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## Opening the black box of inpatient opioid prescribing

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Since initial reports describing an emerging opioid epidemic in the early 2000s,<sup>1</sup> we have seen a flurry of studies characterizing the scope and impact of the problem, and calling for actions to stem the rising tide.<sup>2</sup> However, most of these studies, and even the recently issued CDC guidelines have focused on the outpatient setting,<sup>3</sup> rendering the inpatient setting somewhat of an opioid prescribing “black box.”

Recently, however, several studies have highlighted both the scope and downstream impact of opioid prescribing in the inpatient setting. We now know that more than half of hospitalized patients in the U.S. are exposed to opioid medications during their hospitalization,<sup>4</sup> the majority of which are new initiations in patients without opioid receipt in the year preceding their hospitalization.<sup>5</sup> Among opioid naïve patients admitted to the hospital, one quarter go on to receive a script for an opioid in the 72 hours after hospital discharge, and 4% have ongoing use 1 year after discharge.<sup>5</sup> While this may seem like a relatively small percentage, when you consider that there are about 40 million discharges from U.S. medical centers each year, the majority of which are opioid naïve prior to hospitalization, this becomes a large absolute number. Taken together, these studies suggest that inpatient prescribing contributes substantially to more chronic opioid use. Accordingly, reigning in inpatient prescribing may be a crucial step in curbing the opioid epidemic as a whole.

In the present issue of the *Journal of Hospital Medicine*, Calcaterra et al.,<sup>6</sup> in a qualitative analysis of hospitalist perceptions of opioid prescribing, draw attention to the bi-directional pull exerted on physicians by the need to both adequately treat pain as mandated by the Joint Commission,<sup>7</sup> and do so while minimizing exposure to medications fraught with a wide array of adverse effects, ranging from constipation to addiction to death. What often ensues is a haphazardly choreographed negotiation between two parties, one of which, in the setting of addiction, may not know what’s best for him/herself, and the other of which is caught between the desire to relieve suffering and the desire to do no harm.

At the center of this all is the fact that pain itself is a nebulous concept, defined and experienced in a multitude of different ways by different people and cultures. For some,

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there is no distinction between psychological and physical pain. Without sufficient objective measures of pain, we must rely on the patient to convey their degree of suffering, and then use our clinical judgment to decide whether pain is severe enough and risks are low enough to use medications with physiological effects that are identical to heroin.

This study adds important information to the opioid prescribing equation in that understanding the drivers of physician decision making in this realm is an important prelude to developing strategies that effectively promote more standardized and appropriate opioid prescribing. This is the first study to investigate perceptions of hospitalists, specifically. Although their study involved only 25 hospitalists, raising questions of validity and generalizability, as a practicing hospitalist, I anticipate that their findings will resonate widely with other hospitalists across the country. First, while the hospitalists in their study were generally comfortable using opioids for acute pain, they found managing acute pain exacerbations in patients with chronic pain more challenging. Second, negative prior experiences related to opioid prescribing strongly inform future prescribing. And third, opioids are often used as a tool to facilitate discharges and prevent readmissions.

There are several important implications arising from each of these three identified emergent themes:

First, although hospitalist felt generally comfortable in prescribing opioids for acute pain in patients not on chronic opioids, in reality, prescribing opioids for acute pain, even in opioid naïve patients, is neither straightforward nor done safely. It is important we recognize that our prescribing practices as hospitalists, even for acute pain in opioid naïve patients, contribute to adverse events, and promote and propagate addiction. We can do better. Akin to the recent CDC guidelines, prescribing guidelines specifically directed at the hospital setting are necessary. An effective set of guidelines would both promote more standardized and safer prescribing practices, as well as provide support for physician decision-making in this realm. Such guidelines would help provide ground rules and a framework from which physicians could draw during those challenging discussions with patients suffering from chronic pain.

Second, many of the negative prior experiences described by the hospitalists in this study as shaping future behavior could have been avoided with enhanced, system-wide safety measures directed at each of the steps in the medication use continuum, from prescribing to administration. For example, mandatory use of electronic prescribing of controlled substances can prevent patient tampering with prescriptions.<sup>8</sup> Monitored ingestion can prevent misuse and diversion. Additional safety measures that should be widely adopted in the inpatient setting include integration and mandatory review of the State Prescription Drug Monitoring Program when prescribing opioids on admission and discharge, and clinical decision support to promote safe prescribing decisions related to dose, route, and monitoring practices. Incorporation of these and other safety measures in a systematic way will ultimately improve the experience and outcomes for both patients and physicians.

Finally, opioids are used as a tool to facilitate discharge, in part, because it is much harder to discuss a decision not to prescribe opioids with a patient expressing suffering than it is to

just provide a limited supply and get them back to their longitudinal provider. Physicians often lack the vocabulary necessary to effectively navigate such discussions. We need to make these discussions easier, through physician education and training regarding how to speak to patients about pain management. A shared, standard vocabulary specific to the inpatient setting should be developed and disseminated for discussing with patients 1) expectations related to pain management, 2) potential benefits and risks of opioids, 3) concerns over addiction, and 4) discontinuing/tapering opioids.

In conclusion, if we are to effectively curb the opioid epidemic, the inpatient setting cannot remain a black box. Standardizing opioid prescribing in the hospital will require a concerted effort by hospitalists and other physicians, nurses, pharmacists, and regulatory bodies, with important input from patients as well as longitudinal providers in the outpatient setting to assure appropriate navigation during transitions of care. Together, we can turn haphazard negotiation into coordinated co-management, ultimately promoting individual and public health.

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