

Today's Hospitalist

Hospital medicine and the **opioid crisis**

A collection
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Hospitalist



CONTENTS

3

A buprenorphine team transforms treatment, culture

The model relies on the team not having formal addiction training

5

Battling the other epidemic: opioids

A pilot program cuts inpatient prescribing

7

Treating opioid use disorder in the hospital

Are you comfortable initiating opioid agonist therapy?

9

Most opioid scripts go to only 10% of users

New research makes the case for more targeted treatment options

11

A dumb way to die

A bedside calculator predicts opioid overdose risk

14

Opioids in the hospital

How to manage pain without (or with fewer) opiates

17

Hospital medicine in the nation's heroin capital

A medical community is sorely tested

18

Treating addiction in the hospital, not just withdrawal

An inpatient addiction team greatly expands treatment options

20

Opiates and the media

A love-hate relationship squeezes doctors in the middle

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A buprenorphine team transforms treatment, culture

The model relies on the team not having formal addiction training

In 2016, providers at Dell Seton Medical Center at The University of Texas at Austin came together to work on an ambitious agenda.

They wanted to create a multidisciplinary team to initiate (and bridge) buprenorphine treatment for hospitalized patients with opioid use disorder. They decided that team members would include RNs, NPs and PAs, social workers, pharmacists, and physicians from different specialties. And they developed a series of milestones they wanted to achieve, including administering buprenorphine to at least 50% of eligible screened patients.

After a year of planning, what came to be known as "the B-Team" (for buprenorphine team) was launched in November 2017 and has since proved very successful. But team member and hospitalist Christopher Moriates, MD, associate chair of the internal medicine department and associate dean for health care value, says there is one big takeaway from all that planning and development: You don't really need it.

"Just get started with one patient," Dr. Moriates suggests. "Treat that person, learn about that treatment and then roll out a system, and don't let a lack of infrastructure get in the way of prescribing."

He uses this analogy: While physicians would love to offer patients with diabetes plenty of support and counseling, "no physician would ever decide to not prescribe insulin if such services weren't in place. We want doctors to prescribe buprenorphine when appropriate, no matter what."

That treatment, the evidence shows, clearly saves lives, Dr. Moriates adds. "Then, if you can develop other services that benefit patients, that's great."

Planning to be phased out

According to Dr. Moriates, team members from the

start were guided by one founding principle: Any model of buprenorphine treatment they created couldn't rely on formally-trained, board-certified addiction medicine expertise.

"Most hospital models are led by a board-certified addiction medicine physician, and that is great," he says. "But it's not really feasible to scale in most hospitals in the country—and certainly not here in Texas" due to the shortage of board-certified specialists. Relying solely on specialists, he adds, reinforces the misconception that buprenorphine is difficult or dangerous to order and administer. Instead, B-Team specialties include hospital medicine, psychiatry and palliative care.

"Palliative care has a lot of pain management expertise," he says. "Each specialty brings different skill sets and perspectives, particularly as we were learning along the way how to set up protocols."

Team members also spent a lot of time debating how to reach this ultimate goal: "Start this movement, but plan toward being able to phase out the B-Team," says Dr. Moriates. The idea was to bring so much enthusiasm, demonstrate so many successful treatments and train so many other providers that, eventually, those clinicians would step up, begin initiating buprenorphine themselves and get their own X waiver to bridge patients.

But how best to do that? The team decided to remain a volunteer service instead of moving to a formal addiction consult service. In an article in the December 2021 issue of the open access journal *Healthcare*, team members spelled out the drawbacks of remaining a pseudo-service. For one, team duties and presentations can be tough to work into regular day jobs. And a volunteer team can't provide 24/7 coverage.

There was, however, one decisive downside of becoming a formal service. "(H)aving a consultation service," team members wrote in Healthcare, "may work against the goal of expanding clinicians' comfort and proficiency with managing buprenorphine." If providers at the medical center couldn't offload buprenorphine prescribing to a formal service, OUD treatment for hospitalized patients might more easily become hardwired as the new standard of care.

Breaking the stigma

More than four years later, that strategy of not creating a formal service has paid off. Most hospitalists in the academic center now routinely initiate buprenorphine themselves, and many have their own X-waiver to write discharge bridging orders. While the goal of having every hospitalist X-waivered had to be postponed due to the pandemic, Dr. Moriates believes that goal will be reached this year.

The B-Team set itself another critical goal, that of breaking the cycle of stigma that fuels mutual mistrust between providers and hospitalized patients with substance use disorders. To help foster patient trust, the B-Team now includes a chaplain and a peer recovery coach. Those coaches, according to a write-up the team published in March 2022 in the *Journal of Hospital Medicine*, "connect patients with people in the local community with lived experience and serve as 'culture brokers.'"

Then there's the formidable stigma that health care workers bring to patients with opioid use disorder, the idea that patients are too far gone or only drug-seekers.

"It always sounds like we're over-playing the transformation we've seen over the years just by virtue of doing this work," Dr. Moriates says. "But we have seen impressive cultural changes."

Yes, he and his colleagues have done a great deal of education, and they have changed the language providers now use, both in conversations with (and about) patients with opioid use disorder and in charts. "But the biggest way we combat stigma is having success stories," he says. "Physicians and nurses see the benefits of starting patients on buprenorphine, and that really changes the narrative."

"Don't let a lack of infrastructure get in the way of prescribing."

—Christopher Moriates, MD
Dell Seton Medical Center



Who can call?

Putting a peer recovery coach on the team was one change team members made since the service went live. They also did away with an initial requirement that patients have an anticipated 72-hour length of stay before the B-Team is called; now, every patient who can benefit from buprenorphine is eligible.

Also, it used to be that only doctors, residents or advanced practice providers could call the team. Now, nurses and social workers can make that request, given that they often recognize opioid use disorder in hospitalized patients sooner than prescribers.

As Dr. Moriates points out, a key factor in the team's success has been partnering with a community clinic so discharged patients "have a place to land." He also credits having an in-house community pharmacy in the hospital, to allow discharged patients to fill bridge orders.

