

## CASE STUDY

### A 71-Year-Old Patient With Widespread Pain



#### Presentation and Context

A 71-year-old female is referred by her rheumatologist for management of persistent widespread pain, especially in her shoulders, neck, and lower back. She is a widow who lives with her daughter and enjoys playing cards, gardening, and entertaining her grandchildren; however, her activities have been more and more limited due to her pain. Although she takes 3 or 4 doses of a short-acting opioid (hydrocodone 7.5 mg/acetaminophen [APAP] 750 mg) per day and APAP, as needed, she reports her pain worsening over the past 10 years to her current level, which is between 8 and 10 on a visual analog scale (VAS). Her chronic pain and limited activity have caused her to feel depressed, for which she has received treatment in the past. She has bilateral upper extremity tingling at night and difficulty ambulating, especially at nighttime, because she is unsteady. She denies having any allergies or using alcohol or recreational drugs, although she has smoked half a pack of cigarettes a day for “many years.” This patient’s multiple medical problems and possible cervical myelopathy contribute to the widespread nature of her pain in addition to that associated with rheumatoid arthritis (RA).

#### Physical Examination

- Blood pressure 130/80 mm Hg
- Abdomen Benign
- Extremities Without cyanosis, clubbing, or edema; peripheral pulses intact
- Hands Multiple joint deformities and rheumatoid nodules seen bilaterally

#### Neurologic/Pain Assessment

- Neck/shoulders Pain on palpation of the cervical paraspinal muscles and bilateral upper trapezius muscles; decreased range of motion of neck and shoulders; no carotid bruits
- Back/spinal column Impaired lumbar forward flexion to 30°; Romberg positive
- Extremities Full strength bilaterally, upper and lower; slightly wide-based gait and unsteady on tandem gait, but she can walk on her heels and toes; she has impaired position sense of both distal lower extremities and decreased vibratory sense to both ankles
- Feet The Babinski response is present on the left but absent on the right; her deep tendon reflexes are brisk
- Mental state Alert and oriented to person, place, and time; her speech and language are intact
- Beck Depression Inventory Score is 16, indicating mild to moderate depression
- Opioid Risk Tool Score is 1, indicating a low-risk potential for opioid abuse

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- Cranial nerves 2-12    Within normal limits
- Electromyography    Normal
- Nerve conduction velocities    Normal

#### Medical History

- Gastroesophageal reflux disease
- Rheumatoid arthritis
- Osteoarthritis
- Cervical degenerative disc disease
- Hypertension
- Atrial fibrillation
- Coronary artery disease
- Postspinal surgery ×2
- Bilateral total knee replacement
- Cholecystectomy
- Depression

#### Current Medications

- Isosorbide dinitrate
- Diltiazem
- Furosemide
- Esomeprazole
- Celecoxib
- Warfarin
- Hydrocodone 7.5 mg/APAP 750 mg 4 times a day
- Over-the-counter APAP, as needed

#### Clinical Decision Point

What pharmacologic aspects of this case could be improved upon in the new treatment plan?

- Poor efficacy of the current opioid
- The use of additional APAP, as needed
- The use of a nonsteroidal anti-inflammatory drug (NSAID) in an older adult with GERD
- Polypharmacy
- All of the above listed elements are important to consider

#### Comment

The patient's opioid treatment was clearly not providing adequate analgesia. To determine which opioid may be most appropriate (Table 1 and Table 2),<sup>1</sup> it is important to select a medication that fits the patient's complaint of pain, and then reassess the pain level and whether the pain relief obtained is adequate. If the patient's pain continues to be present throughout the day once the patient has been using opioids for several weeks, then consider using an extended-release (ER) medication in combination with a short-acting opioid for breakthrough pain.<sup>2</sup>

**Table 1. Guidance on Opioids for Treatment of Different Severities of Chronic Pain**

Severity of Pain	Opioid
Mild	➤ Codeine-containing medications
Moderate	➤ Oxycodone-containing medications ➤ Oxymorphone-containing medications ➤ Hydrocodone-containing medications
Severe	➤ Fentanyl ➤ Hydromorphone ➤ Methadone ➤ Morphine

