ABSTRACT

In tailoring opioid therapy, consideration of administration route is vital, particularly in patients undergoing chronic therapy. This article provides a discussion of administration issues, equianalgesic conversions, and side-effect management relating to opioid therapy. For constant pain, a sustained-release formulation is preferable, both for convenience and for prevention of fluctuations in plasma opioid levels. Immediate-release oral opioids, in addition to transmucosal and buccal formulations, may be used for breakthrough episodes of pain. Alternative routes of administration (eg, transdermal, rectal, vaginal, and topical) may be required in patients with certain physiologic limitations, such as mucositis-related dysphagia. The discussion on side-effect management centers on factors (eg, age and duration of therapy) used in anticipating and treating traditional side effects of opioids (eg, constipation, respiratory depression, and pruritus). Also provided, are special considerations and limitations pertaining to common equianalgesic conversions (eg, oral morphine to fentanyl patch) using currently suggested references. Finally, patient counseling suggestions are offered, along with a brief pharmacist interview relating to the challenges of communicating with patients suffering from chronic pain.

Increasing acceptance of opioid therapy in the management of chronic pain comes with the responsibility of optimizing dosing regimens and managing side effects of long-term analgesic therapy. In today's practice, pain management is individualized, dynamic, and dependent on the patient's care setting. A hospitalized patient with acute pain may be best treated initially with intravenous opioids and eventually transitioned to an oral, sustained-release (SR) or transdermal opioid product in the home setting. Pharmacists have become active members of the multidisciplinary healthcare team and are thus increasingly being asked to help develop individualized opioid regimens and manage side effects of chronic therapy. It is imperative that they become adept in performing equianalgesic conversions, monitoring and managing opioid-related side effects, and providing patient information.

ROUTES OF ADMINISTRATION

In patients with chronic pain, the oral route is generally preferred because it is the most convenient and often the least invasive and expensive option. Although parenteral routes may deliver doses more rapidly, the oral route is associated with dependable absorption and usually acceptable time to onset of action in chronic pain conditions. The oral route is also most favored by patients, as evidenced in practice and in the literature. For example, in a 1999 survey of chronic noncancer pain conducted by the American Pain Society (APS), 83% of patients preferred to take medications via the oral route.1

The pharmacokinetic properties of an opioid may be manipulated by changing its formulation, as in the case of oral SR formulations of morphine, oxycodone, and oxymorphone, all of which have delayed onset and longer durations of action compared to their immedi-
ate-release (IR) counterparts. For pain that is constant, an SR formulation is preferable, both for convenience and for prevention of fluctuations in plasma opioid levels. IR opioids can be used for breakthrough episodes of pain. Certain formulations of oral SR opioids may be opened and sprinkled on semisolid food for patients who have difficulty swallowing.

Alternative routes of administration (eg, transdermal, rectal, vaginal, and topical) may be required in patients with certain physiologic limitations, such as mucositis-related dysphagia, chemotherapy-induced nausea, malabsorption from gastrointestinal dysfunction (eg, fistula and dumping syndrome in human immunodeficiency virus/acquired immune deficiency syndrome), or the need to swallow an impractical number of tablets. In patients with dermal conditions, such as diabetic ulcers, compounding pharmacies produce topical opioid gels for local administration, which may theoretically limit systemic side effects. Because transmucosal and buccal routes (eg, fentanyl buccal tablets and transmucosal lozenges) avoid first-pass metabolism and have a more rapid onset of action than oral formulations, they are more suitable for breakthrough pain. Intramuscular injections should be avoided because they produce discomfort and variable responses, depending on tissue perfusion at the site and/or the technique used to administer the drug. Particularly in women, intramuscular doses may be deposited in the superficial adipose tissue, instead of muscle. Other routes of administration (eg, intravenous, subcutaneous, epidural, and intrathecal) are usually reserved for patients with acute exacerbations of chronic pain who are hospitalized or in palliative care settings. These administration routes have several limitations, including the potential for local adverse events or infection, and the need for special equipment.