The B-Team has now received funding from Texas Health and Human Services to help disseminate its model to four other hospitals in the state. That agency is also funding the B-Team's work on creating an SBIRT (screening, brief intervention and referral to treatment) intervention for hospitalized patients with alcohol use disorder.

In the meantime, the B-Team's work has not only transformed his center's treatment protocols and culture, but Dr. Moriates' own career.

"This has completely changed my hospitalist practice," he says. While he started practicing without any particular expertise or interest in treating patients with substance use disorders, "it's an area that's been very gratifying for me professionally because it's advancing so quickly. And I know we're really helping folks who are vulnerable." **TH**

Phyllis Maguire is Executive Editor of Today's Hospitalist.

Battling the other epidemic: opioids

A pilot program cuts inpatient opioid prescribing

With coronavirus crowding the headlines, it's easy to forget that the U.S. is still in the middle of a decades-long opioid epidemic. But "in the hospital, we know it's still happening. We know it's still here."

That's according to Cathy O'Neil, MD, a hospitalist with Centura-Longmont United Hospital in Longmont, Colo. Earlier this year, Dr. O'Neil served as physician champion for a 10-hospital pilot program in her state that tested the use of protocols and scripts designed to reduce inpatient opioid prescribing.

That pilot built on the success of an ED project launched in 2018 by the state's hospital association, which dramatically cut opioid use in EDs throughout the state. While data from the inpatient pilot, which ended in March, are still being tallied, "we do have some rough numbers from Longmont," says Dr. O'Neil. "Those numbers show that, compared to the year before, our opioid prescribing decreased and our use of opioid alternatives increased significantly."

Inpatient pain protocols

In 2017, the Colorado Hospital Association piloted its original Alternatives to Opioids (ALTO) Project in 10 EDs across the state. The goal was to see if the program—which promotes the use of other types of pain management modalities and medications—could treat pain effectively while reducing ED opioid administration by 15%.

Instead, participating EDs cut opioid prescribing by 36% and increased their use of opioid alternatives by 31%, and the ED ALTO program was rolled out statewide. In early 2019, the hospital association partnered with SHM's Rocky Mountain chapter to create specialty-specific clinical guidelines on inpatient opioid prescribing.

Those became the basis of the inpatient ALTO project. Ten hospitals volunteered to participate, including Centura's Longmont United and St. Anthony North Health Campus, both part of Centura Health, a 17-hospital health system. The pilot began in October 2019 and ended in March 2020.

A key component was adopting those nonopioid treatment protocols for common types of pain.

"We created five protocols for renal pain, pleuritic, musculoskeletal, extremity and abdominal pain," Dr. O'Neil explains. The protocols spell out both the schedule of and dosages for the nonopioid pain medications to be used, including acetaminophen, ibuprofen, neurontin, oral ketamine and IV lidocaine. Participating hospitals entered order sets for each protocol into their EHR.

While IV lidocaine and ketamine have been pain mainstays in EDs and ORs, Dr. O'Neil says that getting hospitalists to use them may have been, for those physicians, the toughest part of the pilot. That's because hospitalists have little experience with those medications for pain control.

"We're so used to prescribing opioids because that's how we were trained," she says. Dr. O'Neil also chalks up hospitalists' over-reliance on opioids to the Joint Commission's requirement that patients who report a 10-out-of-10 pain level need to be given opioids.

In the pilot project, participating hospitals used only oral ketamine. They also decided to use IV lidocaine only on the telemetry floors, which were stocked with lipid rescue kits in the event of lidocaine toxicity.

"We had to make sure," says Dr. O'Neil, "that clinicians knew how and when to use the drug, so we enlisted our pharmacy colleagues to help."

"I've seen a lot of people come in asking for more narcotics—and we used to give them more."

—Cathy O'Neil, MD

Centura-Longmont United Hospital

Changing the conversation

Other recommended modalities used much more often during the pilot were ice and heat, and early mobility.

And Longmont United, which has an integrated health department, also received a grant around the same time as the project pilot that allowed hospitalists to offer massage and acupuncture to patients reporting pain for whom it might help.

"We also made more use of our chaplains," Dr. O'Neil points out. "They bring a sense of calm, and they are already trained in guided imagery and relaxation techniques."

But "the real beauty of the project," she says, "is how it changes the conversation around opioids on the floors." Part of the training for both nurses and providers has been in using scripts with patients who ask for pain medications.

"We all learned to say, 'Yes, we're going to help your pain, but we're going to use certain medicines before we go to opioids. We're going to try these cocktails, which have worked well. And then if you need opioids, we'll give you opioids.' "

That, Dr. O'Neil adds, "has been a huge satisfier for the nurses," on whom patients put more pressure for pain meds than they do physicians.

"Saying 'no' is difficult," she notes. "Now doctors and nurses can say, 'You are getting better because you are eating/walking/sleeping better, so I shouldn't increase your opioid dose. Because of the opioid epidemic, I am being watched and I don't want to get in trouble. But I have lots of other good options.' "

That conversation makes a lot of sense to opioid-naïve patients, many of whom don't want to be started on opioids if they can avoid it.

As for patients who come in with acute pain and are already on chronic opioids, Dr. O'Neil tells them:

"We know you have a dependency on opioids, and I'm going to check the prescription drug database to find out how much you're taking. I'll continue you on that dose, but I'm not going to increase it. Instead, we'll add on these other agents.' " Sometimes, she points out, "it works, and sometimes the patient is still unhappy."

Changing course

With the pilot project ending just as coronavirus blew up, an analysis of the pilot data has been delayed. Dr. O'Neil reports that the hospital association is still putting those figures together based on hospital claims filed.

Still, the project was considered such a success that Centura Health plans to roll it out in 16 other Colorado and Kansas hospitals next year. Planning for that roll-out begins in November.

During her 13 years in hospital medicine, Dr. O'Neil says, "I've seen a lot of people come in asking for more narcotics—and we used to give them more. Patients would then be groggy or fall asleep and not participate in their care. We were doing them a disservice."