**Table 2. Equianalgesic Opioid Doses and Timing of Effects**

Opioid Analgesic	Equianalgesic Doses <sup>a,b</sup> (mg)	Peak Effect (h)	Duration (h)
Morphine	10 IM/IV/SQ 20-30 PO	0.5-1 1-2	3-4 3-6
Controlled-release morphine	20-30 PO	NA	8-12
Extended-release morphine	20-30 PO	NA	12-24
Hydromorphone	1.5 IM/IV/SQ 7.5 PO	0.5-1 1-2	3-4 3-6
Oxycodone	20-30 PO	1-2	3-6
Controlled-release oxycodone	20-30 PO	3-4	8-12
Oxymorphone	1 IM/IV/SQ	0.5-1	3-6
Immediate-release oxymorphone	10-15 PO	1-2	6-8
Extended-release oxymorphone	10-15 PO	2.5-4	12
Levorphanol	2 IM/IV/SQ 4 PO	0.5-1 1-2	3-6 3-6
Methadone	Variable	1-2	6-8
Hydrocodone	30 PO	1-2	3-6
Fentanyl	50-100 µg IV/SQ	<10 min	1-2
Fentanyl transdermal system	NA	12-24	48-72 per patch
Oral transmucosal fentanyl citrate	NA	15-30 min	1-2
Fentanyl buccal tablet	NA	15 min	1-2

IM = intramuscular; IV = intravenous; NA = not applicable; PO = by mouth; SQ = subcutaneous.

<sup>a</sup>Dose provides analgesia equivalent to 10 mg of morphine given intramuscularly. These ratios are useful guides when switching drugs or routes of administration. In clinical practice, the potency of the IM route is considered to be identical to IV and SQ routes.

<sup>b</sup>When switching from one opioid to another, incomplete cross-tolerance requires a reduction in the dose of the new drug by 25% to 50% to prevent excessive opioid effects. Provisions of "rescue" medication during the conversion period (a few days) prevent breakthrough pain that might result from relative underdosing.

Adapted from Fine PG, Portenoy RK.<sup>1</sup>

If an analgesic regimen continues to be ineffective—a situation hallmarked by no improvement in pain and/or functioning, excessive or intolerable side effects, or unresolved aberrant behavior—then the treatment(s) should be either changed or discontinued.<sup>2</sup> More specifically, the dose of the systemic opioid(s) can be reduced and a co-analgesic added, or the route of administration of the opioid can be changed, or an alternative opioid can be prescribed (Figure 1, page 22).<sup>1,3</sup> In fact, opioid rotation is supported by a systematic review of the literature which indicated that >50% of patients with chronic pain and a poor response

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to the original opioid derive clinical benefit from an alternate opioid.<sup>4</sup> Additionally, a survey of a cancer population documented that 80% of patients required one opioid switch, another 44% required trials of 2 or more opioids, while 20% required trials of 3 or more opioids to achieve satisfactory analgesia.<sup>5</sup> Potentially, the benefits of opioid rotation are derived from clearance of accumulated opioid metabolites and the parent compound itself, allowing for the introduction of a new opioid at a lower dose due to incomplete cross-tolerance.<sup>6</sup>

#### Adjuvant Agents

The use of APAP as needed in addition to that already contained in hydrocodone

7.5 mg/APAP 750 mg should be reconsidered. As the chronic use of  $\geq 4$  g/day APAP can cause hepatotoxicity,<sup>7</sup> the total daily dose of APAP including that from the short-acting combination opioid needs to be calculated. Also, APAP can potentiate the effects of warfarin; therefore, the routine prothrombin time should be monitored as well.<sup>7</sup>

All NSAIDs used chronically are associated with increased cardiovascular risks, and due to the potential for gastrointestinal (GI) bleeding, traditional NSAIDs should not be prescribed for patients with a history of GI bleeding, renal insufficiency, or hepatic dysfunction.<sup>11</sup> One of the major risks of taking non-selective NSAIDs is gastric ulceration.<sup>10</sup> Most patients with these ulcers are asymptomatic and only seek medical care when they develop tarry stools or hematemesis. In order to lower the risk of GI bleeding for patients taking non-selective NSAIDs, a proton pump inhibitor (PPI) can be prescribed, although it only provides protection for the upper GI system and adherence is often problematic.

