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## Obstacles to the Prescription and Use of Opioids

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### LESSONS LEARNED AT THE INTERFACE OF MEDICINE AND PSYCHIATRY

The Psychiatric Consultation Service at Massachusetts General Hospital (MGH) sees medical and surgical inpatients with comorbid psychiatric symptoms and conditions. During their twice-weekly rounds, Dr Stern and other members of the Consultation Service discuss diagnosis and management of hospitalized patients with complex medical or surgical problems who also demonstrate psychiatric symptoms or conditions. These discussions have given rise to rounds reports that will prove useful for clinicians practicing at the interface of medicine and psychiatry.

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**H**ave you ever wondered why physicians try to avoid prescribing opioids for patients with chronic pain? Have you ever struggled to decide whether prescribing opioids is appropriate or wondered how likely it is that one of your patients will become dependent following prescription of an opioid? If you have, then the following case vignette and discussion of patient, provider, and system factors that interfere with prescribing an opioid should prove useful.

### CASE VIGNETTE

Mr A, a 44-year-old veteran with a history of hypertension, gout, and chronic lower back pain, presented to his primary care physician's office with complaints of persistent back pain. He has tried ibuprofen and acetaminophen, fentanyl patches, and, most recently, vicodin, all without much relief. He says that his back pain interferes with his ability to work at his physically demanding job (as a contractor) and to play soccer on weekends. He describes having difficulty with sleep and feeling irritable due to his pain. Mr A's other medications include hydrochlorothiazide and allopurinol. He has no personal or family history of drug or alcohol abuse. He is married and has 2 children in college. During the visit, he reports that he previously received oxycodone for acute back spasms and is wondering if he could try oxycodone once again to treat his current pain. Should Mr A's physician prescribe oxycodone? How much and for how long?

### WHAT IS THE LINK BETWEEN OPIOID MECHANISM AND PAIN RELIEF?

Opiate use dates back to the beginning of human civilization, yet opiates and their synthetic derivatives continue to be the most potent and effective analgesic agents available.<sup>1-3</sup> Opiates are substances that contain opium or its derivatives. The term *opioid* refers to natural or synthetic chemicals that have opiate-like effects. Opioid medications can be grouped into naturally occurring opioids (morphine, codeine, thebaine), semisynthetic opioids (oxycodone, hydrocodone, hydromorphone), and synthetic opioids (fentanyl, meperidine, methadone, tapentadol).

Opioids imitate endogenous peptides, including endorphins, endomorphins, enkephalins, and dynorphins, by stimulating opioid G protein-coupled receptors.<sup>2,4</sup> They act at 4 subtypes of opioid receptors ( $\mu$ ,  $\delta$ ,  $\kappa$ , and the nociceptin orphanin peptide receptor). Among these receptors,  $\mu$  is the most closely associated with analgesia and addiction.<sup>5</sup> Due to concern about addiction, pain often goes undertreated.

Undertreatment of chronic pain has both human and economic consequences. In 2008, about 100 million adults in the United States suffered from chronic pain, resulting in huge health care costs and lost productivity (totaling roughly \$560–\$635 billion).<sup>6</sup> Chronic back pain alone is estimated to cost \$100 million per year, representing about 2% of the US domestic gross national product.<sup>7</sup> In addition to its economic consequences, undertreatment of pain represents a failure of a physician's mandate to alleviate suffering and disease burden. Beyond its effects on suffering, chronic pain disrupts patients' capacity to work and their social

- Opioid prescription is fraught with challenges.
- Concern for opioid misuse can result in undertreatment of pain.
- Risk-assessment calculators, alternative therapies, and objective outcome measure are some tools that physicians can use to help balance the risks and benefits of opioid use.

interactions, and it increases the risk of both depression and anxiety.<sup>8,9</sup>

