recommended
Fentanyl		0.1				
Hydromorphone	7.5 mg q 3-4 h	1.5 mg q 3-4 h	6 mg q 3-4 h	1.5 mg q 3-4 h	0.06 mg/kg q 3-4 h	0.015 mg/kg q 3-4 h
Hydrocodone	30 mg q 3-4 h	Not available	10 mg q 3-4 h	Not available	0.2 mg/kg q 3-4 h	Not available
Levorphanol	4 mg q 6-8 h	2 mg q 6-8 h	4 mg q 6-8 h	0.04 mg/kg q 6-8 h	0.02 mg/kg q 6-8 h[3]	0.02 mg/kg q 6-8 h
Meperidine	300 mg q 2-3 h	75 mg q 3 h	Not recommended	100 mg q 3 h	Not recommended	0.75 mg/kg q 2-3 h
Methadone (Acute)	20 mg q 6-8 h	10 mg q 6-8 h	20 mg q 6-8 h	10 mg q 6-8 h	0.2 mg/kg q 6-8 h	0.1 mg/kg q 6-8 h
Oxycodone	20 mg q 3-4 h	Not available	10 mg q 3-4 h	Not available	0.2 mg/kg q 3-4 h[3]	Not available
Oxymorphone	Not available	1 mg q 3-4 h	Not available	1 mg q 3-4 h	Not recommended	Not recommended
Opioid agonist-antagonist and partial agonist						
Buprenorphine	Not available	0.3-0.4 mg q 6-8 h	Not available	0.4 mg q 6-8 h	Not available	0.004 mg/kg q 6-8 h
Butorphanol	Not available	2 mg q 3-4 h	Not available	2 mg q 3-4 h	Not available	Not recommended
Nalbuphine	Not available	10 mg q 3-4 h	Not available	10 mg q 3-4 h	Not available	0.1 mg/kg q 3-4 h
Pentazocine	150 mg q 3-4 h	60 mg q 3-4 h	50 mg q 4-6 h	Not recommended	Not recommended	Not recommended

1 For morphine, hydromorphone and oxymorphone, rectal administration is an alternate route for patients unable to take oral medications, but equianalgesic doses may differ from oral and parenteral doses because of pharmacokinetic differences.

2 **Caution:** Codeine doses above 65 mg often are not appropriate, due to diminishing incremental analgesia with increasing doses but continually increasing constipation and other side effects.

3 **Caution:** Doses of aspirin and acetaminophen in combination opioid/NSAID preparations must also be adjusted to the patient's body weight.

Common side effects of opioids

Carefully watch patients on long-term opioids for potential side effects and use the necessary means to counteract them. Patients can develop intolerable side effects to an individual opioid. In some cases, another opioid will not cause side effects to the same extent, making switching to an alternative opioid a reasonable option.

Opioid-naive patients are more susceptible to **respiratory depression** than patients receiving long-term opioids. Provide careful follow-up when initiating opioids in these patients.

Constipation is an almost inevitable side effect of chronic opioid therapy. A prevention regimen could include docusate, bisacodyl, or senna concentrate, and a hyperosmotic agent such as milk of magnesia or lactulose.

Key points: treating older patients

When treating older patients with opioids, apply the same general principles as in care for younger adults. However, consider age-related factors and specific dosing recommendations, which include:

- Slowly and carefully titrate opioids to 50% of usual adult starting dose.
- Do not prescribe propoxyphene or meperidine for older patients. Neuroexcitatory side effects may be more likely in this population because of central sensitivity and subclinical renal insufficiency.
- Use methadone very cautiously because its long, variable half-life makes it especially problematic in older patients. Adverse effects from drug accumulation may arise several days after regular dosing begins.

Adapted with permission from Fine PG and Portenoy RK: A Clinical Guide to Opioid Analgesia, 2004, The McGraw-Hill Companies Inc.

Treat opioid-related **nausea and vomiting** with a phenothiazine antiemetic, transdermal scopolamine, or hydroxyzine. Some patients will experience less nausea if the opioid blood level remains constant throughout the day rather than with period peaks.

Changing the dosing interval of an immediate release preparation from every four hours to a smaller dose every three hours may stabilize the blood level and reduce nausea and vomiting. Changing to a sustained release opioid or the transdermal route will also produce more constant opioid blood levels and may be helpful.

Adding a stimulant can sometimes successfully treat **sedation**. Stimulants include caffeine, dextroamphetamine, and methylphenidate.

Prescribe an antihistamine for opioid-related **itching and urticaria** due to the release of histamine. Oxymorphone and fentanyl are two opioids that do not release histamine, so consider switching to one of these.

When rapid reversal of opiate depression is indicated, administer naloxone in small increments to improve respiratory function without totally reversing analgesia. Monitor patients carefully until an episode of respiratory depression resolves.

Meperidine and mixed agonist-antagonist analgesics

After repeated doses of meperidine, the toxic metabolite normeperidine accumulates and can produce anxiety, tremors, myoclonus, and seizures. Because the kidneys excrete the metabolite, patients with renal insufficiency are at particularly high risk for this complication.

