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What are Future Pain Physicians Learning? A Survey of Opioid Prescribing Practices Among US Pain Fellowship Programs

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Background: Pain physicians have long been seen as subspecialists that commonly prescribe opioid medications, but the reality exists that primary care, oncologists, and surgical subspecialists find themselves embroiled in these clinical decisions just as frequently. It is a reasonable hope that pain physicians emerge as leaders in navigating these muddy waters, and the most important time to engrave practice standards is during clinical training.

Objectives: It was our hope to survey Accreditation Council for Graduate Medical Education (ACGME) pain fellowship programs throughout the United States in regard to practice behaviors for opioid prescribing in chronic noncancer pain (CNCP), and to assess what future pain physicians are learning during their training.

Study Design: We developed a succinct, 8-question survey that attempted to gauge several aspects of opioid prescribing practices for CNCP. A survey was prepared in electronic format and e-mailed to each program director or chair of every ACGME accredited pain program in the United States.

Methods: Our results were anonymously collected and percentage of response to each question was presented in bar graph format. The survey was prepared and initially sent out in November 2017 and intermittently redistributed through April 2018.

Results: Of the 117 surveys sent through Survey Monkey, 42 responses were returned and collected, 39 fully completed surveys, and 3 partial completions, an estimate of roughly one-third of US ACGME pain fellowship programs.

Limitations: Completion of our survey was voluntary, roughly 35% of ACGME programs submitted a response.

Conclusions: Data displayed in collected responses illustrate that although there is variance in opioid prescribing practices for CNCP, many programs are limiting what they use opioids for and have substantial nonopioid pharmacologic and or interventional aspects to their practice. Future pain physicians throughout the country are learning diverse methods of pain management, with opioids being only a part of their toolbox.

Key words: Opioids, ACGME, pain management fellowship, guidelines, teaching

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Prescribing practices of opioid medication has transitioned from opposite ends of the spectrum over the past 20 years. There was once aggressive dose titration of short- and long-acting opioid formulations, with minimal regard for escalating doses to counteract tolerance. This has given way to conservative, highly scrutinized doses with a goal to wean medications as low as possible. The once held moto

of “no pain” has given way to the idea that some pain is unavoidable, and focus should remain on improving physical function. The catalyst of much of this can be credited to increased media coverage of what has been dubbed the “opioid epidemic.” The Centers for Disease Control and Prevention (CDC) estimates over 67,000 US deaths due to drug overdose from August 2016 to 2017, a 13% increase from the year prior (1).

Aside from media scrutiny, there have been quality scientific publications failing to show positive, consistent, long-term outcomes with chronic opioid therapy for chronic noncancer pain (CNCP). A comprehensive systemic review performed in 2010 by Noble et al (2) attempted to summarize evidence for the efficacy and safety of long-term opioid therapy for CNCP. The review was able to identify only one controlled trial that evaluated the efficacy and safety of opioids for long-term outcomes, most studies were case series. Many patients in the included studies were so dissatisfied with adverse events or insufficient pain relief that they discontinued participating in these studies. The authors concluded based on available evidence that there is only “weak” evidence for opioid therapy beyond 6 months. The CDC has gone on to release guidelines describing safe opioid prescribing measures, targeting therapy to minimize opioid doses and even describes maximum daily morphine equivalents to strive for (3).

Pain physicians have long been seen as subspecialists that commonly prescribe opioid medications, but the reality exists that primary care, oncologists, and surgical subspecialists find themselves embroiled in these clinical decisions just as frequently. It is a reasonable hope that pain physicians emerge as leaders in navigating these muddy waters, and the most important time to engrave practice standards is during clinical