### WHAT ARE THE PHYSICIAN'S OBSTACLES TO THE PRESCRIPTION OF OPIOIDS?

Physicians who prescribe opioids must consider the risk of tolerance and substance abuse and associated unhealthy behavior patterns. Drug tolerance is an altered physiologic state caused by repeated exposure to a drug, which necessitates continued administration of the drug to prevent withdrawal symptoms. Substance abuse includes affective, behavioral, cognitive, and physiologic factors, which may develop with repeated drug exposure; these typically include the desire to take the drug, trouble controlling the amount of drug taken, continued use despite negative consequences related to drug use, prioritization of drug use above other obligations, and drug tolerance and withdrawal when the drug is withheld.<sup>10</sup> While opioids effectively relieve pain, tolerance often develops, and a subset of those individuals with tolerance progress to addiction. Some people become addicted to the inherent euphoric effects of opioids, while others are compelled to continue using the drug to avert symptoms of drug withdrawal following its discontinuation.<sup>11</sup> Opioid addiction is particularly dangerous due to its life-threatening side effects (eg, respiratory depression and hypoperfusion). Worldwide, opioid overdose causes an estimated 69,000 deaths annually.<sup>10</sup> In the United States, more than 16,000 opioid prescription-related deaths (as differentiated from deaths due to illicit use of opiates) occurred in 2010.<sup>12</sup> Opioids are frequently used because there are few alternative agents that offer the same level of analgesia (and  $\mu$  receptor potency), making it challenging for physicians to balance pain relief with the risk of creating or fueling addictive behavior.<sup>3</sup> Additionally, pain management is not adequately taught in the majority of US medical schools (Table 1). Treatment contracts, risk assessment tools, and inclusion of pain management training in medical school curriculums could mitigate some of these challenges.

### HOW DOES A PROVIDER ASSESS WHO RECEIVES AN OPIOID?

Opioids are appropriate for the treatment of acute or severe pain (eg, pain following surgery, trauma, and burns), as well as for chronic pain associated with terminal illnesses (eg, cancer).<sup>19</sup> In the above circumstances, opioids are effective and essential. Opioids allow an individual to engage actively

in rehabilitation after orthopedic surgery and to mitigate otherwise intolerable pain in those who are terminally ill and unlikely to return to their baseline level of functioning.<sup>26</sup> The controversy surrounding opioid medications generally focuses on the management of chronic noncancer pain (eg, chronic back pain).<sup>27</sup> More than 3% of adults in the United States are prescribed an opioid medication for chronic non-cancer-related pain despite the lack of high-quality evidence suggesting that opioids are better than placebo or alternative treatments.<sup>28–30</sup>

### HOW DOES A PHYSICIAN DETERMINE THE DOSING OF AN OPIOID?

When prescribing an opioid, most practitioners start patients on a small dose and increase it gradually until symptoms are controlled or adverse effects intervene. In choosing the appropriate treatment for chronic pain, alternative nonopioid interventions should be explored.<sup>31</sup> If tolerance to an opioid develops, switching to a different opioid may also restore analgesia due to incomplete cross-tolerance at receptor sites.<sup>32</sup> Table 2 provides potencies and special features of specific opioids.<sup>33</sup> Psychological stress often alters the response to pain and the phenomenon of tolerance.<sup>34</sup> The intensity of pain reported and the perception of pain are both influenced by myriad factors (including mood, cultural background, social supports, and financial resources). Treatment of pain should be informed by a biopsychosocial model that addresses not only the biological basis of pain, but also the associated social and psychological factors.<sup>9</sup> Thus, pain thresholds that decrease in relation to changing life circumstances should not automatically result in a dose increase. However, tools such as the Pain Assessment and Documentation Tool (PADT)<sup>35</sup> and the Diagnosis, Intractability, Risk, and Efficacy (DIRE)<sup>36</sup> score, which are physician rated, can be used to assess outcomes (eg, effective analgesia and patient functioning) of pain management.

