

## Opportunities to Address First Opioid Prescriptions to Reduce Incident Long-Term Opioid Use

Increases in opioid-related harms, particularly overdose deaths, have led to policy, public health, and clinical care efforts to reduce the volume of opioids prescribed. One focus of these efforts is use of opioids for chronic noncancer pain, which is associated with clear risks and unclear benefits. Efforts have led to the total number of opioid prescriptions decreasing by more than a third between 2012 and 2017 (1).

Implementation of changes to opioid prescribing has not been without challenges. One challenge has been how to address ongoing use of opioids for the millions of Americans already receiving them, in many cases for years. A consensus panel recently voiced concerns that overzealous policy and clinical practice efforts—some of which claim to be based on the Centers for Disease Control and Prevention (CDC) Guideline for Prescribing Opioids for Chronic Pain—may lead to tapering or discontinuation that could precipitate withdrawal and substitution of riskier opioids (2). These concerns led authors of the CDC guideline to clarify that it focuses primarily on avoiding high-risk prescribing but does not provide specific recommendations about mandatory tapering or dosage limits for patients already prescribed opioids (3).

Avoiding initiation of long-term opioid therapy is an objective with a clearer consensus. It is also one in which progress has been made: The incidence of prescribing to opioid-naïve persons decreased by more than 50% in 1 cohort during 2012 to 2017 (4). Understanding the context and clinical pathways where opioids are first prescribed to opioid-naïve persons would aid development of targeted interventions. Several studies have addressed this issue with retrospective analyses identifying characteristics of initial opioid prescribing that lead to long-term prescribing, such as initial days' supply (5) or setting (for example, surgical procedures [6]). These findings may be due to confounding by indication, whereby pain with a greater probability of becoming chronic (for example, more severe pain) is likely to be treated with more opioids. However, 1 study found that persons who visited an emergency department and saw a high-volume opioid prescriber were more likely to continue receiving opioids at 1 year than those who saw a lower-volume prescriber (7). Given that pain severity is probably unrelated to assignment of the emergency department clinician, this finding supports a causal relationship between initial prescribing decisions and long-term opioid use.

In their article, Donohue and colleagues examine inpatient opioid prescribing practices in a large health system in western Pennsylvania over a 5-year period (8). Among nearly 200 000 hospital admissions of opioid-naïve patients, almost half involved administra-

tion of an opioid analgesic during the stay. Of these, fewer than a quarter included initial use of a nonopioid analgesic. An estimated 5.9% of patients receiving opioids during their inpatient stay were still using them 90 days after discharge, twice the rate of those who did not receive opioids. Several admission characteristics were associated with increased outpatient prescribing, including performance of surgical procedures and prescription of opioids within 12 hours of discharge.

These data suggest that opioid prescribing is “sticky” and that any interaction between patients and the health care system that may involve pain presents the opportunity for a first opioid prescription. Avoiding this first prescription in opioid-naïve patients may reduce incident long-term use and associated harms. Prospective studies are needed to evaluate potential interventions based on these findings. A focus may be the development of protocols to pursue nonopioid analgesic use before opioid use during hospitalizations and to attempt to taper opioid doses before discharge. If opioids are to be used, prescribing them at the lowest dose for as few days as possible may reduce long-term use. Behavioral nudges, such as setting a lower default number of tablets in the electronic medical record, may help achieve this goal.

Increasingly, quality measures are being developed to promote opioid stewardship. Ongoing Healthcare Effectiveness Data and Information Set (HEDIS) measures include use of opioids at high dosages and from multiple providers. These measures generally focus on long-term opioid use, but initial prescribing is also coming under scrutiny. In 2019, the National Committee for Quality Assurance added 2 new HEDIS measures addressing risk for continued opioid use for new prescriptions. It is clear that opioid prescribing is a shared responsibility across providers and time; however, the transition of pain management from 1 setting and provider to the next is often not well planned. A pain management “handoff” may facilitate communication among providers but may also provide the opportunity to clarify a plan and set expectations with patients.