**SIDE-EFFECT MANAGEMENT**

Although opioids have been shown to be effective in diverse populations, side effects are common, and thus successful opioid therapy is dependent on the ability of analgesic benefits to outweigh treatment-related adverse events. Opioid side effects in patients with chronic pain may impair quality of life, increase morbidity, and reduce compliance. A recent systematic review found that 22% of patients with chronic noncancer pain discontinue opioid therapy because of side effects.

For the most part, opioid-related research (eg, efficacy and side effects) is more abundant in the acute rather than the chronic pain setting. However, one recent meta-analysis attempted to characterize the incidence of opioid side effects in patients with chronic noncancer pain. Side effects that were found to occur significantly more often in patients taking opioids than in those given placebo included constipation, nausea, dizziness or vertigo, somnolence or drowsiness, vomiting, dry skin, and itching or pruritus. Similar findings were reported in patients receiving opioids for neuropathic pain. Another related survey found that patients most commonly complained of sedation and dry mouth. Additional side effects include confusion, urinary retention, myoclonus, dysphoria, euphoria, sleep disturbance, sexual dysfunction, respiratory depression, physiologic dependence, tolerance, and inappropriate secretion of vasopressin.

There is little evidence regarding which opioid side effects are most important to patients, but clinical experience suggests that patients with noncancer pain and those with cancer pain differ in that respect. For example, a patient with advanced cancer may be less bothered by opioid-induced somnolence than a patient with chronic noncancer pain. Not all patients will suffer from every side effect, and the severity of any given side effect may also differ among patients. Many side effects diminish or resolve (due to tolerance) with continued opioid use; conversely, some side effects (eg, immune and sexual dysfunction) are best documented after long-term therapy. Consequently, in anticipating or treating opioid side effects, consideration should be given to the expected duration of therapy, in addition to the likelihood of an individual side effect occurring and its potential severity. Certain patients may be at higher risk than others for experiencing a given side effect. For example, those with sleep apnea may be more likely to develop respiratory depression. Although many patients develop tolerance to certain side effects (eg, nausea), such adverse effects must still be treated aggressively. Persistent respiratory depression, nausea, and vomiting are rare in opioid-tolerant individuals. Patients generally do not develop tolerance to the side effect of constipation, thus a prophylactic bowel regimen should be prescribed at initiation of therapy.

Differences in side-effect profiles may also be a consequence of individual patient characteristics. Elderly and young patients are prone to exaggerated
responses to meperidine, possibly because they have decreased circulating levels of α-1 glycoprotein, to which this drug is 70% bound. Certain opioid metabolites (eg, normeperidine and morphine-3-glucuronide) may also cause side effects because they possess antianalgesic and/or neuroexcitatory properties. Adverse events attributed to the meperidine metabolite normeperidine are well documented, even with acute administration. With a half-life of up to 48 hours, normeperidine can accumulate and cause dysphoria, excitation, and seizures, especially in the elderly or in patients with renal dysfunction. Although active metabolites of other opioids have been discovered, there is less evidence to support them being implicated in adverse events similar to those seen with normeperidine. The APS now recommends against using meperidine for either acute or cancer pain.

**GENERAL APPROACHES TO SIDE-EFFECT MANAGEMENT**

Comorbidities and concurrent medications that contribute to the incidence and severity of opioid side effects should be assessed and treated, or discontinued if possible. Pharmacologic approaches to preventing or treating opioid side effects include use of an opioid-sparing regimen (lowering opioid requirements by adding nonsteroidal anti-inflammatory or adjuvant analgesics), symptomatic treatment (eg, use of an antiemetic), an opioid antagonist to directly reverse opioid effects (eg, titrated and small doses of naloxone for respiratory depression), or “opioid rotation.” Opioid rotation, the switching of 1 opioid for another, exploits potential differences in efficacy and side-effect profiles of specific opioid molecules. Different opioids have different intrinsic efficacies at opioid receptor types and subtypes. Because preclinical and clinical evidence suggests that analgesic tolerance develops less rapidly to opioids that have high intrinsic efficacy, use of such agents (eg, fentanyl and methadone) may reduce the frequency of required dose increases and associated side effects. However, limited data exist to support clinical differences in side-effect profiles between opioids at equianalgesic doses. Study results are often confounded by use of nonequianalgesic doses, or by the fact that pain itself can cause side effects such as nausea. Also, despite the relatively common practice of opioid rotation, there are no randomized trials to validate its effectiveness.