### WHAT PATIENT FACTORS IMPACT THE PRESCRIPTION OF OPIOIDS?

Patients' fear of addiction also influences the use of opioid pain medications (Table 3). This fear is heightened by the fact that the full extent of risk factors for opioid dependence is incompletely known, especially in outpatient settings. In a prospective study of 196 patients with non-cancer-related chronic pain seen at a large academic center, one-third demonstrated opioid misuse after 12 months.<sup>13</sup> Although 85% of those patients had an income less than \$20,000, which might limit generalizability of the findings, the study<sup>13</sup> found that a history of cocaine or alcohol abuse was the strongest predictor of opioid misuse. A similar study<sup>37</sup> of 15,100 veterans found that in addition to prior substance abuse, a coexisting mental health disorder, younger age, and male sex also contributed to this risk. Boscarino et al<sup>38</sup> showed that age < 65 years, as well as a higher number of drug prescriptions

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**Table 1. Provider Factors That Affect the Prescription of Opioids**

Factor	Evidence/Risk	Solutions
Fear of causing addiction	A prospective study of 196 patients with chronic non–cancer-related pain showed that one-third developed opioid misuse within 12 months <sup>13</sup>	Use treatment contracts, <sup>14</sup> frequent assessments of pain using self-reported questionnaires, or other objective measures such as faces <sup>15</sup> ; use random urine drug testing to assess for medicine diversion; avoid sharp troughs in drug levels to reduce overall drug consumption <sup>15</sup> ; use risk prediction tools <sup>16–18</sup>
Fear of causing actual physical harm	Doctors are reluctant to prescribe opioids to older patients due to an increased risk of toxicity <sup>19</sup> ; geriatric patients taking opioids are at increased risk of falls and fractures <sup>20,21</sup>	Prescribers should stay abreast of progress in pain management through continued medical education <sup>15</sup> ; avoid polypharmacy when possible and discuss risks and safeguards with patients
Concern that a patient is misrepresenting pain	There are no good tools to measure pain objectively	Have a frank discussion with the patient about the risks of opioid medications and obtain urine drug testing to assess for medication diversion <sup>14</sup>
Knowledge deficit	Only 4% of US medical schools have integrated pain courses in their curriculum; across the 117 medical schools, the median number of hours spent on pain and pain management was 9 hours during 4 years of training <sup>22</sup>	Include courses dedicated to pain and pain management during medical school and residency training; postresidency prescribers may stay abreast of progress in pain management through continuing medical education <sup>15</sup> ; refer the patient to a pain management clinic
Insufficient skills in the assessment and management of pain	Realize that older patients require more time to assimilate questions about pain <sup>15</sup> ; additional factors to consider include the impact of culture, health care literacy, and the acuity of illness	Use validated tests for pain assessment <sup>15</sup> ; be aware of how age, gender, race, and culture may impact the expression and report of pain and attempt to mitigate stereotypes when addressing pain <sup>23</sup>
Concern for medication diversion	Be cognizant of the possibility of family/caregiver diversion when prescribing to geriatric patients <sup>19</sup> ; diversion can and does occur at the manufacturing level, the physician level, the pharmacist level, or in the patient's home <sup>24</sup>	Use treatment contracts and urine drug testing to assess for medication diversion <sup>14</sup> ; provide patient education on safeguarding medicine, methods of disposing unused medicine, and the consequences of sharing or selling opioid medications <sup>25</sup>

**Table 2. Opioid Potencies and Special Features<sup>a</sup>**

Drug	Parenteral (mg equivalent)	Oral	Duration (h)	Special Features
Morphine	10	30 mg	4	Morphine sulfate controlled release has 12-h duration
Codeine	120	200 mg	4	Ceiling effect as dose increases, low lipophilic
Oxycodone	4.5	30 mg	4	Oxycontin (10, 20, 40 mg slow release) every 12 h
Hydromorphone	2	8 mg	5	Suppository 12 mg = 10 mg parenteral morphine
Levorphanol	2	4 mg	4	Low nausea and vomiting, low lipophilic
Methadone	5	10 mg	2–12	Cumulative effect, day 3–5 decrease respiration, equianalgesic ratio varies considerably
Meperidine	100	300 mg	3	κ, proconvulsant metabolite, peristaltic slowing and sphincter of Oddi decrease
Fentanyl	0.1	25 µg sublingual	1 (patch 72 h)	50-µg patch = 30 mg/d morphine intramuscular/intravenous
Sufentanil	Not recommended	15 µg sublingual	1	High potency with low volume of fluid
Propoxyphene	Not available	325 mg	4	High dose leads to psychosis
Pentazocine	60	150 mg	3	δ, κ agonist-antagonist, nasal 1 mg every 1–2 h
Butorphanol	2	Not available, 3 mg (intramuscular), 2 mg (nasal)	Nasal 1 mg every 1–2 h	µ, δ, κ agonist-antagonist
Buprenorphine	0.3	4 mg	4–6	Partial agonist
Tramadol	Not available	150 mg	4	µ agonist, decreased reuptake 5-hydroxytryptamine and norepinephrine P450 metabolism
Nalbuphine	10	Not available	3	Agonist-antagonist