Meperidine should not be dosed beyond 48 hours and is not indicated in the management of chronic pain. The use of meperidine in biliary disease is over-rated and offers no proven advantage over morphine.

And mixed agonist-antagonist drugs offer no advantages over morphine-like drugs and can precipitate opioid withdrawal symptoms when given to patients taking chronic morphine-like opioids.

Tolerance, dependence and addiction

When treating patients for pain, watch for the development of tolerance, dependence, and addiction, and treat appropriately.

Experts define **tolerance** as the need for an increased amount of drug to achieve the same analgesic effect. This is a common, expected occurrence in individuals who chronically take opioids.

The first sign of tolerance may be a decrease in the duration of effective pain relief with the patient's usual opioid dose. To treat tolerance, you may have to increase the current opioid dose by between 10% and 15%.

Physical dependence is a physiological state marked by the development of withdrawal symptoms when medications are discontinued abruptly. Signs of withdrawal include anxiety, irritability, excessive salivation, tearing, runny nose, sweating, nausea, vomiting, and insomnia. Prevent opioid withdrawal by slowly tapering chronically-used opioid doses and by avoiding opioid antagonists and mixed agonists-antagonists in patients on chronic opioid therapy.

Addiction is an abnormal behavioral condition in which a person develops an overwhelming involvement in acquiring and using a drug despite adverse social, psychological, or physical consequences. Addiction is relatively rare and occurs in a small percentage of patients taking opioids as prescribed to control pain.

Psychosocial and psychiatric aspects of chronic pain

Delirium is a complication of chronic pain seen most often in high-risk patients, which include the elderly; individuals with preexisting neurocognitive disorders such as dementia; patients with cancer or AIDS; and patients who are debilitated and/or taking multiple psychoactive medications.

Because delirium in medical patients is associated with high morbidity and mortality, physicians must promptly recognize this neuropsychiatric syndrome and identify specific etiologies. Treatment may include constant observation, pharmacotherapy with antipsychotics, and modifications to the opioid regimen. Modifications can include stopping, reducing, and/or changing the drug.

Team building for chronic pain management

Successfully managing the complicated chronic pain patient almost always involves a team approach. For patients with severe depression or who have not responded to one or two antidepressant trials, psychiatric consultation is indicated. Psychologists with specific training in cognitive therapy and/or health psychology can also play a key role.

Nurses, especially those trained in hospice care, are critical for managing pain in patients at the end of life. Nurses can help titrate opioids and manage side effects, provide emotional support, assess for depression and anxiety, and monitor serial mental status exams to detect delirium or early neurocognitive toxicity.

Tolerance is the need for an increased amount of drug to achieve the same analgesic effect—a common, expected occurrence in patients taking opioids chronically.

Social workers can help with issues related to home care, insurance, and prescriptions that may not be covered by a patient's insurance. And clergy address spiritual issues especially at the end of life, regardless of religious affiliation. ■

The information included herein should never be used as a substitute for clinical judgment and does not represent an official position of ACP.

Undertreating pain new focus of legal scrutiny

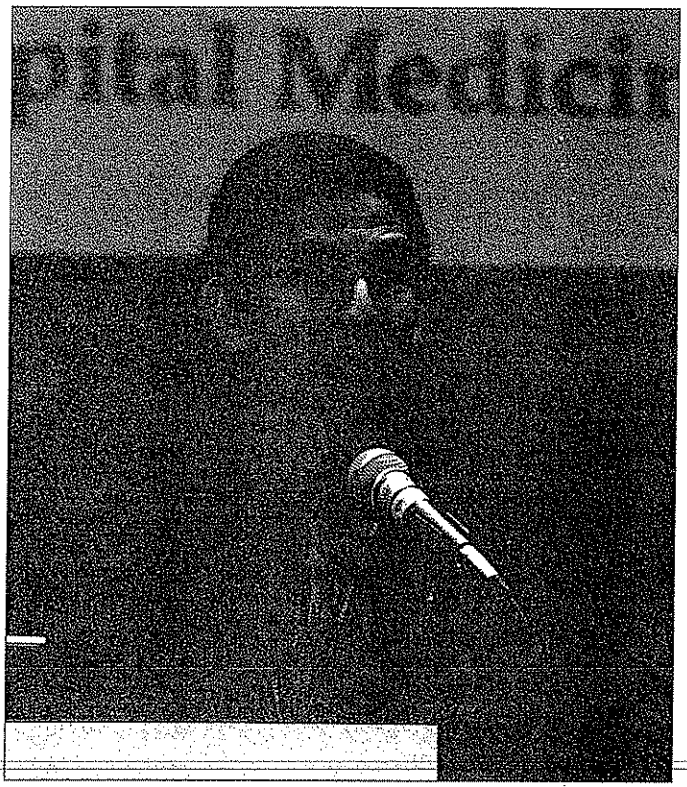
By Deborah Gesensway

WASHINGTON—Many physicians shy away from prescribing opioids for patients in pain, in part because they're afraid they may find themselves accused of drug trafficking. But doctors now find that undertreating pain can get them in just as much legal hot water.