**SIDE EFFECTS OF LONG-TERM OPIOID USE**

Adverse effects of chronic opioid therapy have not been fully established, but may include hormonal changes, immune suppression, and paradoxical hyperalgesia (in some cases). Addiction rarely occurs in patients with cancer or other illness who are initiated on opioids in the absence of a substance abuse history. Prophylaxis or treatment of long-term opioid side effects is either unavailable or has not yet been validated, most likely due to a lack of evidence pertaining to the prevalence of, risk factors for, and mechanisms perpetuating adverse effects in chronic opioid therapy. In clinical practice, abnormal pain sensitivity due to opioid-induced pronociception may be difficult to differentiate from opioid tolerance (desensitization). To date, no treatments are available for this side effect, although use of N-methyl-D-aspartate antagonists (eg, ketamine) is under investigation. Clinically, an opioid dose is often increased to address loss of analgesic effectiveness over time, although, theoretically, a decrease in opioid dose may prove beneficial when the loss of analgesic effectiveness is a manifestation of opioid-induced hyperalgesia. Hormonal changes were initially described only in subjects receiving methadone maintenance therapy, but they are now increasingly described in those prescribed opioids for chronic pain. Testosterone depletion and other signs and symptoms of androgen deficiency (eg, osteoporosis) have been described in men receiving intrathecal opioid therapy for chronic pain. Testosterone (or estrogen in women) replacement is currently the standard of treatment, but the long-term risks of hormone replacement therapy (eg, hormone-dependent malignancy) are now being debated. Different opioids appear to cause varying degrees of immunosuppression, for which there is no treatment other than dose reduction or discontinuation of therapy.

A summary of side effects and methods to prevent or manage them is illustrated in Table 1. Because of the great individual variation in development of these side effects, physicians and pharmacists should inquire regularly about them, monitor them, and be ready to treat them promptly.

**EQUIANALGESIC CONVERSION**

At equianalgesic doses, full agonists have similar efficacy, but as detailed earlier in this article, they may differ in their side-effect profile in a given individual.
Table 1. Prevention and Treatment of Opioid-Related Side Effects

<table>
<thead>
<tr>
<th>Side Effect</th>
<th>Incidence/Frequency</th>
<th>Management</th>
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| Constipation         | Estimated to occur in 25%–50% of patients with cancer. Constipation is an almost inevitable consequence of opioid use and one of the side effects of opioids to which few patients develop tolerance. | Pharmacologic treatment: Initiate bowel regimen at commencement of opioid therapy.  
  • Use both a stool softener and a stimulant (eg, docusate sodium 100 mg [1 capsule twice daily to 3 times daily] plus senna 8.6 mg [1 tablet daily up to 4 tablets 3 times daily]).  
  • Bulk laxatives, such as psyllium, and osmotic laxatives, such as lactulose, are also commonly employed. Psyllium requires that the patient maintain adequate fluid intake, lest fecal impaction occur.  
  Metoclopramide may also improve symptoms for patients with depressed gastric motility. |
| Confusion, delirium  | Mild cognitive impairment and hallucinations frequently occur when opioids are initiated or with significant dosage increase. | 1. Rule out or eliminate other causes (eg, metabolic disturbances).  
  2. Reduce doses of, or discontinue nonessential, centrally acting medications.  
  3. If analgesia is satisfactory, reduce dose of opioid by 25% and add, if needed, an adjuvant analgesic.  
  4. Change the route of opioid administration (may be impractical in terminally ill patients). |
| Myoclonus            | Myoclonus is an occasional side effect that can be precipitated by any opioid analgesic. Most commonly seen with use of meperidine due to accumulation of metabolite normeperidine. Tends to occur when patients are drowsy or entering light sleep. | 1. Often resolves spontaneously with reduction in opioid dose and addition of, or increase in dose of, an adjuvant analgesic, or with rotation to a different opioid.  
  2. Eliminate other causes |
| Nausea and vomiting  | Estimated incidence of 10%–40%. | Pharmacologic treatment: Low-dose benzodiazepine, such as clonazepam or midazolam, or skeletal muscle relaxants, such as dantrolene. |