<sup>a</sup>Adapted with permission from Stern et al.<sup>33</sup>

entered into the medical record, was associated with opioid dependence. Consequently, numerous risk prediction tools have been created to help identify patients at risk for opioid dependence. The Opioid Risk Tool (ORT),<sup>16</sup> which is completed by patients and incorporates family and personal history of substance abuse, age, history of preadolescent sexual abuse, psychological disease, and depression, has a sensitivity of approximately 80% for the detection of patients who will develop opioid-related aberrant behavior. The Screener and Opioid Assessment for Patients with Pain (SOAPP)<sup>17</sup> is another modality for assessing the suitability

of long-term opioid therapy. The 5 factors included in the SOAPP model are history of substance abuse, legal problems, craving medication, heavy smoking, and mood swings.<sup>17</sup> Similarly, the Current Opioid Misuse Measure (COMM)<sup>18</sup> is a self-administered 17-item questionnaire that analyzes behaviors over the past 30 days in those with chronic non–cancer-related pain. Therefore, tools such as the ORT, SOAPP, and COMM facilitate the stratification of patient risk and help minimize overuse in patients at risk for dependence. Table 4 provides more information on these risk assessment scales.

**Table 3. Patient Factors That Affect the Prescription of Opioids**

Factor	Evidence/Risk	Solutions
Fear of becoming addicted	A prospective study of 196 patients with chronic non-cancer-related pain showed that one-third developed opioid misuse behavior within 12 months <sup>13</sup>	Provide patient education on the risks of opioid medications and how one can reduce the risk (such as starting with a low dose and increasing to the lowest effective dose) <sup>25</sup> ; have a discussion about why medication is required
History of addiction	Prior abuse is the greatest risk factor for abuse <sup>13,37</sup>	Try nonopioid medications as first-line treatments; augment treatment with ancillary services (such as individual/group therapy, narcotics anonymous, close relationship with provider); when opioids are necessary, use long-acting opioids (such as buprenorphine and methadone)
Poor communication about pain	Ethnicity influences pain expression <sup>23</sup> (eg, some cultures view pain as an inevitable and necessary part of life and therefore are more reluctant to communicate/express their pain) <sup>15</sup>	Provide patient education that promotes communication about pain (eg, one might put up a sign in the examination room encouraging patients to speak up about their pain)

**Table 4. Score Interpretation of Risk Prediction Tools and Corresponding Validation Studies**

Risk Prediction Model	Score Interpretation	Model Validation
ORT	0–3 (low risk) 4–7 (moderate risk) ≥ 8 (high risk)	In a study <sup>16</sup> of 185 consecutive new patients in a single pain clinic, the ORT demonstrated a high degree of sensitivity and specificity for predicting which patients were at risk for developing opioid-related aberrant behaviors when prescribed opioids for chronic pain; more high-quality studies are needed <sup>39</sup>
SOAPP	Scored out of 14 items Score > 7 = at risk	95 chronic noncancer pain patients were followed for 6 months after completing the SOAPP; in the 14-item SOAPP, receiver-operating characteristic curves demonstrated an area under the curve of 0.881, indicating good-to-excellent predictive reliability of the tool in identifying patients at risk of opioid misuse <sup>39,40</sup>
COMM	17 items rated from 0 = never to 4 = very often Score > 9 = at risk	The COMM was tested and validated in a subset of 86 chronic pain patients followed for 3 months; the model yielded an excellent degree of sensitivity and specificity in risk detection, with a cutoff score of 9 demonstrating a sensitivity of 94% and a specificity of 73% <sup>39,41</sup>

Abbreviations: COMM = Current Opioid Misuse Measure, ORT = Opioid Risk Tool, SOAPP = Screener and Opioid Assessment for Patients with Pain.