NSAID use in this patient should be reassessed. Although frequently prescribed to older adults with a history of ulcer disease and GERD,<sup>8</sup> conventional NSAIDs have been contraindicated in this population in the well-established, explicit list of inappropriate medications for the elderly, called Beers criteria.<sup>9</sup> Also, NSAIDs may not be appropriate for patients with recent bypass surgery, unstable angina, or myocardial infarction or who have ischemic heart disease or have had an ischemic cerebrovascular event.<sup>10</sup>

**Decision: The new treatment plan should address the poor efficacy of the current opioid, use of additional APAP as needed, use of an NSAID, and polypharmacy.**

Effective management of this patient's complex pain scenario is made even more challenging by her age and comorbidities. When possible, the underlying cause of pain should be treated.<sup>11</sup> Therefore, before proceeding with any treatment decisions, the patient's previous medical records and diagnostic tests are reviewed and her referring practitioners are consulted. Because no recent image is available, an updated magnetic resonance image (MRI)

1. Calculate the new daily opioid dose based on the equianalgesic table equivalency
2. Decrease the equianalgesic dose for all opioids 25% to 50%, except methadone and transdermal fentanyl
  - For methadone, decrease the equianalgesic dose 75% to 90%
  - For transdermal fentanyl, do not reduce the equianalgesic dose
3. Divide the dose according to the dosing interval
4. Reassess the patient's response and titrate accordingly

**Figure 1. Strategies for opioid rotation.**

Fine PG, Portenoy RK.<sup>1</sup>

of the cervical spine is obtained. The MRI reveals cervical degenerative disk disease (DDD) with spinal cord narrowing. The patient's diagnosis is therefore updated to include RA, cervical DDD with myelopathic changes, and cervical radiculopathy.

With aging, metabolic changes contribute to individual differences in drug distribution, bioavailability, and elimination. Polypharmacy can present a specific challenge in older adults. Therefore, this patient requires a tailored treatment plan with modified dosages and frequencies, which takes into account her specific comorbidities and potential for drug-drug interactions.<sup>12</sup> It should be noted that the potential for drug-drug interactions is an important consideration for patients of all ages who may be prescribed opioids, as many opioids are metabolized by the enzymes that modify and break down 40% to 50% of all medications, called the cytochrome P450 (CYP 450) isoenzymes—primarily CYP 2D6 and CYP 3A4.<sup>13</sup> Tramadol, oxycodone, hydrocodone, and codeine are converted to active metabolites by CYP 2D6; therefore, drugs that inhibit this enzyme will decrease opioid effects.<sup>14,15</sup> Conversely, methadone and fentanyl are converted to inactive metabolites by CYP 3A4; hence, drugs that inhibit this enzyme will increase their opioid effects.<sup>14</sup> However, morphine, hydromorphone, and oxymorphone are *not* metabolized by the CYP 450 enzymes and can therefore generally be prescribed concomitantly with medications metabolized by that enzyme family.

The clinician notes the patient's score of 16 on the BDI, indicating mild to moderate depression. Depression is often seen in people who have chronic, painful conditions. Other sequelae to pain that lead to a decreased quality of life are not uncommon.<sup>16</sup> These complications associated with pain should be addressed in a comprehensive treatment plan. Hence, an antidepressant with neuromodulating effects is considered for this patient during the ongoing treatment plan, once the opioid analgesic therapy is stabilized.

### Improving the Efficacy of Opioid Therapy

Because better pain relief can be associated with higher activity levels, and because the patient has a history of opioid use without side effects, titration to a higher opioid dose with less APAP would likely enhance the pain relief achieved while decreasing the risk of toxicity. Hence, a stronger opioid is prescribed and the rationale for the medication change is explained to the patient. The hydrocodone 7.5 mg/APAP 750 mg prescription is changed to oxycodone 10 mg/APAP 325 mg, 4 to 6 times a day as needed. In addition, because the patient is being considered for long-term opioid therapy, the Screener and Opioid Assessment for Patients with Pain (SOAPP) is administered to screen for substance abuse potential<sup>17</sup>; another screening tool, the Diagnosis, Intractability, Risk, and Efficacy (DIRE) score can be used to predict whether a patient with chronic noncancer pain (CNCP) will achieve effective analgesia and adhere to a long-term opioid treatment regimen.<sup>18</sup> Because patient reporting of adherence to both prescribed and other drugs is unreliable at best, routine urine toxicity screens should be utilized as well,<sup>19</sup> even for an elderly patient. In addition, as part of universal precautions in pain management (Figure 2, page 26),<sup>20</sup> a written opioid treatment agreement and opioid consent form can be beneficial to ensure that the patient understands the risks and benefits of opioid therapy and to spell out the specific conditions of its prescription.<sup>21</sup>