And since the early 2000s when the Joint Commission began identifying pain as the fifth vital sign, "we've had more and more people becoming addicted, through no fault of their own. I'm onboard with whatever I can do to try to mitigate that." While she may not be able to get someone totally clean, "my goal is to decrease the number of people who could become addicted because they came in with a skin infection and we gave them opioids."

Dr. O'Neil adds one more goal: "We want to get to the point that we don't walk into a room with a chronic pain patient and say, 'Oh dear, not you again.' " 

Phyllis Maguire is Executive Editor of Today's Hospitalist.

Treating opioid use disorder in the hospital

Are you comfortable initiating opioid agonist therapy?

When Hannah Snyder, MD, began working on Project Support for Opioid Use Treatment (SHOUT), the initiative was a state effort. But while it was designed to help hospitalists in California reduce the high mortality and readmission rates they see among patients with opioid use disorder, the project very quickly morphed into a national effort.

“We had a target goal of finding and engaging with about 25 hospitals,” says Dr. Snyder, an addiction medicine fellow at Zuckerberg San Francisco General Hospital. But when the project, which is funded by the California Health Care Foundation, kicked off a series of Webinars last fall, it drew nearly 200 participants in 19 states.

SHOUT leaders do provide intensive interventions in California hospitals with onsite visits, grand rounds and coaching calls. But physicians and hospitals around the country are invited to access the project’s webinars, educational material and guidelines. (SHOUT leaders are also collaborating with a sister project—MAT ED—designed for clinicians starting opioid agonist therapy in EDs.)

Dr. Snyder is very clear about SHOUT’s aim: to help inpatient clinicians become comfortable initiating methadone or buprenorphine in the hospital, therapies that she sees as the best option for most patients with opioid use disorders.

“Our goal is to keep patients on maintenance treatment and not to do this as a detox or taper protocol,” she says. Patients who decide instead to tough out withdrawal in the hospital “often leave against medical advice. Or if they do a taper or a medically-assisted withdrawal through detox, eight or nine out of 10 of them will relapse.”

Dr. Snyder knows that opioid agonist therapy won’t be a silver bullet for all patients. “But we also know that patients benefit from even a short course of treatment,” she says. “Every time they go

through the process of trying to quit opioids and enter a period of non-use, they improve their future chances of sustaining sobriety.”

Plus, patients maintained on a medication maintain their tolerance. “So if they do relapse, we think—although this has not been studied—that they should have a lower overdose risk.” Dr. Snyder spoke to Today’s Hospitalist.

What’s the No. 1 pushback you get on implementing inpatient treatment?

That opioid use disorder is an outpatient issue, an opinion I really like to challenge. Often, these are patients who do not touch the health care system routinely or have an established primary doctor. But they do present to the hospital very frequently, often with something related to that disorder: endocarditis, osteomyelitis or cellulitis.

They’re so uncomfortable that it can be a moment of change. A study in the May 2017 issue of the Journal of Hospital Medicine found that 54% of patients with moderate- or high-opioid use were interested in medication for addiction treatment. So it’s an ideal time for clinicians to step forward and say, “Hey, we have something that can help you, and we can get you connected to treatment.” In many cases, a hospitalist is better positioned than an outpatient provider to really intervene and make a change.

More people died from drug overdoses in 2016 than in the entire Vietnam War. So we need the entire health care system to address this issue.

What concerns do hospitalists have about initiating treatment?

Many have the misconception that it is illegal for them to prescribe buprenorphine or methadone in the hospital without special certification. While

"In many cases, a hospitalist is better positioned than an outpatient provider to really intervene."

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Zuckerberg San Francisco General Hospital



regulations limit these as outpatient therapies, those do not apply in the hospital. The DEA has specifically made allowances to use opioids for inpatient opioid-withdrawal treatment.

Federal regulations state that patients admitted for any reason other than their opioid use disorder can be treated with any medication. The regulations go even further to say that emergency rooms or urgent care centers can dose patients for up to 72 hours with observed dosing to allow patients to be bridged into treatment after discharge.

What are barriers to hospitalists inducing treatment?

First and foremost, limited time, so we really work with people to streamline the induction process and make it as simple as possible. We've developed algorithmic guidelines that let you check off boxes, and we're working with hospitals on order sets.

Scarce outpatient resources are also a huge barrier, so one of our webinars focuses on telemedicine solutions. We work with telehealth organizations that provide expertise for inpatient starts and then connect patients to outpatient care.

We never want to start someone on methadone or buprenorphine and send that person out without clear follow-up. So we work with hospitals to identify community resources they can refer patients to or to train community providers to feel comfortable prescribing buprenorphine. We also try to pair hospitals with methadone clinics.

The guidelines we've developed are designed to make sure that patients being induced with buprenorphine don't have precipitated withdrawal. When patients are already stabilized on a bu-

prenorphine dose at discharge, many more primary care providers are willing to take them on.

What concerns do patients have about starting treatment in the hospital?

A lot of people have strong opinions that using medications is not true abstinence. But I see substance abuse disorders as chronic diseases of the brain. With diabetes patients, I know that many of them are going to end up needing chronic medications. I think about methadone and buprenorphine the same way, and the mortality decreases with these drugs are staggering. For me, this is not substituting one drug for another, but initiating a life-saving intervention.

Working at a major teaching hospital, you must have resources not available to others—like an addiction service.

Actually, UCSF doesn't have an addiction service. We do have some onsite addiction specialists, and we can certainly help troubleshoot questions. But the SHOUT guidelines, and we use those ourselves, are designed so inpatient providers can do the induction. All our hospital services feel quite comfortable with methadone starts and more are becoming comfortable starting buprenorphine as well.

And across all hospitals, hospital pharmacists are very strong advocates and allies. They understand the pharmacology, and they know these medications decrease illicit drug use and infectious disease transmission and improve outcomes. **TH**

Phyllis Maguire is Executive Editor of Today's Hospitalist.

Phyllis Maguire

Most opioid scripts go to only 10% of users

New research makes the case for more targeted treatment options

The opioid epidemic in the U.S. is receiving a growing amount of press and scrutiny, and rightly so. But according to the authors of a report posted online in September by *Annals of Internal Medicine*, “an integral piece of epidemiologic information about opioid misuse remains unknown: the distribution of use across the population.”