As efforts to reduce the burden of prescription opioid-related harms through improved prescribing practices continue, it is important to ensure that clinicians continue to address patient pain and incentives are well aligned to improve patient outcomes. Patient experience scores are increasingly valued in assessing physician and health system performance, and some have expressed concern that this may lead to inappropriate opioid prescribing. Available data have not identified an association between opioid prescribing and patient experience. However, in a survey of more than 100 clinicians, nearly half indicated that they had prescribed

an opioid when it was not clinically indicated because of pressures from patient experience surveys (9). These concerns have led the Centers for Medicare & Medicaid Services to remove pain-related items from its Hospital Value-Based Purchasing program. Monitoring trends in patient experience scores over time may provide insight into whether efforts to reduce exposure to opioids have affected pain management.

Although opioid stewardship is an important goal, it is unlikely to have a substantial effect by itself on the crisis of opioid-related harms. A modeling study estimated that accelerating reductions in incident prescription opioid misuse would only decrease overdose deaths by up to 5% over the next 5 to 10 years (10). The lack of effect is partially due to the high prevalence of persons with opioid use disorder and the transition from prescription opioids to heroin and fentanyl as the types most commonly implicated in overdose death. Efforts to deliver harm reduction services and treatment for opioid use disorder are also urgently needed.

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## References

1. Bohnert ASB, Guy GP Jr, Losby JL. Opioid prescribing in the United States before and after the Centers for Disease Control and Prevention's 2016 opioid guideline. *Ann Intern Med.* 2018;169:367-75. [PMID: 30167651] doi:10.7326/M18-1243
2. Kroenke K, Alford DP, Argoff C, et al. Challenges with implementing the Centers for Disease Control and Prevention opioid guideline: a consensus panel report. *Pain Med.* 2019;20:724-35. [PMID: 30690556] doi:10.1093/pm/pny307
3. Dowell D, Haegerich T, Chou R. No shortcuts to safer opioid prescribing. *N Engl J Med.* 2019. [PMID: 31018066] doi:10.1056/NEJMp1904190
4. Zhu W, Chernew ME, Sherry TB, et al. Initial opioid prescriptions among U.S. commercially insured patients, 2012-2017. *N Engl J Med.* 2019;380:1043-52. [PMID: 30865798] doi:10.1056/NEJMs1807069
5. Shah A, Hayes CJ, Martin BC. Characteristics of initial prescription episodes and likelihood of long-term opioid use - United States, 2006-2015. *MMWR Morb Mortal Wkly Rep.* 2017;66:265-9. [PMID: 28301454] doi:10.15585/mmwr.mm6610a1
6. Brummett CM, Waljee JF, Goesling J, et al. New persistent opioid use after minor and major surgical procedures in US adults. *JAMA Surg.* 2017;152:e170504. [PMID: 28403427] doi:10.1001/jamasurg.2017.0504
7. Barnett ML, Olenski AR, Jena AB. Opioid-prescribing patterns of emergency physicians and risk of long-term use. *N Engl J Med.* 2017;376:663-73. [PMID: 28199807] doi:10.1056/NEJMs1610524
8. Donohue JM, Kennedy JN, Seymour CW, et al. Patterns of opioid administration among opioid-naive inpatients and associations with postdischarge opioid use. A cohort study. *Ann Intern Med.* 2019;171:81-90. doi:10.7326/M18-2864
9. Zgierska A, Rabago D, Miller MM. Impact of patient satisfaction ratings on physicians and clinical care. *Patient Prefer Adherence.* 2014;8:437-46. [PMID: 24729691] doi:10.2147/PPA.S59077
10. Chen Q, Larochelle MR, Weaver DT, et al. Prevention of prescription opioid misuse and projected overdose deaths in the United States. *JAMA Netw Open.* 2019;2:e187621. [PMID: 30707224] doi:10.1001/jamanetworkopen.2018.7621

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