1. Gradual upward titration of opioid dose may prevent nausea from arising. May subside with chronic dosing.  
2. Address reversible comorbidities, such as hypercalcemia and raised intracranial pressure.  
3. Taper or discontinue, if possible, emetogenic drugs, such as digoxin, antibiotics, iron, and cytotoxic agents.  
4. Add or increase dose of adjuvant analgesic.  
5. If analgesia is satisfactory, reduce opioid dose by 25%.  
Pharmacologic treatment: Tailor specifically to the source, although antiemetic combinations are often necessary. Initially parenteral administration may be required, but the oral route should be reverted to as soon as possible.  
• If caused by stimulation of the chemoreceptor trigger zone (as is common the case with initial opioid dosing): dopamine antagonists prochlorperazine (10 mg orally/IV every 6 hours), haloperidol (0.5–1 mg every 8 hours), or serotonin antagonists such as ondansetron.  
• If caused by gastric stasis, the prokinetic metoclopramide 10 mg IV/orally 3 times daily as needed.  
• If exacerbated by motion, diphenhydramine or transdermal scopolamine may be helpful.  

Continued on next page
Although morphine is considered the gold standard of opioid analgesia, opioid rotation may be appropriate when allergy, intolerance, or lack of efficacy occur. For example, patients who experience unmanageable dose-dependent sedation or nausea with oral morphine may be well managed with an equianalgesic dose of hydromorphone, fentanyl, or methadone. It is advisable to try other opioids before deciding that the patient's pain is entirely refractory to opioids. In addition to opioid rotation, it may be necessary to convert to a different route of the same opioid when, for example, a patient is unable to swallow and is admin-

Table 1. Prevention and Treatment of Opioid-Related Side Effects (continued)

<table>
<thead>
<tr>
<th>Side Effect</th>
<th>Incidence/Frequency</th>
<th>Management</th>
</tr>
</thead>
</table>
| Pruritus          | Pruritus is an occasional side effect of opioid use and the most common side effect when epidural or intrathecal routes of morphine administration are used. | • Antiemetics are associated with several side effects themselves, including sedation, confusion, and extrapyramidal symptoms, and for this reason are often only introduced once symptoms appear.  
  1. Reduce opioid dose by 25% or increase dose of a nonopioid analgesic.  
  2. Nonpharmacologic interventions, such as cool compresses or moisturizers, may offer some relief.  
**Pharmacologic treatment:**  
• Antihistamines still commonly used as first-line treatment. Diphenhydramine (25–50 mg IV/orally every 6 hours as needed) employed with varying degrees of success. Its sedating effect may be as important in relieving symptoms as its antihistaminic properties.  
• Increased sedation may be a problem with patients who are already suffering from opioid-induced sedation. Under these circumstances a less sedating antihistamine, such as hydroxyzine or cyproheptadine, may be employed.  
  Mixed agonist/antagonists (eg, butorphanol) or pure opioid antagonists, such as naloxone (0.8 mg/1000 mL IV infusion), can reverse itching but at the risk of also reversing analgesia. Dosing must be carefully titrated to achieve an acceptable balance between reduced pain control and reduced itching.  
  1. Seek alternative explanation, such as pneumonia, pulmonary embolism, or cardiomyopathy, or the coadministration of another sedating medication such as a benzodiazepine.  
  2. Closely monitor and carefully treat possible high-risk patients.  
**Pharmacologic treatment:** Due to the risk of systemic opioid withdrawal, the opioid antagonist naloxone should only be used in impending or symptomatic respiratory depression (<8 breaths per minute), and small, titrated doses employed.  
  1. Many medications, including antihistamines, antidepressants, and anxiolytics, can contribute to sedation or can reduce the metabolism and hence increase the effects of opioids. Discontinue or taper if possible.  
  2. Rule out comorbidities.  
  3. If analgesia is satisfactory, reduce opioid dose by 10%–25%.  
  4. Opioid rotation.  
**Pharmacologic treatment:**  
• Simple stimulant, such as caffeine.  
• If unsuccessful, psychostimulant (eg, methylphenidate).  
• In refractory cases, consider neurosurgical procedures. |