## The Burden of Pain

An estimated 100 million Americans suffer from pain.<sup>1</sup> Approximately 75% of the Americans with pain are afflicted chronically,<sup>1</sup> yet only 58% of patients with chronic pain are satisfied with their analgesics.<sup>2</sup> Many of these individuals exhibit signs of reduced physical, social, and psychological well-being.<sup>3,4</sup> Indeed, chronic pain is the most common cause of long-term disability,<sup>3</sup> especially among older adults, of whom 2 out of 3 who are taking pain medications still find that pain hinders their performance of routine tasks and enjoyment of hobbies.<sup>2</sup> Additionally, 1 out of 4 individuals suffering from chronic pain changes doctors, most commonly due to pain even after treatment.<sup>2</sup> Annually, common pain conditions exact over a \$61 billion dollar toll on the American economy in lost productivity among active workers,<sup>2</sup> and this accounts for only 27% of the work-related cost of pain conditions in the United States.<sup>5</sup>

Recognizing pain requires an assessment that includes taking a complete history, conducting a thorough physical examination, and making a psychosocial assessment. Guidelines created by an interdisciplinary panel of experts in 2007 recommend a battery of the Brief Pain Inventory (BPI) combined with the short form of the McGill Pain Questionnaire (SF-MPQ), as the combination probes pain intensity, quality, interference with function (physical, relational, and psychologic), location, medication use, and perceived relief, and is suited for administration over a 10-minute period.<sup>4,6,7</sup> Throughout the assessment, as well as ongoing during the treatment period, the patient findings and therapy plan should be documented (Table).<sup>3</sup>

### Chronic Noncancer Pain

Chronic noncancer pain (CNCP) is frequently undertreated, and preventative treatment is underutilized, despite guidelines recommending prophylaxis.<sup>8</sup> Although opioids have been recommended as an essential component of the analgesic armamentarium available to manage pain by the World Health Organization since its inception,<sup>9</sup> and opioids are prescribed for as many as 90% of patients with chronic pain seen in pain management clinics, few primary care physicians prescribe opioids, even

for chronic pain.<sup>3</sup> In fact, evidence-based guidelines published by several organizations, such as the American Pain Society, recommend that when indicated, opioids should be considered as a treatment for moderate-to-severe pain associated with chronic ailments ranging from low back pain<sup>10</sup> and osteoarthritis<sup>11,12</sup> to neuropathic pain.<sup>13</sup> Moreover, opioids are indicated when (1) pain persists despite reasonable trials of nonopioid analgesics and adjuvants, (2) a patient in severe pain requires rapid relief, or (3) the patient's characteristics contraindicate use of other analgesics.<sup>13</sup>

### References

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**Table. Areas and Elements of Patient Care Requiring Documentation**

Area	Elements
History and physical evaluation	<ul style="list-style-type: none"> <li>➤ Medical history</li> <li>➤ Medication history</li> <li>➤ Pain history</li> <li>➤ Substance abuse/addiction history</li> <li>➤ Screening tool assessments (eg, SOAPP, ORT)</li> <li>➤ Pain score/intensity</li> <li>➤ Physical examination</li> <li>➤ Results of diagnostic studies</li> </ul>
Diagnosis/clinical indication for prescribing opioids	<ul style="list-style-type: none"> <li>➤ Assumed pathology</li> <li>➤ Hypothesized pathology</li> </ul>
Treatment plan	<ul style="list-style-type: none"> <li>➤ Treatments, pharmacologic (including type of medication, dosage, quantity, and date prescribed)</li> <li>➤ Treatments, nonpharmacologic (eg, physical therapy, exercise, behavioral therapy, lifestyle changes)</li> <li>➤ Treatment goals and anticipated time course</li> <li>➤ Compliance measures (eg, urine drug screens, pill or patch counts)</li> </ul>
Informed consent and agreement for treatment	<ul style="list-style-type: none"> <li>➤ Informed consent, including discussion of risks and benefits</li> <li>➤ Agreement specifying patient's responsibilities and clinic policies</li> </ul>
Periodic review	<ul style="list-style-type: none"> <li>➤ Pain score/intensity and perceived analgesia from current medications</li> <li>➤ Physical, occupational, and overall functioning; family and social relationships; mood; and sleep patterns</li> <li>➤ Side effects (including severity)</li> <li>➤ Aberrant drug-taking behaviors</li> <li>➤ Medication</li> </ul>
Consultations and referrals	<ul style="list-style-type: none"> <li>➤ As appropriate to provide comprehensive care</li> </ul>

SOAPP = Screener and Opioid Assessment for Patients with Pain; ORT = Opioid Risk Tool. Nicholson B, Passik SD.<sup>3</sup> © 2007 by the Southern Medical Association. Reprinted with permission of Lippincott Williams & Wilkins.