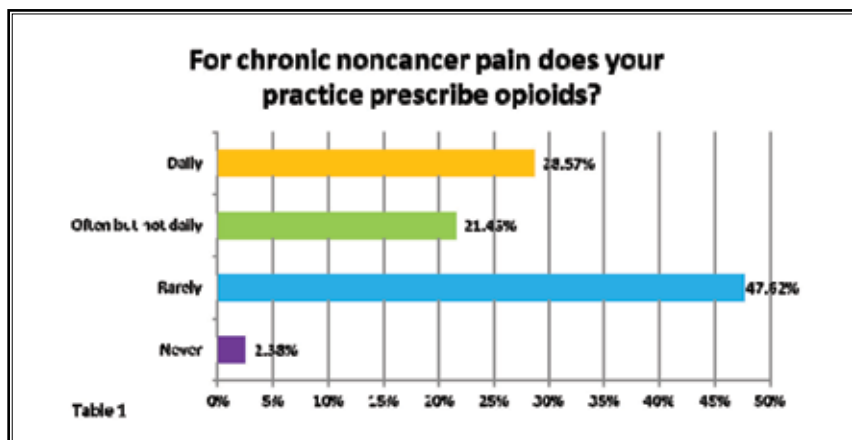
training. What everyone is doing in regard to opioids is a reasonable question to ask, in fact it is a commonly asked question among physicians, oftentimes met with reserved, self-conscious answers.

METHODS

We developed a survey for Accreditation Council for Graduate Medical Education (ACGME) pain fellowship programs that inquired about practice behaviors throughout the country to assess what future pain physicians are learning in regard to opioid prescribing during their training. We developed a succinct, 8-question survey that attempted to gauge several aspects of opioid prescribing practices for CNCP. This survey was prepared in electronic format and e-mailed to each program director or chair of every ACGME accredited pain program in the United States. Our results were anonymously collected and percentage of response to each question was presented in bar graph format. The survey was prepared and initially sent out in November 2017 and intermittently redistributed through April 2018. Of the 117 surveys sent through Survey Monkey, 42 responses were returned and collected, 39 fully completed surveys, and 3 partial completions, an estimate of roughly one-third of US ACGME pain fellowship programs.

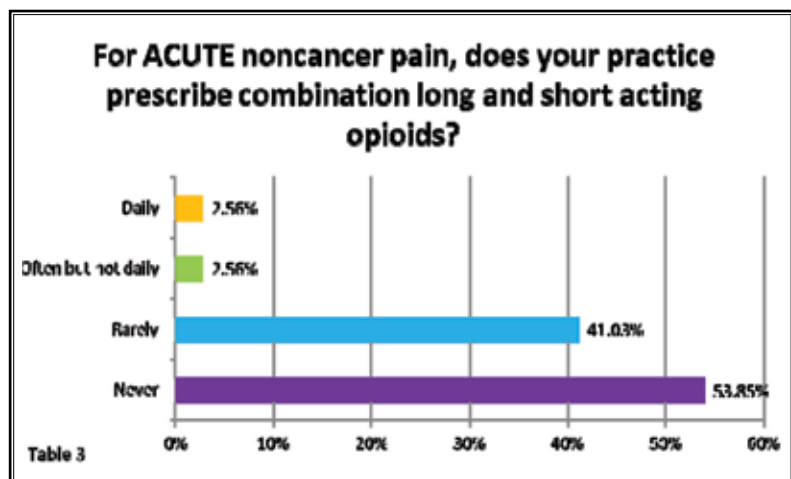
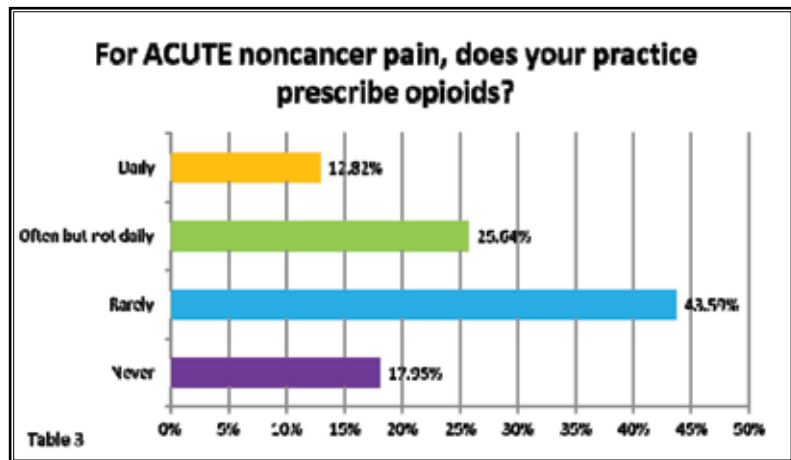
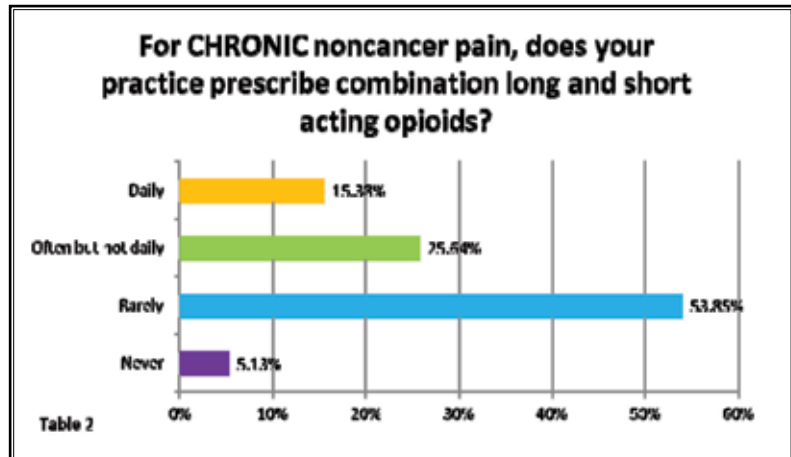
RESULTS