Respiratory depression  
Tolerance usually develops within days to weeks. Respiratory depression is rare in patients who have been receiving opioids chronically.  
1. Seek alternative explanation, such as pneumonia, pulmonary embolism, or cardiomyopathy, or the coadministration of another sedating medication such as a benzodiazepine.  
2. Closely monitor and carefully treat possible high-risk patients.  
**Pharmacologic treatment:** Due to the risk of systemic opioid withdrawal, the opioid antagonist naloxone should only be used in impending or symptomatic respiratory depression (<8 breaths per minute), and small, titrated doses employed.  
1. Reduce opioid dose by 25% or increase dose of a nonopioid analgesic.  
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  2. Rule out comorbidities.  
  3. If analgesia is satisfactory, reduce opioid dose by 10%–25%.  
  4. Opioid rotation.  
**Pharmacologic treatment:**  
• Simple stimulant, such as caffeine.  
• If unsuccessful, psychostimulant (eg, methylphenidate).  
• In refractory cases, consider neurosurgical procedures. |

Sedation  
Most frequently occurs at initiation of opioid therapy or with significant dose increase. Associated with transient drowsiness or cognitive impairment. Symptoms frequently resolve after a few days.  
1. Reduce opioid dose by 25% or increase dose of a nonopioid analgesic.  
2. Nonpharmacologic interventions, such as cool compresses or moisturizers, may offer some relief.  
**Pharmacologic treatment:**  
• Antihistamines still commonly used as first-line treatment. Diphenhydramine (25–50 mg IV/orally every 6 hours as needed) employed with varying degrees of success. Its sedating effect may be as important in relieving symptoms as its antihistaminic properties.  
• Increased sedation may be a problem with patients who are already suffering from opioid-induced sedation. Under these circumstances a less sedating antihistamine, such as hydroxyzine or cyproheptadine, may be employed.  
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• Simple stimulant, such as caffeine.  
• If unsuccessful, psychostimulant (eg, methylphenidate).  
• In refractory cases, consider neurosurgical procedures. |
istered an opioid intravenously rather than orally. Equianalgesic tables commonly employ an intramuscular dose of morphine 10 mg as a reference point in comparing alternative routes and opioids. It should be noted that conversion ratios are approximate and are based on limited data (mostly single-dose studies). Also, patients may vary in their response to a certain opioid and they may require higher or lower conversion factors than those suggested. The conversion to alternate drug and/or route is a 5-step process, detailed in Table 2. Table 3 includes equianalgesic doses of selected opioids; a more comprehensive review of equianalgesic conversion can be found elsewhere.