**Table 5. Systemic Factors That Affect the Prescription of Opioids**

Factor	Evidence/Risk	Solutions
Regulatory barriers	Physicians fear regulatory and legal sanctions or scrutiny <sup>15,42,43</sup>	Recognize that policy will most likely evolve to balance regulation with adequate pain treatment
There are no pain medications that are as effective and nonaddictive	There are no alternative medications that offer the same potency for analgesia <sup>3</sup>	Conduct research into new pain treatments; use long-acting opioids (with lower abuse potential) when possible
Lack of continuity in the care of patients with pain	Risk of opioid abuse is increased among those who go to 2 or more pharmacies and who obtain prescriptions from 2 or more providers <sup>44,45</sup>	Refer to a pain clinic for treatment contracts in which the patient agrees to receive pain medications from a single provider; take advantage of greater access to prescription monitoring program databases to assess for “doctor shopping”; states with prescription monitoring programs have lower opioid prescription claim rates <sup>46</sup>
Talking about pain treatment in medical school and residency programs is a low priority <sup>15</sup>	Only a handful of US medical schools have dedicated courses on pain in their curriculum <sup>22</sup>	Include a dedicated course on pain in medical school and residency training

## WHAT SYSTEMATIC FACTORS IMPACT THE PRESCRIPTION OF OPIOIDS?

There are several systemic obstacles to prescribing opioid medications (Table 5). Regulatory barriers make it more time consuming to prescribe opioids. Physicians, who are notoriously time pressured, must be willing to spend valuable time obtaining regulatory checks, such as prior authorization, in order to prescribe opioids. Additionally, many physicians fear regulatory and legal sanctions/scrutiny, posing further challenge to opioid prescription.<sup>15,42,43</sup> Unfortunately, when pain is severe and requires powerful pain medication to control it, there is little choice; there are no pain medications that are as effective as opioids with lower addiction risk. Continuity of care with pain patients

is essential since opioid abuse risk is elevated in patients who receive opioid prescriptions from multiple providers or who use multiple pharmacies.<sup>44,45</sup>

## HOW CAN PHYSICIANS REDUCE THE RISK OF OPIOID ABUSE?

Before prescribing an opioid, physicians should carefully consider whether opioids are appropriate for a given patient and whether alternative therapies have been exhausted. Alternative therapies for the treatment of chronic pain are shown in Table 6. Once opioid use is deemed appropriate for a particular patient, safeguards should be implemented to reduce the patient's risk for opioid abuse. The patient should review and sign a treatment contract that specifies



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**Table 6. Nonopioid Chronic Pain Treatments and Their Evidence of Efficacy**

