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The Opioid Epidemic and Pain Medicine Specialists: Where to Begin and What Is Next?

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The United States faces a challenge that affects millions of people: the opioid epidemic, also referred to as the opioid crisis. In October 2017, the President of the United States declared the opioid epidemic a public health crisis.[1] The hope is that federal funding will be provided to address the problem and find long-term solutions. Approximately 80% of the global opioid supply is consumed in the United States.[2] This statistic shows not only that US physicians and patients view pain with a different perspective compared to other countries but also that the knowledge about the risks of opioid medications is insufficient.[3,4]

From 1999 to 2010, opioid prescriptions in the United States quadrupled, principally because of the increase in the use of opioids to treat chronic noncancer pain. This pattern was associated with a parallel increase in deaths related to opioid overdose and in admissions for treatment of opioid use disorders. Previously, opioids were primarily reserved for management of postoperative pain, severe acute pain, and end-of-life care.[5]

By 2008, deaths attributed to drug poisoning exceeded the number of motor vehicle accident deaths.[6] Currently, almost half of drug poisoning–related deaths are from analgesic opioids.[7]

The wide and vast prescription of opioids has been associated with the increased prevalence of chronic pain disorders and also with higher rates of opioid misuse and opioid use disorder. Although a small proportion of nonmedical opioid users reported that they obtained the drug from a doctor's prescription, more than half of individuals reported obtaining the drug from a friend or relative[8] who could have been prescribed the medication.

Many factors have been implicated in the rising number of opioid prescriptions, including trading, commercialization, increased awareness of pain, and care providers' constant desire to alleviate suffering. Nonetheless, the evidence supporting opioid therapy for chronic noncancer pain is limited. A systematic review by Chou et al showed that no randomized controlled trial evaluating outcomes (pain, function, or quality of life) has been conducted for longer than 1 year, and most study periods were less than 6 weeks.[9] Moreover, Chou et al found no clear-cut differences between dosing strategies or short-acting vs long-acting medications. The evidence for risk of opioid use disorder and dependence was not robust either. Yet significant associations between opioid prescriptions for a new chronic pain diagnosis and the prevalence of abuse or dependence were found, with higher rates of abuse/dependence directly correlated with daily morphine equivalents. Risks of overdose were clearly increased and dose-dependent. Last, the Chou et al review showed that opioids are associated with fractures, road trauma, and cardiovascular events. It is important to note that the absence of evidence points to a lack of information, especially regarding the efficacy of opioid drugs.

As Ballantyne has explained, longer periods of opioid prescription for chronic noncancer pain can lead to unsafe or toxically high doses.[10] However, these escalated doses did not seem to clinically improve pain perception or functional level. Considering the limited evidence for a benefit from opioid use and the association with numerous risks, an important question remains: How do we manage chronic pain and its adverse effects without incurring unnecessary risks by the prescription of narcotic medications?

Ballantyne provides some general principles for safe chronic opioid prescribing.[10] The initial steps are to obtain a diagnosis and assess the risks and benefits of prescribing opioids. Next, the patient signs a written agreement, or contract, that explains the goals of treatment and expectations. The patient is then monitored according to and depending on the initial risk evaluation. Prescription monitoring data reports should always be reviewed with each prescription. Other recommendations are to obtain a baseline urine drug test and to perform pill counts. Physicians should consider prescribing naloxone for patients who are on high doses of opioids, as high does are associated with an increased risk of overdose. In general, however, high doses of opioids should not be prescribed, and physicians should be prepared to taper and discontinue the drug if treatment goals are not met.

While Ballantyne advocates the use of opioids for cases of comfort care only rather than for functional restoration, other authors argue that the elimination of opioids for such conditions is an overreaction, stating that many patients would require combination therapy in a field with already limited medication classes.[11] Striking a fine balance between access to treatment for patients who need pain control and avoiding opioid misuse and abuse remains a challenge.

Conducting urine drug testing and avoiding concurrent benzodiazepine prescriptions are common denominators in chronic opioid therapy. Although urine drug screens can

have limitations, such as the inability of many tests to detect synthetic opioids,[12] one study showed that repeated testing can lead to higher compliance.[13] However, the study had no direct comparison group, and other components of care, including an opioid agreement and a zero-tolerance policy, could have contributed to the results. In another study, performing urine drug screening during the initial encounter was associated with higher dropout and no-show rates.[14] Interestingly, the patients who did not return for follow-up had a higher prevalence of positive results for illicit substances in their baseline urine drug screens. These results are difficult to explain, but one possibility is that baseline urine testing serves as a screening method for patients concurrently using other substances, placing them at an increased risk for misuse or abuse.

