How many opioid pain pills do surgery patients need? New prescribing guide available
16 October 2017

Opioid Prescribing Recommendations for Opioid-naïve Patients

How many prescription pain pills should a patient receive after breast cancer surgery? Or a hernia repair? Or a gallbladder removal?

With the country facing an epidemic of opioid pain medication abuse, the answer should be simple: Just enough to ease patients' immediate post-surgery pain.

But surgical teams have lacked an evidence-based guide, or even rules of thumb, to help them prescribe powerful opioid pain medications wisely.

Until now.

A new tool developed at the University of Michigan is now available online for free use by any team that performs 11 common operations. It's based on data and surveys from surgery patients across the state of Michigan, and on research by U-M researchers who study pain control and surgical quality.

The new Opioid Prescribing Recommendations for Surgery are just a start. The team behind them hopes to add more types of operations and medications to the list, and to refine the recommendations based on additional research into what patients actually use, and how providers can counsel them about safe opioid pain medication use.

The recommendations were created by the Michigan Opioid Prescribing and Engagement Network, in collaboration with the Michigan Surgical Quality Collaborative, both based at the U-M Institute for Healthcare Policy and Innovation.

"It's embarrassing to admit this, but we've never had any evidence to inform how much opioid we prescribe to surgical patients. These recommendations provide a crucial first step for improving the safety of opioid prescribing," says Jay Lee, M.D., a general surgery resident at Michigan Medicine, U-M's academic medical center, who helped create the recommendations.

Grounded in evidence
Michigan-OPEN researchers have previously shown that when patients are prescribed fewer pills, they consume fewer pills with no changes in pain or satisfaction scores.

So, they focused their first prescribing recommendations on a range of common operations, from hysterectomy and colon surgery to appendectomy and breast biopsy. They give recommended numbers of pills to prescribe to patients who have never taken opioid painkillers before their operation.

Six percent of these "opioid naïve" patients were still taking opioid pain medications three to six months after their operations - long after their surgery pain should have eased, according to U-M research published earlier this year. That suggests problematic use that could lead to addiction to the medications or even to use of illicit drugs such as heroin.

The new guide aims to prevent this kind of new chronic opioid use by giving detailed amounts of hydrocodone, oxycodone, tramadol and codeine/acetaminophen in an easy-to-print chart.

The amounts aren't arbitrary. They represent the actual maximum opioid use reported by three-quarters of actual surgery patients. Most patients actually took far less, from 0 to 5 pills, even when they were prescribed more by their surgeon or other provider.

Resources for providers and patients

Many of those patients had their operations at the 72 hospitals taking part in MSQC, which gathers and analyzes surgery-related data to help surgical teams find ways to improve and learn from others. Funded by Blue Cross Blue Shield of Michigan, and based at U-M, it provided a rich source of information about what patients were prescribed, what they used, and how they fared after surgery.

The new recommendations have already met with positive response among the surgical teams taking part in MSQC, who first received them earlier this month.

"They're all very much aware of the crisis caused by overprescribing opioids, and have embraced these recommendations as an effective tool to begin addressing this problem," says Lee. "These recommendations have tremendous potential for driving continued improvement. As counseling and pain management strategies improve, patients will use less opioid medication."

The Michigan-OPEN team has also created a brochure about post-surgery opioid medication use that surgical teams can give to patients.

The website where the recommendations are posted also includes talking points about pain expectations and medication use to guide care team members.

"Reducing the number of pills we prescribe protects our patients as well as our community from the harms of opioid dependence, addiction, and overdose. We know it'll take involvement of the community to help fix this problem," says Joceline Vu, M.D., a surgical resident who worked on the recommendations with Lee and Michael Englesbe, M.D., a co-director of the Michigan-OPEN effort and surgery professor at U-M.

"Patients trust us when we prescribe opioids to treat pain after surgery," Vu continues. "It's our responsibility to teach them about the potential harms and how to dispose of opioids safely."

Taking back the leftovers

Even if surgical teams adopt the new prescribing recommendations, patients will likely have pills left over. That's why the Michigan-OPEN team has also developed a map that can help Michiganders locate a prescription drug drop-off location near them.

They've also created materials to help healthcare facilities hold prescription drug takeback events together with local law enforcement agencies. One such event, held in late September at eight sites around Michigan, collected 17,500 opioid pills - and tens of thousands of other medications that could be abused.