Therapy	Description	Evidence
Acupuncture	Very thin needles are inserted into the skin at specific locations on the body	A meta-analysis <sup>47</sup> that compared the efficacy of acupuncture, sham acupuncture, and a no acupuncture control for the treatment of chronic pain demonstrated the greatest benefit for those receiving acupuncture
Hypnosis	Trance-like, hypersuggestible state in which patients have elevated focus and concentration	Hypnosis demonstrated clinically meaningful improvement in pain severity in 22% of patients with spinal cord injury and 47% of patients with multiple sclerosis <sup>48</sup>
Transcutaneous electrical nerve stimulation	Uses noninvasive, low-energy electrical current to stimulate nerves to reduce pain	Transcutaneous electrical nerve stimulation is used for chronic pain management despite the paucity of high-quality research assessing the efficacy of transcutaneous electrical nerve stimulation for the treatment of chronic pain <sup>49</sup>
Herbal medicine	Unpurified plant extracts, often containing multiple constituents, which are used to alleviate different ailments	A Cochrane review <sup>50</sup> concluded that several herbal medications, including <i>C. frutescens</i> (Cayenne), <i>H. procumbens</i> , and <i>S. alba</i> among others, showed moderate benefit over placebo in the treatment of chronic back pain; however, there is a lack of research comparing herbal medications to standard therapies; there is moderate evidence supporting the use of oils containing $\gamma$ linolenic acid (evening primrose, borage, or black currant seed oil) for pain related to rheumatoid arthritis <sup>51</sup> ; unfortunately, many studies of herbal therapies are hampered by poor research designs and further research is required
Cognitive-behavioral therapy/biofeedback	A form of psychotherapy that focuses on and addresses thought patterns with the goal of altering unwanted behavioral patterns	Cognitive-behavioral therapy and behavior therapy have weak effects in improving chronic pain <sup>52</sup> ; cognitive-behavioral therapy and electromyography showed equal benefit in treating chronic lower back pain compared to wait-list controls <sup>53</sup>
Massage therapy	Manipulation of soft tissue to alter mechanical stress	Massage therapy improves back pain in the acute setting, but there is very little evidence for long-term benefit <sup>54</sup>
Physical therapy/occupational therapy	Occupational therapy helps patients develop strategies to manage pain in order to improve the ability to function and perform daily tasks; physical therapy involves strengthening exercises to improve both function and pain; both therapies involve patient education on the pain's cause and strategies to prevent the pain	In patients with chronic neck pain, there is moderate evidence for benefit from specific strength exercises <sup>55</sup>
Nutrition	Correction of nutrient/vitamin deficiency	Several studies <sup>56,57</sup> have implicated vitamin D deficiency in patients with chronic back pain
Mindfulness	A specific form of consciousness that encompasses "paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally." <sup>58</sup> (pxxvii)	Patients with chronic back pain who practice mindfulness and wellness exercises (such as Alexander Technique lessons) demonstrate improvement in overall pain compared to those who do not engage in mindfulness exercises <sup>59,60</sup>
Therapeutic ultrasound	Uses high- or low-frequency sound waves to noninvasively treat pain	There is no high-quality evidence to support the use of therapeutic ultrasound for the treatment of chronic lower back pain; therapeutic ultrasound may provide short-term relief, improving low back function; however, more high-quality research is needed <sup>61</sup>
Low-level laser therapy	Uses low-power lasers to stimulate cells <sup>62</sup>	A Cochrane review <sup>63</sup> of low-level laser therapy found mixed evidence for benefit in the treatment of osteoarthritis pain; further research is needed to determine techniques, dosage, and anti-inflammatory effects of low-level laser therapy in the treatment of osteoarthritis; a Cochrane review <sup>64</sup> of low-level laser therapy found some evidence of positive efficacy in the treatment of pain and morning stiffness associated with rheumatoid arthritis; however, more research on the appropriate wavelength, treatment duration, dosage, and site of application over nerves (instead of joints) is needed
Breathing therapy	Uses deep breathing to control pain	A randomized controlled trial <sup>65</sup> demonstrated pain improvement in patients with chronic lower back pain; improvement was comparable to improvement seen with high-quality physical therapy
Nonopioid pharmacologic medications	Medications whose main site of action is not at the opioid receptor	Treatment includes the following drug classes: anticonvulsants, antidepressants, benzodiazepines, <i>N</i> -methyl-D-aspartate receptor antagonists, nonsteroidal anti-inflammatory drugs, skeletal muscle relaxants, and topical agents (eg, lidocaine, capsaicin, and ketamine) <sup>66</sup>

the importance of taking the opioid only as prescribed and agree to obtain prescriptions from a single provider.<sup>14</sup> A baseline urine drug test obtained prior to initiation of opioid therapy can help the physician assess the patient's risk for future opioid abuse by providing information on the patient's current drug use. Results of routine urine testing can inform treatment adherence and may reduce the social cost of medication diversion for nonmedical use. Physicians

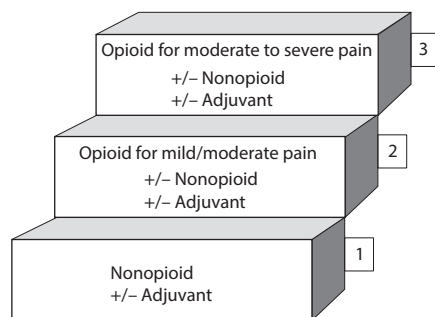
and patients should collaborate on what a successful pain management plan involves for the patient and wean the opioid if the goals are not reached.