Special Considerations: The manufacturer of transdermal fentanyl provides dosing recommendations for converting to this system from oral or parenteral opioids, based on first converting the original opioid to an equivalent dose of oral morphine. However, clinical practice suggests that these recommendations result in underdosing in more than 50% of all cases and, consequently, a lengthy titration period. A simpler and more accurate method, used commonly in clinical practice, involves converting the original opioid to an equivalent dose of oral morphine (as per the manufacturer’s recommendations) and then halving this dose (and converting to micrograms) to find an appropriate patch size. For example, if the conversion to oral morphine equivalents was 200 mg/day, the patient should be started on a 100 mcg/hour patch. It is important to understand that neither this method nor the manufacturer’s method of converting oral morphine equivalents to a fentanyl patch should be used in the reverse situation. For example, the dose of the fentanyl patch should not be doubled and converted to milligrams of oral morphine, as this may potentially result in drug overdoses. Patches are changed every 48 to 72 hours. Opioid-naïve patients should not be started on a patch size that delivers more than 25 mcg/hour.

In the past decade, increased prescribing of methadone has been fueled by several advantages of the drug, including low cost, a naturally long plasma half-life, low risk of toxic metabolites, and efficacy in treating neuropathic pain. However, the complex pharmacokinetic and pharmacodynamic properties of methadone make dose conversion challenging. Although equianalgesic conversion tables routinely suggest a conversion from 30 mg of oral morphine to 20 mg of oral methadone, recent evidence suggests that this conversion may grossly overestimate the equivalent dose of methadone in patients with chronic pain, especially when high doses of the original opioid are being used. In addition, methadone accumulates with repeated dosing, necessitating a decrease in dosing fre-

### Table 2. Equianalgesic Conversion Process

| Step 1: Total the 24-Hour dose of current drug, including all breakthrough doses. |
| Step 2: Convert 24-hour dose to new drug and/or route using an equianalgesic conversion table (Table 3). |
| Step 3: Divide the total dose of new drug by the schedule of the new drug. |
| Step 4: In opioid-tolerant patients, consider reducing calculated dose of the new drug by 25% to 50% to account for incomplete cross-tolerance. |
| Step 5: Calculate a breakthrough dose—either 10%–20% of the total daily opioid dose or 25%–30% of the single standing dose. |

### Table 3. Equianalgesic Doses of Selected Opioids

<table>
<thead>
<tr>
<th>Parenteral</th>
<th>Oral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine</td>
<td>10</td>
</tr>
<tr>
<td>Fentanyl*</td>
<td>0.1</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>1.5</td>
</tr>
<tr>
<td>Meperidine†</td>
<td>75</td>
</tr>
<tr>
<td>Methadone‡</td>
<td>5</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>NA</td>
</tr>
<tr>
<td>Oxymorphone</td>
<td>1</td>
</tr>
</tbody>
</table>

* The dose of transdermal fentanyl in mcg/hour is approximately half the 24-hour milligram dose of oral morphine.
† Not recommended for chronic pain.
‡ Recent data suggest that methadone may be more potent than originally thought. Consider reducing by greater than the above conversion ratios, especially in patients who have been receiving high doses of opioids chronically.

frequency from every 6 hours initially to twice daily with continued use. Clinicians are advised not to utilize methadone as a first-line drug, unless they have ample experience with it. Another consideration is the recent joint decision by the Drug Enforcement Agency and wholesale distributors to restrict distribution of dosage formulations containing more than 10 mg of methadone. As a result, patients in the community on high doses of methadone may have to take an impractical number of tablets.

PATIENT COUNSELING, COMMUNICATION, AND GETTING PAST THE STIGMA

Considerably more patients with pain are seen by their primary physician than in a specialized pain program. Although it is widely acknowledged that pain should be treated aggressively, evidence of undertreatment of pain in primary care settings persists. Inadequately treated pain can impair a patient's quality of life, slow recovery from injury or surgery, interfere with daily activities, and undermine social interaction. Factors that may contribute to undertreatment of chronic pain in primary care include lack of education in medical schools, clinicians' attitudes or beliefs about side effects and addiction, and regulations that make healthcare providers hesitant to prescribe opioids due to fear of prosecution.