The report goes on to provide that missing piece. The authors analyzed data on more than 19.5 million patients without cancer who had private insurance between 2001 and 2013 and who filled at least one opioid prescription. They found that the top 5% of users in 2013 accounted for 59% of all prescribed opioids, while the top 10% that year received 76% of all opioid prescriptions.

In 2001, by comparison, the top 10% of users accounted for 69% of all prescribed opioids, indicating that opioid use is becoming more concentrated among fewer users. The findings, the authors write, have “important policy implications.” Opioid-prescribing guidelines—like the ones released by the CDC last year—tend to take a very broad approach, suggesting limited dosages and prescribing durations for

all patients, as well as recommending the use of non-opioid treatments.

Instead, the fact that opioid use is becoming increasingly concentrated among only a few users “would argue for focused efforts aimed at reducing use among these persons,” according to the study. Lead author Eric Sun, MD, PhD, an anesthesiologist and researcher at Stanford Hospital in Stanford, Calif., spoke with *Today’s Hospitalist*.

In the feedback you’ve received, were clinicians surprised by your results?

I think most people suspected that the majority of opioids was being used by only a small minority of patients. But just because you think something is true doesn’t mean it is, and that was the point of our paper: to say that this is true. The fact that we found the concentration of opioid use increasing over time, however, did surprise some people.

The need to combat opioid overuse is becoming much more visible, with a presidential commission now recommending that a national emergency be

Are new prescribing laws too restrictive?

In guidelines released in 2016, the Centers for Disease Control and Prevention (CDC) advised doctors to voluntarily restrict their opioid prescribing. According to the guidelines, doctors should limit their initial prescriptions for patients with acute pain to a three-day supply, not 30 days. Further, opioid prescriptions of more than seven days will rarely be needed.^o

Several states—including Massachusetts, New York, Connecticut, Maine and Rhode Island—have taken that guidance further and imposed seven-day prescribing limits. But does that leave some patients without adequate pain control?

Some researchers think it may. A study published online by *JAMA Surgery* this September looked at the optimal duration

for postop opioid prescriptions after eight common surgeries. Based on 2005-14 data on more than 215,000 patients, the optimal script lengths were deemed to be between four and nine days for general surgeries, between four and 13 days for women’s health procedures, and between six and 15 days for musculoskeletal procedures.

Among patients receiving postop opioids, 19% received at least one prescription refill. While seven-day limits on postop opioids are sufficient for many common surgeries and gynecologic procedures, the authors conclude, “after many orthopedic and neurosurgical procedures, a 7-day limit may be inappropriately restrictive.” **TH**

"The **better** the pain control in the hospital, the **lower** the risk of long-term **opioid use**."

—Eric Sun, MD, PhD
Stanford Hospital



declared. Is that helpful?

I think it is. Anything that draws attention to the issue gets more people thinking about how to reduce risk. What can be left out of that discussion, however, is that people being in pain is not a good thing either. But at least we're thinking about what we need to study and how to implement good evidence into actual clinical practice.

Your report points out that the CDC guidelines take a very broad approach instead of a more targeted one.

I think guidelines are helpful, although I'm not a practicing pain physician. But several state legislatures have passed laws that are more stringent than the CDC guidelines, saying that doctors can prescribe only a one-week supply of opioids at a time. (See "Are new prescribing laws too restrictive?" on page 14.) Those laws target everyone. Our research suggests that we probably should focus on the small group of people who use opioids quite intensely.

Some hospitalists have a blanket rule that they won't prescribe opioids at discharge, to make sure patients get such prescriptions from only outpatient physicians. Should doctors instead approach discharge prescribing on a case-by-case basis?

I understand why hospitalists don't write those prescriptions: They're not going to be following up with those patients, and patients won't be calling them if they have problems.

You have to own any prescription you write. For me, if I'm not going to follow up with the patient, I shouldn't write the prescription. I don't prescribe any opioids for patients at discharge either, although I order them for patients in the hospital during their recovery and give them opioids during surgery. Because the surgeon usually follows the patient closely after surgery, I think it makes sense to leave outpatient opioid prescribing

to the surgeon.

How is your own institution targeting patients taking high opioid doses?

Our preop clinic is moving toward formally evaluating opioid dosing and flagging patients at high risk. That allows me to think about altering my anesthesia management to include things like nerve blocks and epidurals, which minimize the need for additional opioids.

The preop clinic is also reaching out to consult another group of anesthesiologists who are part of the pain group, to see if patients taking a lot of opioids should be tapered off before surgery. We're developing infrastructure and pathways to identify patients and get interventions on board, but doing so takes time.

You also authored a study in the September 2016 JAMA Internal Medicine. That found that opioid-naive patients were at increased risk postop for chronic opioid use, particularly if they used antidepressants or benzodiazepines, or had a history of drug abuse. What could reduce the risk related to postop opioids?

I think that's the next step in research: to try to identify how to reduce that risk. Studies do show that patients who have less pain in the hospital are less likely to use opioids long-term, but that evidence is hard to interpret and you can't really say there's a causal effect.

Those patients may have been less likely to use opioids in any case after discharge because maybe their surgery went more smoothly. But evidence does suggest that the better the pain control in the hospital, the lower the risk of long-term opioid use. **TH**

Phyllis Maguire is Executive Editor of Today's Hospitalist.

A dumb way to die

A bedside calculator predicts opioid-overdose risk

but great for me. I became hospitalist No. 3 for my old health system way back in 2005, joining two overworked internists who needed to offload the psych floors. One unit was a chemical dependency floor that was also a federally-licensed opioid treatment program—basically a methadone clinic in a hospital.

And so it began. Twelve years and board certification in addiction medicine later, opioids continue to pay our mortgage and fund orthodontia for our kids. I never saw it coming when I was applying to med school in the '90s.

Hospitalists are certainly aware of—and probably fatigued by—the opioid epidemic: the 2016 CDC guideline, the surgeon general's campaign, the Trump dust-up about whether or not it's a public health emergency and so on. But the problem has always felt like it's out there with the pill-happy primary care doctors and pain clinics. What, realistically, can a hospitalist do in two or three days for a seemingly incidental issue?