## CASE DISCUSSION

The case of Mr A illustrates a commonly encountered complex scenario. Mr A reported significant discomfort and

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Figure 1. The World Health Organization Pain Relief Ladder<sup>a</sup>



<sup>a</sup>Adapted with permission from the World Health Organization.<sup>31</sup>

disability from his chronic back pain. Mr A's primary care physician wanted to alleviate his suffering, but standard first-line pharmacologic treatments failed. A trial of an opioid was not unreasonable, as opioids are likely to help him in the short term. However, long-term opioid use has caused opioid-induced hyperalgesia, which lowers pain thresholds and could ultimately cause greater pain or opioid dependence.<sup>67</sup> Opioid medications also cause other side effects, including constipation, nausea, and somnolence, in approximately 80% of patients.<sup>68</sup> Opioid use in the outpatient setting is further complicated by misuse and diversion.

In determining whether opioids are an appropriate next step, the physician should assess whether other factors are contributing to Mr A's pain. For example, Mr A's irritability and insomnia may indicate an underlying mood disorder, which could augment his experience of pain. If Mr A meets criteria for an underlying mood disorder, he may improve with antidepressant medication. The physician also could discuss the risks and benefits of opioid medications. Mr A's abuse potential can be calculated using the ORT, SOAPP, or COMM to further help the decision process. Given his age (44 years) and possible depression, Mr A's ORT score was 1–2, which puts him in the low-risk group.<sup>16</sup> Despite having a low-risk profile, these calculation tools are imperfect and opioids still convey risk. If Mr A is amenable, he and his physician can explore a broad range of nonpharmacologic treatment options (Table 6).

If the decision is made to move forward with a short-term opioid trial, several measures can be implemented to mitigate the risk of abuse and diversion. Mr A and his physician should establish a treatment contract as described previously detailing appropriate safeguards (such as taking the opioid only as prescribed, obtaining prescriptions from a single provider/pharmacy, safeguarding the medication from theft, and agreeing on duration of course). The initial dose should be as low as possible and may be slowly titrated to the lowest effective dose. The physician can monitor Mr A's opioid use with urine drug tests and prescription monitoring program databases. Mr A and his physician also need to determine the goals for therapy and what successful pain management might mean. Realizing that chronic pain treatment in the outpatient setting is challenging and much more nuanced

than illustrated with the simplicity of Mr A's case, providers and patients can generate these goals of therapy in the form of a treatment plan.

The basis of such a treatment plan should be rooted in the schema outlined by the World Health Organization stepladder for chronic pain treatment (Figure 1).<sup>31</sup> Opioids should not be the first line of treatment for chronic pain, but should be prescribed with caution and only used in cases of severe debilitating pain not abated by other nonopioid modalities. Tools such as the PADT and DIRE can assess treatment outcomes. If therapeutic goals are not met, the opioid should be discontinued. If opioid dependence develops, a variety of intervention and treatment strategies are available (but are beyond the scope of this article).<sup>69</sup>

## CONCLUSION

As illustrated in our vignette, the prescription of opioid medication is multifaceted and challenging. Opioid medications are the most effective therapy available, and other treatments may fail to alleviate chronic pain. This puts physicians in a difficult position of attempting to balance the risks and benefits of opioid medications. Physicians should discuss this dilemma frankly and work with patients to create the best treatment plan, which could include exhausting alternative therapies or only using opioids episodically during periods of elevated pain, ultimately limiting the amount of prescribed medication.

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