Pharmacists may also create barriers to opioid access by stocking insufficient quantities of opioids, or expressing hesitance about the legality of dispensing opioids to patients with noncancer chronic pain. In a 2000 survey, pharmacists gave 3 chief reasons for having inadequate supplies of opioids—regulations with regard to disposal, illicit use, and fraud; low demand; and fear of theft. They also cited other complicating issues, including additional paperwork required by state and federal drug enforcement agencies, regulatory oversight and monitoring of these medications, and fear of penalties imposed by state and federal agencies. A 2001 survey revealed that many pharmacists did not perceive the prescribing/dispensing of opioids for more than several months to patients with chronic pain as a lawful and acceptable medical practice; this was especially true when the patient had a history of opioid abuse.

The patient is another potential barrier, often exhibiting reluctance in taking opioids for fears of addiction and concerns about side effects and the need for increased usage over time. Patients commonly think that opioids should only be used for terminal illness, they perceive a stigma in taking controlled substances, and feel that they should remain stoic and "just deal with the pain," or that pain is not treatable. Nonadherence is a major issue in prescribing analgesic medication, with side effects and financial factors being cited by patients as the primary causes.

It is essential that patients and physicians perceive pharmacists as a valuable resource in effective opioid therapy. Pharmacists should dispel common myths surrounding opioids and reassure patients that these analgesics are an integral component of their treatment. For example, many patients equate methadone with drug addiction. It may be helpful to explain that the incidence of addiction with opioids is low, and that after an initial titration period, opioid doses tend to remain constant for long periods (assuming no disease progression). Patients should also be reassured that many of the aforementioned side effects will resolve with continued use and that effective treatment is available for side effects that patients do not develop tolerance to. Patients should be counseled not to drive until opioid-induced sedation resolves. Simple guidance regarding opioid administration (eg, time of day, when to use rescue medication, and which oral formulations can be crushed or sprinkled) are all useful tools for the patient, and may result in greater compliance.

Patients should be educated about storing their medications safely (especially in homes with children or adolescents), the importance of reporting side effects, and the dangers of sharing medication with family members or friends.

It is also important to set realistic expectations. In many cases, it is not possible to completely resolve a patient's pain, particularly in those with chronic pain. If a patient is told that his/her pain may not be eliminated, but may be reduced to the extent that he/she is able to carry out activities of daily living, this may be sufficient. Patients should be counseled not to abruptly discontinue therapy because acute withdrawal may occur. Patients with chronic pain, especially the elderly, are often prescribed multiple medications, not only for pain itself but also for side effects and comorbidities. The pharmacist is best equipped to monitor for potential drug interactions, particularly if patients are being prescribed medication from physicians other than their primary care physician. Patients also commonly use over-the-
Patients often do not realize that more than 1 of their medications contains acetaminophen, especially when it is combined with an opioid. The physician/pharmacist relationship is also important in improving patient care. Rather than feeling that his/her authority is being challenged, a physician may feel more open to a pharmacist’s intervention if the pharmacist initially offers to help calculate equianalgesic conversions or counsel the patient.

**CONCLUSIONS**

In existence for hundreds of years, opioids are certainly not new in medicine. Yet, because these agents are used in such a vast number of patients as a critical component of analgesia, there is always new clinical data emerging with regard to dosing, administration, and long-term effects. It is imperative for pharmacists to keep abreast of current issues relating to opioid use and understand the intricacies involved in developing optimal dosing regimens and converting between various opioids. Being aware of patients’ beliefs regarding opioids and keeping an open dialogue with both patients and clinicians are also critical responsibilities for pharmacists. The following section offers a brief interview with Ewan McNicol, RPh, MS, regarding challenges and strategies in communicating with patients and physicians about opioid therapy.

**PHARMACIST INTERVIEW: PAIN MANAGEMENT FOR THE PHARMACIST**

**UTASiP:** With such widespread use of the Internet and a general increase in health awareness among consumers, today’s patients are certainly more educated about their conditions and drug therapy. Do you find that this trend has helped patients become more forthcoming in reporting pain and overcoming the stigma related to the need and use of opioids for chronic pain conditions?