Problems with MME

I never minimize or soft-sell medication risks and side effects. I advise patients that medications are poisons because they interfere with the way the body normally works. Sometimes the risks are worth it, but I need patients to appreciate that potential benefits come with clear costs.

In terms of opioids specifically, here's my key talking point: There's no risk-free dose. Granted, higher doses generally confer greater risk, but don't delude yourself that standard prescriptions—for example, oxycodone 5 to 10 mg every 6 hours—are necessarily safe or benign. They continue to kill people.

People have been buzzing about morphine milligram equivalents (a.k.a. morphine equivalent dose) since the CDC guideline appeared last year. Here's the fifth recommendation in that document: "Clinicians should use caution when prescribing opioids at any dosage, should carefully reassess evidence of individual benefits and risks when increasing dosage to 50 morphine milligram equivalents (MME) or more per day, and should avoid increasing dosage to 90 MME or more per day or carefully justify a decision to titrate dosage to 90 MME or more per day."

Everyone quickly became obsessed with those two numbers. Health systems sliced their data and started developing QI programs to taper patients below the higher MME threshold. Noble work, but it misses the larger point: There's no risk-free dose.

This MME business didn't come out of thin air. You can trace it back to large data sets that looked at MME vs. overdose. The one that I keep referring to was published in the *Journal of Pain* in April 2015. Investigators looked at 207,000 patients with non-cancer pain over three and a half years. Patients on 100 or more MME/day had a 6% risk of overdose.



Bedside opioid-overdose calculator

In the past six months, has your patient had an outpatient, inpatient or ED visit for any of the following:

	Points for "yes" answer
■ Substance use disorder (addiction) of any kind, including alcohol and cannabis?	25
■ Bipolar disorder or schizophrenia?	10
■ Stroke or other cerebrovascular disease?	9
■ Significant chronic kidney disease?	8
■ Heart failure?	7
■ Nonmalignant pancreatic disease?	7
■ Chronic pulmonary disease?	5
■ Chronic headache?	5

Does your patient take:

■ Fentanyl (transdermal or transmucosal)?	13
■ Morphine?	11
■ Methadone?	10
■ Hydromorphone?	7
■ Extended-release or long-acting (ER/LA) opioid?	5
■ Benzodiazepine?	9
■ Antidepressant?	8
■ ≥100 mg MME/day?	7

Average probability of overdose or serious opioid-induced respiratory depression in the next six months

Points	
0-4	2%
5-7	5%
8-9	7%
10-17	15%
18-25	30%
26-41	55%
≥42	83%

Source: Venebio Group LLC. Used with permission.

MME is a univariate analysis in a **complex, multivariate world**. When do you look at just a **single vital sign and ignore the rest?**

But here's the more interesting—and I think overlooked—finding: Those on 20–49 MME still had a 2% chance of overdose. Lower, yes, but probably unacceptable for a non-fatal condition like chronic pain where the benefits of opioids are extremely iffy.

Multivariate analyses

I've grown weary of MME for another reason: It distracts from other risk factors. MME is a univariate analysis in a complex, multivariate world. When do you ever look at just a single vital sign and ignore the rest?

Let me drive this point home with a simple case. Consider John Doe, a 55-year-old male admitted to your service for community-acquired pneumonia. He has mild COPD and takes oxycodone extended-release 20 mg/day for chronic back pain and fluoxetine for depression. What's his risk of overdose in the next six months?

An above-average hospitalist (like you!) will note that oxycodone 20 mg=30 MME. (Yawn) Definitely seen worse. Continue at discharge.

The careful reader might guess that it's 2% based on the prior section, but that's not even close. Mr. Doe's actual risk—brace yourself—is 30%. Said differently, one patient in three with his clinical profile will experience a serious overdose in the very near future.

This estimate comes from the risk index for overdose or serious opioid-induced respiratory depression (RIOSORD), an opioid-overdose calculator first presented at the American Academy of Pain Medicine's 2015 Annual Meeting. (It was subsequently published this April in *Pain Medicine*.) (See "Bedside opioid overdose calculator" on facing page.) The investigators developed it by analyzing a crazy number of variables for 18.4 million patients.

(Full disclosure: I work as a paid consultant for Venebio, the Virginia-based company that developed RIOSORD. Venebio has tasked me with writing content for frontline providers that will hopefully help them mitigate risk. I also use RIOSORD for direct patient care in my private practice.)

Despite his low MME, Mr. Doe racked up points for COPD, the extended-release formulation and his antidepressant. And here are some frightening twists: Substituting morphine extended-release for oxycodone increases his overdose risk to 55%. The same thing happens when you add a benzo for sleep. Yikes!

Scare them straight

So what can you do? Educate. Run your patients' numbers and give them blunt, directive feedback. My suggested script goes something like this:

- I'm really concerned about your opioid overdose risk.
- I ran your numbers through a calculator and found that your risk of overdosing in the next six months is X%.
- Please talk to your opioid prescriber about ways to reduce your overdose risk.

I also recommend putting a conspicuous but more doctorly version of this conversation in your discharge summary. Sure, you might get some angry phone calls from community providers. But what's worse: an aching ear, or an overdose you might have prevented? **TH**

David A. Frenz, MD, runs a small private practice and health care consulting firm in Minneapolis. He was previously vice president and executive medical director for North Memorial Health in Robbinsdale, Minn. You can learn more about him and his work at www.davidfrenz.com or LinkedIn.



Hospital medicine and opioids

How you can manage pain without
(or with fewer) opiates



Like all physicians, hospitalists are under the gun to reduce their opioid prescribing. To that end, several panels of experts at this year's Society of Hospital Medicine annual meeting offered advice on everything from how to use opioids when treating the growing number of inpatients suffering from both pain and substance use disorders to more effective ways of using non-opioid analgesics and non-drug pain treatments.



"Why do we care?" asked Shoshana J. Herzig, MD, MPH, a hospitalist and director of hospital medicine research at Harvard Medical School and Beth Israel Deaconess Medical Center in Boston. "Because opioids are among the most common causes of adverse events in hospitalized patients"—and because "hospitalization contributes to opioid initiation and long-term use in millions of adults each year."