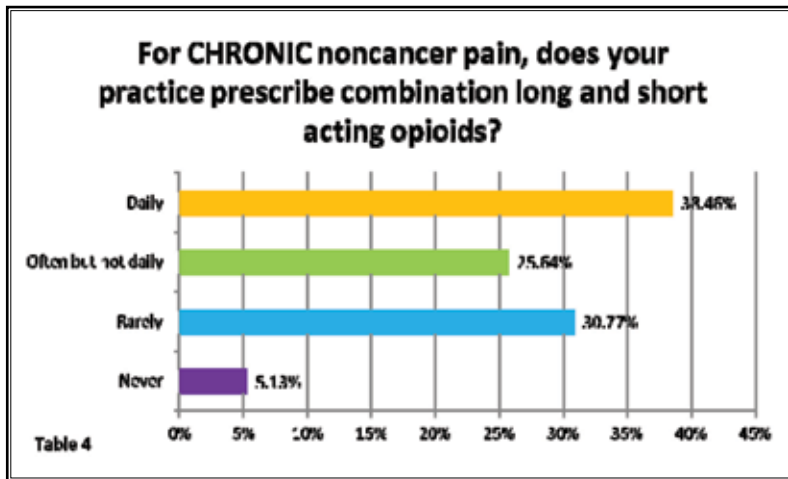
Our first question asked if opioids were ever prescribed for CNCP (Table 1). Nearly every ACGME pain program who responded described prescribing opioids for CNCP. Our survey respondents were split nearly 50:50 between those who prescribe opioids never or rarely and those who do so often or daily. The SPACE randomized clinical trial (4) attempted to assess if opioids



were superior to nonopioid therapy in improving pain-related function for moderate to severe chronic back, knee, or hip pain. This study concluded that opioids were not superior to nonopioid medications for CNCP as the 2 study groups did not significantly differ on pain-related function. The Nobel et al (2) Cochrane Review also attempted to assess long-term opioid management for patients with CNCP. In the review, it was found that many patients discontinued long-term opioids due to side effects, and also it was inconclusive if long-term opioid therapy improved quality of life for patients. Although nearly half of respondents describe limiting opioids for CNCP, another half does describe frequent prescribing of opioids for CNCP. Admittedly, this question does not address the characteristics of the patients, or other medications that may have been prescribed previously or concurrently for their pain in an effort to reduce or avoid opioid medications.