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Elements of a written opioid treatment agreement should include<sup>22</sup>:

- Specific information about the medications to be used
- Specific amounts to be dispensed; usually they are small
- A specific refill policy
- The policy for replacement of “lost” medications
- Frequency of office visits
- The policy for other practitioners prescribing opioid medications: one practitioner *and only one practitioner is the prescriber*

An analysis of 39 opioid contracts submitted by major academic pain centers found that despite the overall diversity of the content in the agreements, these written consents universally attempted to improve patient care through education, define a mutually agreed-upon course, and/or enhance adherence.<sup>23</sup> Furthermore, controlled-substance agreements combined with periodic measures of adherence can help provide structure, support, monitoring,<sup>24</sup> and ultimately result in a 50% reduction in opioid abuse.<sup>25</sup>

The patient is enrolled in an opioid compliance monitoring program. After 2 weeks, the patient reports her pain level to be 3 to 4 on a VAS, while taking 5 doses of oxycodone 10 mg/APAP 325 mg a day. Intolerable side effects can lead to a poor outcome in 10% to 30% of patients taking opioids.<sup>6</sup> Constipation can be the most troublesome side effect for patients with chronic pain as it is a dose-related side effect that does not attenuate with time.<sup>11</sup> The patient is encouraged to continue eating a fiber-rich diet. If she begins to have constipation, a docusate/sennosides regimen would be added, starting with one tablet per day taken nightly, with increasing doses until her bowel movements become regular. In addition, she would be instructed to drink adequate fluids.

During her follow-up visit 2 weeks later, the patient reports that she had resumed gardening and outings with her daughter, but as her pain—especially in her shoulders—increased, so her activities declined. The patient rates her pain level as 3 to 4 by VAS when she is not active, but as 7 to 8 with activity. Otherwise, she is medically stable, with no apparent side effects from her medications, including no constipation. She is reminded to monitor her bowel movements, so a laxative can be added if she does indeed become constipated. She appears to be using her medication appropriately, but both an assessment of pain and monitoring for aberrant drug-taking behaviors should be part of the ongoing process of patient care, even for

- ➔ Make an appropriate differential diagnosis
- ➔ Perform a psychological assessment, including the risk of addictive disorders
- ➔ Document informed consent
- ➔ Use a treatment agreement
- ➔ Assess pain level and function before and during therapy
- ➔ Individualize therapy with or without adjunctive medication
- ➔ Reassess pain scores and functionality
- ➔ Regularly assess the “4 As”: Analgesia, Activities of daily living, Adverse effects, and Aberrant drug-taking behaviors
- ➔ Periodically review the pain diagnosis and comorbid conditions
- ➔ Document all assessments and care plans

**Figure 2. Universal precautions in pain management.**

Reprinted from: Gourlay D et al.<sup>20</sup>

older patients that are seemingly doing well.<sup>26</sup> The most important aspects of monitoring are highlighted by the “Four A’s of Pain” (Figure 2).<sup>22</sup>

### Clinical Decision Point

How should the treatment plan be modified at this point?

- Switch to an ER opioid and continue prescribing a short-acting opioid for breakthrough pain
- Add duloxetine for depression and the neuropathic component of pain
- Initiate physical therapy for strengthening and functional restoration
- All of the above therapy changes can be implemented at this time

### Comment

For patients who require treatment for chronic pain and have minimal opioid side effects, conversion from a short-acting to an ER opioid can provide more consistent pain relief and reduce the burden of dosing,<sup>11</sup> thereby potentially increasing adherence if this is a problem. When converting, the best practice is to “start low and go slow,” as conversion tables can overestimate the ER dose. The American Pain Society recommends initiating ER opioid therapy with 50% to 75% of the expected daily IR dose, with an additional IR opioid provided for breakthrough pain.<sup>11</sup>

### Decision: Implement all recommended changes in therapy.

The patient is switched to the ER transdermal fentanyl patch and given a prescription for short-acting oxycodone 10 mg/APAP 325 mg to treat incident pain associated with gardening and physical therapy. Duloxetine is added to treat depression and the neuropathic component of her pain, and physical therapy is added to improve musculoskeletal function, balance, and social interaction.