An important article published last year in the May 2016 issue of the *Journal of General Internal Medicine* found that up to one-quarter of patients who were opioid-naive

prior to a hospitalization filled an opioid script in the week after discharge. Another study, published in the July 2016 *JAMA Internal Medicine*, found that nearly half those patients were still using opioids more than 90 days later.

"If you are taking opioids 90 days after, you are taking them indefinitely," pointed out hospitalist Theresa E. Vettese, MD, a palliative care specialist at Atlanta's Emory University School of Medicine and Grady Memorial Hospital. "We may think that this is just an outpatient problem, but we are part of the problem too."

"We may think that this is just an outpatient problem, but we are part of the problem too."

—Theresa E. Vettese, MD
Emory University
School of Medicine



How to reduce prescribing

How can hospitalists turn problematic prescribing around? Here are several key changes that panelists recommended when treating patients suffering from severe pain:

■ **Avoid long-acting opioids, order the lowest effective dose for the shortest time and limit opioids at discharge.** As Dr. Herzig pointed out, “there are many opioid conversion apps out there” that hospitalists should use. But she recommended that doctors should go further and reduce doses by between 25% and 50%, especially for elderly patients.

“Remember, calculated equianalgesic dosages are estimates only,” she said. Moreover, patients who develop a tolerance for one opioid are unlikely to tolerate a different opioid similarly. As a result, physicians need to reduce doses when switching between opioids and when prescribing opioids in patients with comorbidities.

Dr. Vettese pointed out that she tells patients at the start of their hospital stay that she will not be prescribing them opioids at discharge. Instead, any post-discharge opioid prescription will have to come from patients’ outpatient physician, something she lets them know she will communicate to primary care providers.

And if you must discharge a patient with an opioid prescription, make sure it is for the fewest number of pills possible. When opioids are used for acute pain, said Dr. Herzig, “three days or less of therapy will often be sufficient. Longer courses lead to the higher likelihood of both chronic use and diversion.”

■ **Avoid intravenous opioids if possible.** “The faster the rate of opioid onset, the greater the reinforcement and addiction potential,” Dr. Herzig said. That is why “the oral route is strongly preferred over injection” for almost all patients.

While IV-administered opioids take effect almost immediately, oral therapies usually take between 20 and 40 minutes. “We are talking about only a 15- or 30-minute difference” in the onset of pain control, and oral opioids last longer than IV agents. “You can get a bigger bang for your buck, and you don’t need as many repeated doses.”

■ **Always consult your state’s prescription drug monitoring program (PDMP) before prescribing.** All states but Missouri have a PDMP. In some, like Massachusetts, prescribers or pharmacists are required to check these online databases before writing or filling an opioid prescription.

With a PDMP, “you can assess whether a patient has been getting refills from multiple providers or doing a bit

of doctor shopping, or if they have overlapping pills or rapid consumption,” Dr. Herzig explained. “All of these can serve as red flags for possible substance use disorder and increased risk for adverse events.”

■ **Revise your pain scale to ask about both intensity and tolerability.** Clinicians should ask not just about how bad patients’ pain is (on a 1-10 scale, for instance) but also—on a similar scale—how much the pain affects their “enjoyment of life” and how much it “interferes with general activity.” That’s according to Hilary J. Mosher, MD, MFA, hospitalist and clinical associate professor at the University of Iowa Carver College of Medicine and Iowa City VA Medical Center in Iowa City.

Dr. Mosher pointed out that those three data points can help “interrupt the reflexive response that patients get an opioid when they report a high pain score, which in turn can lead to inappropriate continuation.” And hospitalists are often surprised by patients’ answers to those questions, she noted. Many patients in pain are willing to work with doctors to use non-opioid treatments to deal with discomfort in the hospital.

■ **Make greater use of other pharmaceutical and non-pharmaceutical treatments.** Except for patients with reduced kidney function, “we probably aren’t using NSAIDs as often as we should,” said Dr. Herzig. Mounting evidence indicates that NSAIDs are “equally or more effective and have less risk for harm than opioid analgesics.” She cited several recent Cochrane reviews that compared opioid to non-opioid therapy for acute renal colic, acute post-operative pain and acute tissue injury.

Moreover, in treating most kinds of pain, doctors should pair opioids with non-opioids. That makes both work better and “reduces total opioid requirements.”

When prescribing NSAIDs for older patients, Dr. Vettese advised ordering lower doses, such as 200-400 mg of ibuprofen every six hours, for instance. Physicians should also stop patients’ ACE inhibitors and make sure they are well-hydrated.

In addition to non-opioids, Dr. Vettese recommended trying non-pharmaceutical pain-relief methods, from physical therapy and TENS units to nerve blockades administered by anesthesiologists, which show promise. (See “Four pain scenarios: What to do in the hospital” on page 27.) Some evidence also supports distraction therapy, such as music therapy.

“We probably aren’t using NSAIDs as often as we should.”

—Shoshana J. Herzig, MD, MPH
Beth Israel
Deaconess
Medical Center



■ **Have tough conversations with patients.** Many patients mistakenly believe that opioids aren't addictive, don't have side effects or can take away all their pain. "We should be discussing risk, and—more importantly—setting realistic goals and expectations," said Dr. Herzig. "You can save

yourself a lot of headaches down the road when therapy goes awry or patients start having adverse effects." **TH**

Deborah Gesensway is a freelance writer who covers U.S. health care from Toronto.

Four pain scenarios: What to do in the hospital

Scenario 1: Patients have chronic pain with no acute pain or history of opioid use. Do not start opioids in the hospital. "Even for chronic pain scores of 10, opioids should not be a first-line therapy in the absence of acute pain," said Hilary J. Mosher, MD, MFA, hospitalist and clinical associate professor at the University of Iowa Carver College of Medicine in Iowa City. Dr. Mosher advised hospitalists to find out what patients do at home to cope and to also pay attention to disturbed sleep, anxiety, depression, boredom and immobility. All of those can be exacerbated in the hospital, and they all contribute to chronic pain.