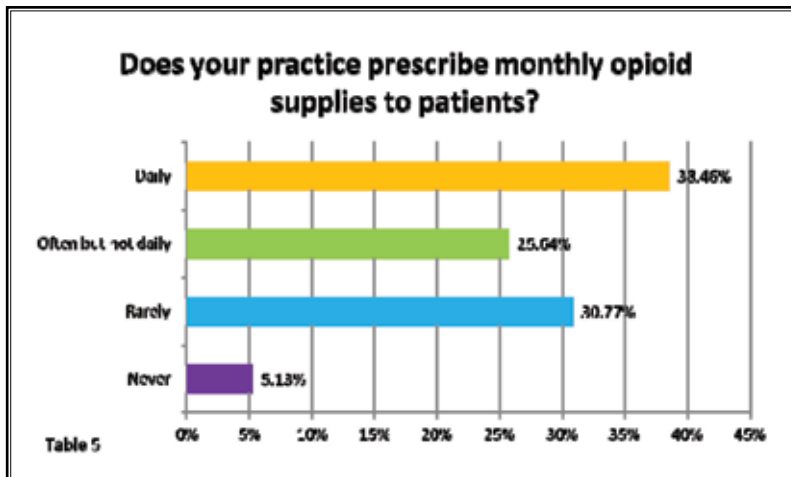
Our second survey question assessed if it was common practice to combine long-acting opioid formulations with short-acting formulations (Table 2). The data we collected show a mixed approach for the usage of long-acting opioids for noncancer pain. An article published by Argoff and Silverstein (5) in 2009 attempted to examine superiority, if any, for long-acting opioid medications. Their findings suggested that when comparing short-acting opioids to long-acting opioids, neither showed superiority, and management of CNCP should be tailored to each individual patient. Some patients benefit from the stable analgesic profile of long-acting opioids, yet in other patients the rapid onset of analgesia from short-acting opioids is preferable depending on goals of treatment and effects on their daily life. However, long-acting opioids are believed to have additional risks, and the CDC



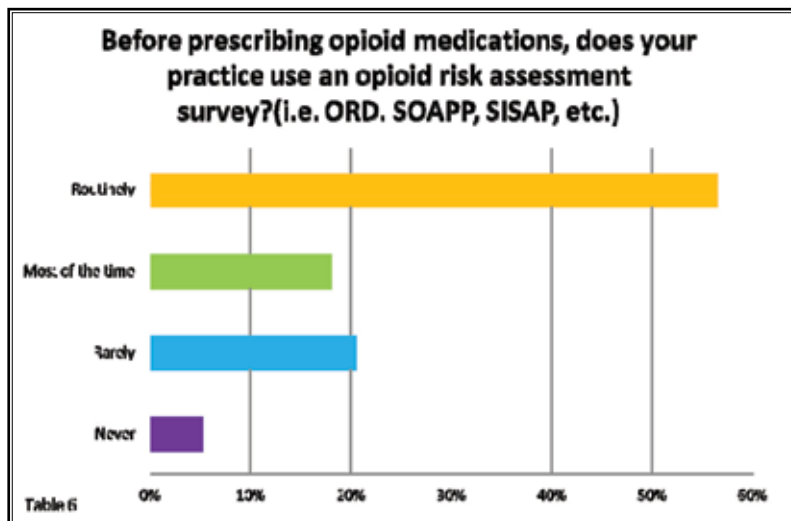


guidelines outline many cautions and caveats for using them, even in chronic pain (3). Interestingly, fewer practices prescribe long- and short-acting combinations daily compared with the practices that prescribe opioids in general for CNCP. Thus, many practices may not use long-acting opioid combinations.

Questions 3 and 4 attempted to address acute pain issues, namely opioid management with both short- and long-acting formulations (Tables 3 and 4). Acute pain, described as pain lasting < 3 months, may be an indication for opioids but also may not be preferred medical management. Concerns may be raised about addiction and diversion of leftover pills, as well as the efficacy of opioids for acute pain as compared with combinations of nonsteroidal antiinflammatory drugs or other novel treatment options. We also do not know how many of these practices prescribing opioids for acute pain are managing postoperative pain versus ambulatory patients presenting with new onset pain, we simply know that about one-third of practices prescribe opioids for acute pain regularly. The earlier mentioned data shows that most programs rarely, if ever, prescribe long-acting opioids for acute noncancer pain, which is reassuring.