Use of transdermal fentanyl and oral oxycodone is supported by guidelines on the management of CNCP derived by reviewing the available evidence in the literature.<sup>27</sup> Although traditional tricyclic antidepressants have demonstrated efficacy for both pain and depression, the propensity for anticholinergic side effects (such as dry mouth, ataxia, and urinary retention), as well as sedation, postural hypotension, and constipation, limit their use in older adults.<sup>9,28</sup> The serotonin-noradrenaline reuptake inhibitor (SNRI) duloxetine has milder side effects, as well as demonstrated efficacy in treating neuropathic pain, and therefore may be a better choice for this older adult.<sup>28</sup>

During a follow-up visit 7 months after the initial visit, the patient reports her pain as 10 out of 10 on a VAS scale. As explained by her daughter who accompanies the patient to her visit, her mother had emergency surgery 3 weeks earlier for a perforated ulcer after complaining of abdominal pain, blood in her vomit, and a tarry stool. The emergency doctor attributed this GI injury to the patient’s new strategy of taking 2 to 3 doses of NSAIDs and approximately 8 doses of extra-strength acetaminophen per day to control her arthritis pain. Her new self-medicating strategy also included discontinuing her opioid therapy. It is not advisable for patients to stop taking opioid medications without consulting a clinician. A slow reduction in dose will minimize and help manage any potential withdrawal symptoms. When discontinuing therapy, decrease the dose by 25% every 1 to 2 weeks. An alpha-adrenergic blocker, tizanidine, or clonidine may help lessen withdrawal symptoms if they do occur.

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#### Clinical Decision Point

What went wrong with the treatment and monitoring plan?

- The patient should have stayed on a short-acting opioid only
- The patient should have been regularly monitored with urine toxicity screens
- The antidepressant agent was added too early
- The patient was not given enough physical therapy

#### Comment

Urine toxicity screening was not used on a routine basis at follow-up visits; otherwise this assay might have detected the absence of the prescribed opioid. A comprehensive monitoring program involves both urine drug testing and behavioral monitoring, as more patients with inappropriate drug-taking behaviors will be captured with the combination than by using either method alone.<sup>29</sup> For example, a significant portion of patients without signs of aberrant drug-taking behaviors (Table 3)<sup>30</sup> yield a positive urine drug test.<sup>29</sup> Urine drug testing in clinical practice is essential to providing objective documentation of patients' adherence to the prescribed treatment regimen and opioid contract, and to support treatment decisions.<sup>20</sup> Testing provides feedback on drugs taken within a 1- to 3-day window. Samples are best collected randomly in a clinical setting to minimize tampering, with at least a 30-mL volume and a creatinine concentration <20 mg/dL to enhance the reliability of the sample.<sup>20</sup> Indications of tampering with the sample can be given by the temperature (within 4 minutes of voiding it should be between 90°F and 100°F), pH (between 4.5 and 8.0), and/or creatinine concentration of the urine.<sup>20</sup>

Immunoassays are commonly used to rapidly and simultaneously assay for multiple drugs in urine. Table 4, provides the cutoff numbers considered positive for the drug of interest.<sup>20</sup> However, due to cross-reactivity between drugs, and variability in the sensitivities and specificities of the tests, gas chromatography and mass spectrometry are more reliable ways to detect the presence of specific drugs. Conditions that can potentially confound the interpretation of test results include the presence of morphine, which can be indicative of heroin use (in the presence of the heroin metabolite 6-monoacetylmorphine), or simply the presence of metabolites of codeine or morphine from digested foods such as poppy seeds. Amphetamine and methamphetamine are structurally similar to many over-the-counter and prescription medications and can yield false-positive results that must be interpreted carefully.<sup>20</sup>

**Table 3. Notable Aberrant Behaviors Potentially Indicative of Drug Abuse**

- Purposeful oversedation
- Negative mood changes
- Intoxicated appearance
- Increasingly unkempt or impaired
- Involvement in car or other accidents
- Requests frequent early renewals
- Increased dose without authorization
- Reports lost or stolen prescriptions
- Uses pain medication in response to situational stressor
- Abusing alcohol or illicit drugs
- Arrested by police

Passik SD, Kirsh KL.<sup>30</sup>

**Table 4. Initial and Confirmation Cutoff Concentrations of Drugs During Urine Drug Testing According to Federal Standards**

Drug	Immunoassay Screening Cutoff Concentration (ng/mL)	Confirmation Cutoff Concentration (ng/mL)
Marijuana metabolites THC	50 -	- 15
Cocaine metabolites Benzoyllecgonine	300 -	- 150
Opiates Morphine Codeine	2000 - -	- 2000 2000
Phencyclidine	25	25
Amphetamines Amphetamine Methamphetamine	1000 - -	- 500 500

THC = 11-nor-delta-9-tetrahydrocannabinol-9-carboxylic acid.