Scenario 2: Patients have both chronic and acute pain, but no history of opioid use. Hospitalists' first job is to focus on acute pain, and their choice of therapy will depend on proper diagnosis.

If the pain is nociceptive—due to tissue injury such as inflammation, trauma or ischemia—patients typically describe it as "sharp, aching or throbbing," said Harvard's Shoshana J. Herzig, MD, MPH. The best choice of an analgesic is likely to be an NSAID or acetaminophen.

If the pain is neuropathic and related to a nerve injury, which patients usually describe as "burning, heavy or numbness, you are reaching for things like gabapentin, pregabalin, tricyclic antidepressants or SNRIs."

"There is a myth out there that opioids are the most effective medications to treat severe pain," Dr. Herzig explained. "For most pain, in fact, non-opioid analgesics are equally or more effective with less risk for harm."

Studies have also shown that other pain reduction therapies "significantly" help reduce post-operative pain, said Emory's Theresa E. Vettese, MD. In addition to physical therapy and TENS units, options include femoral nerve block and acupuncture. According to a systematic review in the Aug. 16, 2011, *Annals of Internal Medicine*, the most effective pain management strategy for hip fracture patients is nerve blockade.

"It's a low-risk procedure" that leads to less opioid use as well as decreased delirium and length of stay, Dr. Vettese

said. "We should be talking to our hospital administrators and anesthesia colleagues to have nerve blockade offered as part of our pain management."

Scenario 3: Patients have chronic pain with no acute pain, and they take opioids. Hospitalists need to determine whether the pre-hospital opioids are "causing imminent harm or contributing to the reason for the hospitalization," Dr. Mosher said. Opioids are implicated in falls, mental status changes, respiratory distress and polypharmacy complications.

"If we don't see those harms, it is reasonable to continue home therapy," she noted. "If we do see harms, then consider if there is also an underlying substance abuse diagnosis."

It is also important to "engage patients in conversation about alternatives. If they are willing to consider getting off opioids," Dr. Mosher said, "initiate a tapering protocol."

Scenario 4: Patients have both chronic and acute pain and take opioids. If the opioids the patient takes for chronic pain aren't "causing imminent harm and other analgesics are contraindicated or have not been effective, it is reasonable to consider increasing opioids short-term," Dr. Mosher said.

The most difficult subset within this group is patients with an opioid use disorder. Some strategies can help, starting with up-front conversations both about the risks of opioids in hospitalized patients and expectations about their benefits.

"The message should not be that we are going to help you become pain-free," said Dr. Herzig. "The goal is tolerability, not absence of pain. Discussing this up-front goes a long way toward forging a therapeutic alliance."

Conversations also should cover the fact that opioids will be cut back if patients experience a lot of sedation or other side effects. "That," Dr. Herzig pointed out, "can make discussions down the line a little easier." **TH**



"Opioids should not be a first-line therapy in the absence of acute pain."

—Hilary J. Mosher, MD, MFA
University of Iowa
Carver College of
Medicine

Jenny Hartsock, MD

Hospital medicine in the nation's heroin capital

I am a practicing hospitalist in Dayton, Ohio. Dayton has emerged in the last year as the city with the highest per capita death rate from opioid overdoses.

When we measure the number of deaths here, we talk about how many there are per day, not per week or month. We have been inundated with heroin and other products laced with fentanyl or carfentanyl. Every other drug, including marijuana, is laced with an opiate in this city.

Dealers stand on street corners and throw baggies of heroin into passing cars that have the windows open—free of charge—to get new customers hooked. A routine dose of Narcan to revive someone here is not the standard 0.4 mg dose, but a minimum dose of 10 mg. But despite those maximum Narcan doses, many people die and cannot be revived.

Medical consequences

Our hospitals are overrun with opioid dependent patients. They take up a staggering amount of the health care community's resources. When you are an IV drug user, there are many acute and chronic medical illnesses that come with that disorder. Those include:

- hepatitis C
- bacteremia
- endocarditis
- skin and bone abscesses
- osteomyelitis
- pyomyositis
- rhabdomyolysis



Jenny Hartsock, MD, is a hospitalist practicing in Dayton, Ohio. Dr. Hartsock's commentary originally appeared in July 2017 on KevinMD.com.

And that's if you are lucky enough to survive an overdose. Many of these conditions take months to treat and cost hundreds of thousands of dollars.

An exhausted community

In hospitals and clinics in Dayton, the medical community is being tested. We do not have enough resources to help patients get clean.

And even if we did, the number of patients who achieve remission then relapse over and over and over is staggering. Instead, we spend our days putting out fires, reviving opiate users and patching them up so they can leave against medical advice—only to return day after day in an endless cycle.

What you see throughout this city is a community exhausted by opiate abuse. Our job is to take care of all patients, but you clearly notice over time a degradation of empathy and willingness to keep endlessly helping drug abusers. When day after day, you are constantly verbally abused and threatened, sometimes physically as well, it is very hard to maintain any kind of positive outlook and caring bedside demeanor. It wears on us to be mistreated by our patients and to even fear for our own safety when caring for them.

The truth is that most of these patients we're taking care of are going to die of an overdose or a complication of their drug abuse. Right now, things look bleak and a solution seems unreachable.

All I can do is to keep trying to fulfill my duty to "do no harm" and treat each patient to the best of my abilities. But I'm not going to pretend that doesn't get harder and harder every day. **TH**

Treating addiction in the hospital, not just withdrawal

An inpatient addiction team greatly expands treatment options

Like many hospitals around the country, Oregon Health & Science University (OHSU) in Portland admits a lot of patients with substance use disorders. Lengths of stay can soar in these patients, and many bounce back weeks or months later in similar or worse shape.

That's why in 2014, the 522-bed academic center sought a better way to care for these patients. The goal was to identify care gaps and to treat patients' addiction in the hospital, not just manage their withdrawal.

The resulting program—the Improving Addiction Care Team (IMPACT)—marries inpatient addiction consultation with rapid access to post-discharge treatment. In developing the outpatient component, OHSU has developed relationships with local treatment organizations and rural programs to find resources for patients who live outside Portland.