Our fifth survey question asked if practices prescribed monthly opioid supplies to assess to what extent practices strive to wean down or discontinue opioids for patients (Table 5). There is a sizable (36%) portion that rarely, if ever, incorporate monthly opioid prescriptions in their practice, the majority (64%) prescribe monthly opioids for their patients often or even daily. It is possible that the minority of practices rarely or never prescribing monthly supplies are heavily interventional practices. There is also the possibility of "legacy" pain patients who have exhausted the options long before the opioid epidemic and the resulting

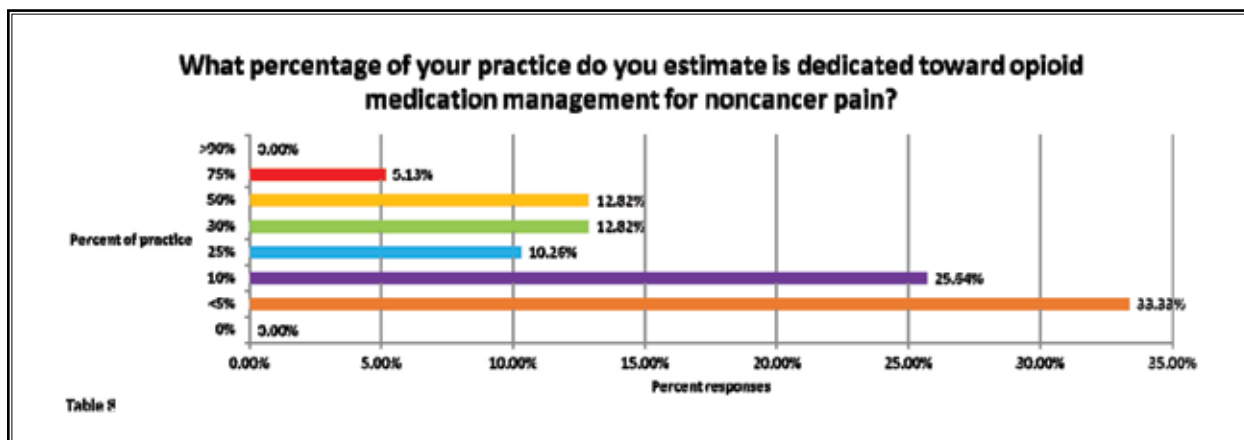
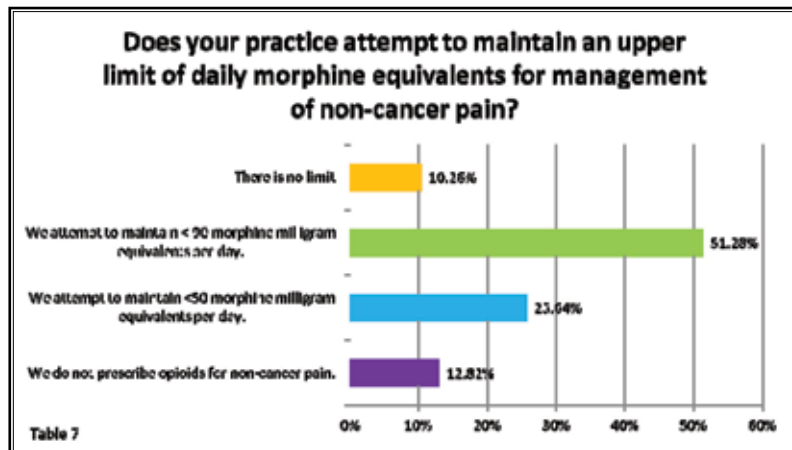


regulations, and simply manage on long-term opioid therapy. Considering the risks and limited benefits of long-term opioid therapy, in addition to increasing stigma of prescribing long-term opioids and opioid guidelines issued by many states regulating opioid prescriptions, it is possible that these ratios stand to change.