**Mr McNicol:** Yes. Slowly, patients’ attitudes toward the use of opioids are changing, which is in large part fueled by greater access to information. However, a generational divide does appear to persist. Elderly patients are still generally more resistant to using opioids, and less likely to advocate for themselves and ask questions about their treatment. Younger patients don’t feel like they need to put up with pain, and so they tend to present earlier. Unfortunately, not all of the information available to consumers is helpful. Tabloid journalism often paints the use and abuse of opioids in sensationalist terms. For this reason, you may still see resistance to drugs such as oxycodone and methadone.

**UTASiP:** What are some challenges that you face in counseling patients who are receiving opioid therapy?

**Mr McNicol:** As we discussed earlier in this article, patients nowadays are often more open to a trial of opioids for chronic pain than they were previously. However, often side effects (eg, constipation) are unpleasant enough that patients would rather deal with the pain than continue to take the opioid. An estimated 20% of patients discontinue therapy due to this reason. It helps greatly if the pharmacist counsels patients at the initiation of therapy, and makes them aware of potential side effects and their treatment. Additionally, it’s important to set realistic expectations about the benefits of opioids. In many cases, opioids are either ineffective or only partly effective in treating chronic pain conditions. It’s equally important to establish what expectations the patient has (eg, a reduction in pain, an increased ability to do daily tasks, or a return to work). There has to be a common goal, in which the perceived benefits of therapy outweigh any risks or side effects. If this goal is not achieved after a sufficient trial of an opioid, then a different opioid may be more appropriate. If opioid rotation also fails, it may be advisable to discontinue opioid therapy altogether.

**UTASiP:** What are some important points to keep in mind when communicating with patients who may be suffering from chronic pain? Do you find many cultural and gender disparities among patients’ reporting of and experiences with pain?

**Mr McNicol:** There are often biopsychosocial issues attached to treating this population. Patients may be receiving multiple medications, both for pain and for comorbidities. Pain may be affecting their ability to work or socially interact. Depression can accompany chronic pain. The fact that the patient suffers from chronic pain may indicate that he/she may have already tried and failed several therapies. For all of these reasons, it is particularly important for the pharmacist to get to know the patient, to listen to how
chronic pain affects the patient, and to ascertain the patient’s attitude and goals regarding therapy. It’s a cliché, but individualization of therapy is incredibly important for patients with chronic pain.

I work in an area with a large Asian population. These patients, and particularly the older immigrants, tend to be more stoic about their pain and less likely to ask their physician questions. It’s just my personal experience, but women tend to be more communicative about their conditions than men. Of course, these are generalizations, and it’s important not to make assumptions about a patient beforehand.

UTASnP: With the profession of pharmacy moving away from the sole function of dispensing and assuming more clinical responsibilities, has there been a lot more interaction in recent years between pharmacists and physicians? Do you find that physicians are more accepting of pharmacist-driven recommendations regarding pain management? Can you briefly describe how pharmacists and physicians can best work together to optimize patient outcomes in chronic pain?

Mr McNicol: Absolutely. Not only are patients’ attitudes changing, but physicians’ attitudes are changing as well. Almost all of my interactions with physicians have been positive. I find younger physicians less likely to interpret a pharmacist’s intervention as equating to a questioning of their authority. In fact, they are often apt to contact a pharmacist for advice before writing a prescription, rather than waiting for us to intervene. Physicians seem to recognize the need for multidisciplinary input, particularly in patients who are often challenging to treat. They view the role of the pharmacist as an enabler rather than a barrier to patient care. Ultimately, the patient’s diagnosis and the prescribing of an opioid lie with the physician. It’s important to let the pharmacist perform the role that he or she does best. Physicians often don’t have the time for, or are not comfortable with, calculating equianalgesic conversions. They may be unaware of drug interactions. They may consider that the pharmacist is the best person to counsel a patient on how to optimally take their medication. It’s important that the pharmacist and physician establish their individual roles, thus the patient receives a consistent message about their therapy.

REFERENCES