The 2016 Centers for Disease Control and Prevention (CDC) guidelines include important recommendations; chief among them is the preference for nonopioid pharmacologic and nonpharmacologic therapies for chronic pain.[15] Other recommendations are to establish treatment goals and discuss risks, benefits, and expectations with patients regarding pain modalities. Immediate-release opioids are preferred to extended-release formulations when starting a prescription, and close follow-up is required at this point; the CDC recommends that clinicians should evaluate the benefits and harms with patients within 1-4 weeks after the drug is started.

Several organizations such as the American Society of Anesthesiologists, Spine Intervention Society, American Academy of Pain Medicine, American Pain Society, American Society of Regional Anesthesia and Pain Medicine, North American Neuromodulation Society, and North American Spine Society are collaborating to address the opioid crisis. Collaborations and work groups of experts representing those societies have been active. In 2017, the American Society of Interventional Pain Physicians published updated guidelines for opioid use to treat chronic noncancer pain syndromes.[16] Their comprehensive approach includes the 4 phases of care: (1) taking initial steps that include comprehensive assessment, drug screening, and physical and psychological diagnosis; (2) assessing the effectiveness of long-term therapy; (3) monitoring adherence and side effects; and (4) deciding whether to continue the therapy. The guidelines also recommend that prescription monitoring programs should be checked before prescribing opioids. Opioid analgesia can be effective for selected patients, provided at least a 30% improvement is documented on follow-up. A useful mnemonic provided by the guidelines is to use the 4 *A*'s of continuing medical necessity: analgesia, activity, aberrant behavior, and adverse effects. Finally, the guidelines recommend that therapy should be maintained at low doses, defined as up to 40 morphine milligram equivalents. The approach to "go low and go slow" is generally advised.

The Institute of Medicine 2011 report *Relieving Pain in America* called for cultural transformation of pain care and education[17] and led to the release of the National Pain Strategy (NPS) in March 2016.[18,19] The NPS outlined the federal government's first coordinated plan for reducing the burden of chronic pain that affects millions of Americans, serving as a roadmap toward high quality, evidence-based pain treatment.

The role of fellowship-trained pain specialists is vital now more than ever to lead the way in addressing the opioid epidemic and finding practical solutions. The adoption of a multimodal approach for management of chronic pain is the first step. This multimodal approach includes opioid-sparing methods such as interventional pain procedures, physical therapy, rehabilitation, and psychological methods to reduce the necessity for opioids while improving functional status and providing pain relief. Objective pain measures should be adopted to monitor outcomes. Pain rehabilitation and functional restoration programs are available in certain large academic institutions. The financial feasibility of such approaches remains a challenge, especially for small-scale private practices. The collaboration between different disciplines—including pain specialists, primary care physicians, psychologists, psychiatrists (including addiction medicine specialists), physical therapists, and others—is critical to provide such a multidisciplinary approach, improve outcomes, and decrease costs. Community outreach and education about available opioid-sparing treatment modalities for pain management are essential to dissociate the connection between *pain management* and *opioids*. Communication between pain specialists and primary care physicians should occur on a regular basis. Some states require continuing medical education seminars targeted to primary care physicians to help them stay up to date with the guidelines.

We believe using the rules of pain medicine to educate and train all opioid-prescribing clinicians is essential, including training in multimodal and multidisciplinary therapy, educating patients and their families about the risks of opioids, monitoring patients on a continuous basis, and using interventional pain procedures, physical therapy, rehabilitation, and psychological methods to reduce the necessity of opioids while improving functional status and providing pain relief.[4] In addition, basic research and clinical research in the field of pain management are needed to provide evidence-based solutions.

Several considerations must be taken into account before prescribing opioid therapy to manage chronic pain. First, the liberal use of opioids does not result in improved outcomes and has been associated with an increasing incidence of opioid-related deaths. Second, although the evidence of long-term use is scarce, the lack of evidence does not mean that long-term opioids are not beneficial for some patients. Indeed, guidelines state that opioids can be used to treat chronic noncancer pain, provided several principles are considered. Third, the use of opioid screening tools, prescription monitoring programs, urine drug screening tests, and an agreement between the physician and the patient on specific goals is advocated. If treatment and compliance goals are not met, opioids might not need to be continued. Fourth, high doses of opioids should not be prescribed, and the prescription of naloxone should be considered for patients using high doses of opioids.

The role of pain specialists as leaders to address the opioid epidemic is critical. Using a multidisciplinary multimodal approach to address chronic pain is recommended. Collaborating with different disciplines, educating other providers, and educating patients and the community are good steps in the right direction. Federal funding and grants can open the door for well-designed clinical and basic

research in the field of pain medicine to initiate steps to combat this uphill battle.

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