Question 6 assessed for use of opioid risk assessment tools (Table 6). Opioid risk assessment surveys allow the practitioner to safely assess the likelihood of abuse potential in a patient prior to prescribing opioids. Recommendations published in Practical Pain Management's resources geared toward minimizing opioid misuse and abuse admits there is debate regarding the accuracy of these risk assessment tools, but they can still provide vital information in the global risk assessment of patients and aid in mitigating abuse and misuse (6). The results of our survey show approximately 75% of nationwide pain practices incorporate this tool in managing patients on a regular basis. These tools can be self-administered and could easily be incorporated into an initial visit. Integration into the electronic medical record (EMR) may also be advantageous, however, this presents a challenge for many EMRs currently.

The CDC released guidelines for prescribing opioids for CNCP in 2016, although directed primarily toward primary care physicians. The guidelines recommend assessment of benefits and risks when considering increasing dosages to ≥ 50 morphine milligram equivalents (MME)/day and avoiding increasing dosages to ≥ 90 MME/day or careful justification in deciding to titrate dosages beyond 90 MME/day (3). Our seventh survey question asked if practices maintain opioid dose limits (Table 7). The results show that the overwhelming majority of programs strive to maintain a dose limit within guidelines released by the CDC. This point illustrates an interesting transition in the realm of pain management compared to 10-15 years ago. At one time, limiting the daily morphine equivalence of opioid medication was considered being "opioid phobic" or undertreating patient's pain, which has transitioned to an agreement that there may be a ceiling effect of opioid medication.

For our last question, we wished to see what percentage of each practice's case load is devoted to opioid medication management (Table 8). The data obtained from our survey shows that most ACGME pain programs that responded see opioid medications as a small percentage of their practice for noncancer pain. One could extrapolate from these data



that trainees are spending most of their time in pain fellowship programs attempting to develop methods and skills to treat pain outside of opioid medication management. This is encouraging, but it also may be difficult to quantify for providers. Oftentimes, the question of opioids does come up at some point during the visit in our experience; it is what the provider chooses to do with the topic that is the important matter.

DISCUSSION

The data displayed in these responses illustrate that although there is variance in opioid prescribing practices for CNCP, many programs are limiting what they use opioids for and have substantial nonopioid pharmacologic and or interventional aspects to their practice. Future pain physicians throughout the country are learning diverse methods of pain management, with opioids being only a part of their toolbox. It is unclear if geography, size of academic institution, or specialty sponsoring the fellowship plays a measurable role in these differences as our study did not assess these metrics. We also did not assess if programs were purely interventional versus noninterventional, which would skew prescribing practices.

We also did not inquire about the use of abuse-deterrent opioid formulations. Many of these agents are not widely in use and are in their infancy of development. Furthermore, a strict definition as to what designates "abuse deterrent" has yet to be agreed on. In regard to the published data on opioid efficacy in noncancer pain and the public's renewed interest in pain management practice, it is the responsibility of pain medicine practitioners to provide leadership in the future of prescribing opioids, namely lessening

the unnecessary use of opioids and maximizing other evidence-based modalities.

Our survey and the responses received both answer and raise fascinating questions on the topics of prescribing practices and their variance between practices. Should national guidelines pertaining to prescribing practices for opioids be dogma, or is there room for exceptions? If there are acceptable deviations, under what circumstances should we depart from guidelines? Should guidelines focus on individual maladies, age demographics, geographic location, or current standards of care? The answers here are not obvious, and at the same time we know guidelines must take at least some of the aforementioned factors into account. When it comes to training future pain physicians, however, establishing clear goals and guidelines does represent an opportunity to mold leaders and have a new generation that sees opioids in a different light than the previous generation of pain physicians. An opportunity to explore this point would be in a follow-up study that applies this survey to private practice in the coming years.

CONCLUSIONS

Future studies may address why certain patients and pathologies should be treated with chronic opioids. Others may also wish to examine the reasons behind monthly prescriptions and provider's attitudes, as well as patient demographics and outcomes. There will always be a role for opioid medication in the realm of pain management; however, thinking proactively and thinking about the long-term is an important concept for patient health and well-being.

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