"Now, you are damned if you don't too, so there is [legal] exposure on both sides," said Steven Z. Pantilat, FACP, a hospitalist and director of the palliative care program at the University of California, San Francisco, and immediate past president of the Society of Hospital Medicine (SHM). However, he added, there is "a wide area of appropriate, evidence-based practice that can provide good pain control for patients and that is well within the bounds of the law." Dr. Pantilat spoke at a session on pain management this spring at SHM's annual meeting.

Five years ago, a jury in Hayward, Calif., stunned the medical profession by finding that an experienced and well-respected internist committed elder abuse by inadequately treating the pain of an 85-year-old man admitted to a hospital with lung cancer and compression fractures. During his six-day hospitalization, the patient consistently rated his pain as between seven and 10 on a 10-point scale.

The physician explained during the trial that he was worried that opioids would drive this already frail patient into respiratory failure and so had prescribed meperidine (Demerol) on a PRN basis. In fact, as his lawyer pointed out, the physician could have been sued for malpractice if he had overmedicated the patient.



Steven Z. Pantilat, FACP: Physicians should combine different classes of medication for better pain relief.

Overcoming 'overblown' concerns

Although such concerns about side effects of potent pain medication are valid, they are "typically overblown," Dr. Pantilat said. Starting with small doses is usually safe. Physicians should then see how patients respond in terms of pain relief and sedation, and adjust accordingly.

Other barriers to adequate prescribing include the hassle factor, such as needing special prescription pads; concerns that the physician will get a reputation as the local drug pusher; and worries that prescribing opioids might lead to addiction.

But addiction doesn't apply to most patients who need opioids, Dr. Pantilat said. Several studies that combined looked at a total of 22,000 patients in pain—mostly suffering from cancer and burns—who received opioids found that fewer than one in 1,000 developed an addiction to the medication. "In these studies," he noted, "most of the patients who developed true addiction had a history of addiction."

As a precaution before starting someone on opioids, Dr. Pantilat always asks a screening question such as, "Have you ever had trouble with substance abuse in the past?" If the answer is no, he said, he can reassure patients they shouldn't worry that they run the risk of abusing opioids either. It also helps to keep in

mind, he said, that all potent medicines have their risks: Thousands of people die each year, for example, from gastrointestinal bleeding caused by NSAIDs.

Improving pain assessment, treatment

Given the many barriers, it's no surprise that studies find physicians still do a poor job managing pain despite efforts over the last decade to change that, Dr. Pantilat said.

That's probably because pain is the one area where patients know more about their bodies than physicians do, he said, noting that "pain is subjective."

Physicians would do better at pain management if they first trusted patients' self-assessment of pain and used pain scales to assess pain, such as the 0-10-stage pain scale, he said. Then physicians should assess the type and etiology of pain because treatment algorithms will be different, particularly for neuropathic pain.

Multiple studies have demonstrated that five different classes of drugs can relieve this type of pain: opioids, tricyclic antidepressants, gabapentin, tramadol hydrochloride, and lidocaine patches. What studies have also found, however, is that each type of medication relieves pain by only about 30%. "So it's hard to get to zero pain," he said.

Once physicians realize that a medicine won't provide complete relief, they need to explain that reality to patients. In addition, he said, patients may get more relief from combining these different classes of drugs, not simply increasing the dose of one drug.

And Dr. Pantilat listed several common mistakes physicians make when prescribing pain medicine:

☐ **Ordering pain medicine PRN.** This became a key factor in the California elder abuse case. Instead, Dr. Pantilat said, write orders that say, "Around the clock while awake. Patient may refuse." Hospitalists do not want nurses to wake sleeping patients to give them pain medicine, and patients need to be given the option of saying they do not need pain medicine.

☐ **Not anticipating predictable side effects.** Dr. Pantilat said he never writes a prescription for opioids without also adding docusate sodium and senna for constipation. Another predictable side effect that needs to be anticipated is sedation with gabapentin and tricyclic antidepressants.

☐ **Setting bolus doses too low.** A bolus for breakthrough pain needs to be between 50% and 100% of the daily dose if the patient is in severe pain; lower dosages won't work. Dr. Pantilat recommended using an equianalgesic dosing chart (see "Dosing and conversion chart for opioid analgesics" on page 7) and writing out the calculation to be sure the math is correct. ■

Impact of chronic pain

One in five adults suffers from chronic pain

48% of those patients report that pain leads to depression

42% say that pain hurts their relationships

10% note that pain creates an economic burden

Source: Michigan Pain Study, 1997

Deborah Gesensway is a freelance health care writer in Toronto.

The information included herein should never be used as a substitute for clinical judgment and does not represent an official position of ACP.