According to a report about IMPACT in the May issue of the *Journal of Hospital Medicine*, the program's goal is to take advantage of “reachable moments” in a hospitalization to initiate treatment and referral.

Systems and expertise

A needs assessment done prior to implementing IMPACT found that a majority of inpatients with substance use disorders were interested in either quitting or cutting back, and that many wanted to start medications for addiction in the hospital. Patients also reported inadequate withdrawal treatment, a lack of trust in health care providers and long wait times to enter post-discharge programs.

“Before IMPACT, we were failing people hospitalized with medical complications of addiction,” says Honora Englander, MD, the hospitalist and addiction medicine physician who designed the initiative and led its implementation. “We didn't have the expertise or the systems in place to address their underlying substance use disorder.” In addition to not connecting patients to treatment, “we also weren't initiating medication for addiction in the hospital because we didn't have the right expertise or

the care pathways to support continuing care.”

With IMPACT, inpatients who self-report substance use are approached by a social worker or peer mentor to gauge their interest in treatment. (The hospital-based peers, who are an important part of IMPACT, are also in recovery.) The addiction medicine physician consults and advises on withdrawal and pain management and helps initiate medications like methadone or suboxone, if appropriate. Before IMPACT, OHSU did not have an addiction medicine service.

Original program staffing was fairly slim: a 0.5 FTE physician, one FTE social worker and a 1.4 FTE peer mentor. Currently, the program includes 1.5 FTE physicians (divided among five doctors), two FTE social workers, one FTE nurse practitioner and two FTE peers.

The peers work weekdays and are available by phone on evenings and weekends. In addition, the program employs what it calls an “in-reach liaison” (0.5 FTE), a staff person from an OHSU community site who performs in-hospital assessment to triage patients and coordinate outpatient care.

Community partnerships, Dr. Englander points out, have been critical to reducing long wait times post-discharge. And peers support patients throughout their hospital stay and after they leave.

“Patients interact with peers in a way that's totally different from how they would with physicians,” she explains. “Peers understand what it feels like to go through withdrawal, be in jail or live in the streets.” Further, “they help build trust and understanding, which is critical to having patients engage with our team.”

Collaborative design

IMPACT grew in part out of Dr. Englander's earlier work developing and leading OHSU's Care Transitions Innovation (C-TraIn) program. That initiative focuses on hospital-to-home transitions for low-income adults, particularly uninsured patients and those on Medicaid—many of whom have substance use disorders. When Dr.

“We were **failing people**
hospitalized with medical
complications of **addiction.**”

—Honora Englander, MD, Oregon Health & Science University



Englander and her colleagues began developing outpatient resources for IMPACT, their C-Train experience was invaluable.

The task force that helped launch IMPACT included hospitalists, infectious disease and addiction medicine physicians, nursing and social work leadership, and health services researchers. Regional stakeholders included payers, charitable organizations and substance use disorder treatment centers, as well as primary care and community health centers.

Dr. Englander and her team also made the business case to hospital administrators and payers. Data from 165 participants in the original needs assessment revealed 137 readmissions over 4.5 months, with a mean cost per readmission of \$31,157. Charges ran as high as \$68,774 for patients with endocarditis or osteomyelitis.

“We estimated that IMPACT could reduce six-month readmissions by 10%, potentially avoiding \$674,863 in charges,” says Dr. Englander. She and her colleagues used a conservative LOS reduction of 10%—which equaled 205 bed days—for budgeting purposes. The financial model also assumed that 15% of OHSU’s inpatients have substance use disorders, a figure based on administrative data that is likely low.

Another factor that bolstered the rationale for IMPACT was the state’s Medicaid system. In 2012, Oregon transformed Medicaid by establishing regional coordinated care organizations to slow spending and improve outcomes. Under that model, hospitals take on some financial risk while working to strengthen outpatient support for Medicaid patients.

Dr. Englander points out that programs like IMPACT are increasingly important. The opioid epidemic has hit her state hard, with opioid-related hospitalizations there increasing 88.9% between 2009 and 2014. Many patients also aren’t able or ready to access treatment through primary care or the community.

So how has IMPACT performed? In 2016, the program saved more than 400 hospital days. When 2016

Medicaid data become available, OHSU expects to see reduced readmission rates.

Funding, logistical challenges

To date, OHSU has assumed the majority of IMPACT’s costs, most of which go to salaries. The state’s Medicaid program has contributed some funding, and OHSU is working with two local coordinated care organizations to define a case rate for IMPACT patients. In hindsight, Dr. Englander says, it might have helped to involve payers earlier in the process.

“There really aren’t payment models that support this,” she says, despite the program’s promising return on investment. “We’ve had to work very hard to ensure sustained financial support.”

The program did terminate one early component: medically-enhanced residential treatment for patients with a substance use disorder who needed prolonged IV antibiotics. That model tested integrating home-infusion and infectious diseases care to address conditions like endocarditis in residential treatment.

And while Dr. Englander “strongly encourages” hospital systems to consider integrating peers into inpatient addiction teams, peers might not pass traditional hospital-employment background checks.

The peers working with OHSU are employed by an outside agency. According to Dr. Englander, hospitalists and health systems interested in developing similar programs should engage human resources, public safety and legal departments early on to pave the way and avoid problems.

She also notes that the center’s hospitalists and nurses give IMPACT top marks. “By building systems of care and having the right expertise onsite, patients are getting better care,” she notes. “Our providers report a tremendous amount of relief.” **TH**

Bonnie Darves is a freelance health care writer based in Seattle.

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"OPIATES ARE GREAT!"

"Oxycodone is a miracle drug. It cures everything and has no side effects."



WHAT?!



"Doctors under-treating pain: Do they even care about their patients?"



PROGRESS NOTES

Leo Motter M.D. & Dan Langsdale B.A.

"We know so much more about these medications than the doctors do!"



Patients should be able to sue their doctors if they overdose on pain meds!



"Doctors caused the opiate abuse crisis. Is jail too good for them?"



We've been fighting the opiate crisis for years.



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"OPIATES ARE TERRIBLE!"



"Marijuana is a miracle drug. It cures everything and has no side effects."