Reprinted from: Gourlay D et al.<sup>20</sup>

While routine urine toxicity screening would have helped detect the patient's new self-medicating approach that did not include opioids, management of this case was clinically inadequate. The overall lack of diligence included the failure to assess all domains of her chronic pain, including family attitudes and involvement, the quality of life, physical function, psychosocial morbidity, economic concerns, and social consequences. Moreover, further assessment of this patient's belief systems regarding her pain and its management could have revealed that this patient had a fear of burdening her daughter and of drug addiction with use of opioids. She had stopped taking her opioid analgesics and self-managed with nonopioid therapy, despite the education provided on the risks of APAP and NSAID toxicity early in the practitioner-patient relationship.

- ➔ **Addiction** is a chronic neurobiologic disease characterized by the four Cs: craving, compulsive use, lack of control, and continued use despite harm.
- ➔ **Physical dependence** is a state of adaptation where the body becomes accustomed to the regular use of a medication. A withdrawal syndrome occurs when the medication is stopped abruptly. It is a normal physiologic response that occurs with chronic administration of different drug classes and does not indicate addiction.
- ➔ **Tolerance** is a physiologic adaptation to drug exposure in which drug effect diminishes over time and increased dosage is needed to produce the same effect. Tolerance is a normal response and is not indicative of addiction.

**Figure 3. Differences among addiction, dependence, and tolerance.** Nicholson B, Passik SD.<sup>22</sup>

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### A 71-Year-Old Patient With Widespread Pain

**Decision: The patient should have been monitored for understanding and compliance with the plan of care, and given psychosocial support as well as intermittent urine toxicity screens.**

The patient's understanding of her treatment plan must be reassessed frequently and she should receive further education regarding the side effects of all potential analgesics, including the safety of opioids and the telltale signs of addiction (Figure 3, page 29).<sup>22</sup> All patients should be informed that a urine drug screen will provide evidence of aberrant drug use even in the absence of behavioral signs. The family, and in this case, the patient's daughter, must be involved in the treatment plan so that questions and concerns can be discussed as they arise during treatment. Ongoing monitoring will involve urine toxicity screens and asking about pain interference with pleasurable activities; the patient's pain may be well controlled at rest but not with activity unless she is adhering to treatment. The Pain Assessment and Documentation Tool (PADT) (Figure 4)<sup>31</sup> can be used to fulfill the ongoing obligations of assessment and documentation of the opioid therapy used by patients with chronic pain. Four domains: pain relief, patient functioning, adverse events, and drug-related behaviors, are probed in this tool that typically takes 10 to 20 minutes to complete.

### Clinical Pearls

- Evidence exists for the efficacy of opioids in the treatment of chronic pain supporting their inclusion as an essential tool in the armamentarium for managing chronic pain; persistent moderate-to-severe pain that is unresponsive to non-opioid analgesics and adjuvants warrants a trial of opioids.
- Appropriate use of opioids depends upon differentiating among dependence, tolerance, and addiction and identifying aberrant drug-taking behaviors.
- Opioid treatment should include setting realistic goals, a collaborative practitioner-patient relationship, patient education, ongoing documentation and reassessments, and a clearly defined exit strategy.

## PROGRESS NOTE

### Pain Assessment and Documentation Tool (PADT™)

Patient Stamp Here

Patient Name: \_\_\_\_\_ Record #: \_\_\_\_\_

Assessment Date: \_\_\_\_\_

#### Current Analgesic Regimen

Drug name	Strength (eg, mg)	Frequency	Maximum Total Daily Dose
_____	_____	_____	_____
_____	_____	_____	_____

*The PADT is a clinician-directed interview; that is, the clinician asks the questions, and the clinician records the responses. The Analgesia, Activities of Daily Living, and Adverse Events sections may be completed by the physician, nurse practitioner, physician assistant, or nurse. The Potential Aberrant Drug-Related Behavior and Assessment sections must be completed by the physician. Ask the patient the questions below, except as noted.*

#### Analgesia

If zero indicates "no pain" and ten indicates "pain as bad as it can be," on a scale of 0 to 10, what is your level of pain for the following questions?

1. What was your pain level on average during the past week? (Please circle the appropriate number)

**No Pain** 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 **Pain as bad as it can be**

2. What was your pain level at its worst during the past week?

**No Pain** 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 **Pain as bad as it can be**

3. What percentage of your pain has been relieved during the past week? (Write in a percentage between 0% and 100%) \_\_\_\_\_

4. Is the amount of pain relief you are now obtaining from your current pain reliever(s) enough to make a real difference in your life?

Yes       No

5. **Query to clinician:** Is the patient's pain relief clinically significant?

Yes       No       Unsure

#### Activities of Daily Living

Please indicate whether the patient's functioning with the current pain reliever(s) is Better, the Same, or Worse since the patient's last assessment with the PADT.\* (Please check the box for Better, Same, or Worse for each item below.)

	Better	Same	Worse
1. Physical functioning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Family relationships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Social relationships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Mood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Sleep patterns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Overall functioning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\* If the patient is receiving his or her first PADT assessment, the clinician should compare the patient's functional status with other reports from the last office visit.

(Continued on reverse side)

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**Figure 4.** The revised Pain Assessment and Documentation Tool (PADT) shown as a 2-sided figure (front).<sup>31</sup> Reprinted from *Clin Ther*, 26, Passik SD, Kirsh KL, Whitcomb L, et al. A new tool to assess and document pain outcomes in chronic pain patients receiving opioid therapy, 552-561, Copyright (2004), with permission from Excerpta Medica, Inc.

## CASE STUDY

### A 71-Year-Old Patient With Widespread Pain

<b>PROGRESS NOTE</b>																																																											
<b>Pain Assessment and Documentation Tool (PADT™)</b>																																																											
<b>Adverse Events</b>		<b>Potential Aberrant Drug-Related Behavior</b> <small>This section must be completed by the <u>physician</u>.</small>																																																									
<p>1. Is patient experiencing any side effects from current pain reliever(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><b>Ask patient</b> about potential side effects:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;"></th> <th style="width: 10%;">None</th> <th style="width: 10%;">Mild</th> <th style="width: 10%;">Moderate</th> <th style="width: 10%;">Severe</th> </tr> </thead> <tbody> <tr><td>a. Nausea</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>b. Vomiting</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>c. Constipation</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>d. Itching</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>e. Mental cloudiness</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>f. Sweating</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>g. Fatigue</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>h. Drowsiness</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>i. Other _____</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>j. Other _____</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> </tbody> </table> <p>2. Patient's overall severity of side effects?  <input type="checkbox"/> None <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe</p>						None	Mild	Moderate	Severe	a. Nausea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	b. Vomiting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	c. Constipation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	d. Itching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	e. Mental cloudiness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	f. Sweating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	g. Fatigue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	h. Drowsiness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	i. Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	j. Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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<p>Please <b>check</b> any of the following items that you discovered during your interactions with the patient. Please note that some of these are directly observable (eg, appears intoxicated), while others may require more active listening and/or probing. Use the "Assessment" section below to note additional details.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Purposeful over-sedation</li> <li><input type="checkbox"/> Negative mood change</li> <li><input type="checkbox"/> Appears intoxicated</li> <li><input type="checkbox"/> Increasingly unkempt or impaired</li> <li><input type="checkbox"/> Involvement in car or other accident</li> <li><input type="checkbox"/> Requests frequent early renewals</li> <li><input type="checkbox"/> Increased dose without authorization</li> <li><input type="checkbox"/> Reports lost or stolen prescriptions</li> <li><input type="checkbox"/> Attempts to obtain prescriptions from other doctors</li> <li><input type="checkbox"/> Changes route of administration</li> <li><input type="checkbox"/> Uses pain medication in response to situational stressor</li> <li><input type="checkbox"/> Insists on certain medications by name</li> <li><input type="checkbox"/> Contact with street drug culture</li> <li><input type="checkbox"/> Abusing alcohol or illicit drugs</li> <li><input type="checkbox"/> Hoarding (ie, stockpiling) of medication</li> <li><input type="checkbox"/> Arrested by police</li> <li><input type="checkbox"/> Victim of abuse</li> </ul> <p>Other: _____            _____            _____</p>																																																											
<p><b>Assessment:</b> (This section must be completed by the <u>physician</u>.)</p> <p>Is your overall impression that this patient is benefiting (eg, benefits, such as pain relief, outweigh side effects) from opioid therapy? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure</p> <p>Comments: _____            _____</p> <p><b>Specific Analgesic Plan:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Continue present regimen</li> <li><input type="checkbox"/> Adjust dose of present analgesic</li> <li><input type="checkbox"/> Switch analgesics</li> <li><input type="checkbox"/> Add/Adjust concomitant therapy</li> <li><input type="checkbox"/> Discontinue/taper off opioid therapy</li> </ul> <p>Comments: _____            _____            _____            _____</p>																																																											
<p>Date: _____ Physician's signature: _____</p>																																																											
<p>Provided as a service to the medical community by Janssen Pharmaceutica Products, L.P.</p>																																																											

Figure 4. The revised Pain Assessment and Documentation Tool (PADT) shown as a 2-sided figure (back).<sup>31</sup>

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