

Opioid Stewardship Series, Season 1, Episode 3: Developing an Opioid Dashboard

Speaker 1 (00:02):

I am going to present to you Dr. Scott Weiner. He's an associate professor of emergency medicine at Harvard Medical School and the director of the Division of Health Policy and Public Health in the Department of Emergency Medicine at Brigham and Women's Hospital in Boston.

Speaker 2 (00:18):

Before we talk about a dashboard, I think it is important to talk about guidelines because the dashboard is going to be measuring what you're stating you're going to do in your guidelines. For our system, we created a dashboard, or we, we created guidelines for, uh, acute pain and for chronic pain. And our starting point was basically guidelines that already existed. Things were specialty-specific or we already had in the hospital. And then we also had state law, which we all have to face. And in Massachusetts, we were pretty early from having some pretty strict opioid laws, uh, policies, such as we couldn't prescribe more than seven days of opioids to a patient for acute pain if they were opioid-naïve. It was important to do this because it really did set the expectations for both our prescribers and for our patients, for the prescribers that basically said, we're not targeting you, just that this is, these are best practices that we want to implement.

Speaker 2 (01:10):

And so, this is how we treat everybody. So, if you're an outlier provider, then we'll probably reach out to you and share best practice with you, with practices, with you. It's not anything personal. And the same thing goes for patients too, because patients don't want to feel like they're being targeted or biased, which is absolutely correct. And so if we tell people, you know, if you're on chronic opioids our best practices [is] to check a toxicology screen at random once a year, and we do that for everybody. That's in our guidelines. Um, patients are, won't feel like they're being specifically targeted, uh, which is, we give them appropriate[ly]. It's also protective for the hospital too. And I'm, I'm hearing of more and more cases of hospitals and health systems that are actually being sued for patients that developed opioid use disorder after prescriptions. So, having these guidelines and systems in place are really important to protect you and your system.

Speaker 2 (01:57):

So, I think this is really the key here, which is these three pieces of the puzzle really fit together nicely. So, the guidelines are the best practices that you're going to want to implement. The clinical decision support are the tools that you'll implement into your electronic health record. The little nudges that you might give to providers to say, you're going above an 90 morphine milligram equivalents per day. Are you sure you want to do that? You don't have a pain treatment agreement on file with this patient? Are you sure you, you don't, you want to do, you know, do you want to do that? And then the metrics or the dashboards, which we're going to talk about next, are, will then determine how you're doing with all that. And like all quality improvement initiatives, it doesn't end there. This is iterative. So basically, you would keep going, modify your guidelines, modify your clinical decision support, get to the metrics, and see how you're doing.

Speaker 2 (02:44):

But you can't do any of this without all of these three pieces. So, I think that they're really important. So, now I want to talk about development of metrics and dashboards. And so, the first thing I have is, is just some questions for you. And these questions are one ones that I hope you can answer for yourself, for your hospital. For opioid prescribing, how many opioid prescriptions have you are written in your system every year? Do you, do you know the answer to that question? Which clinic or provider prescribes the most opioids? How many of your prescriptions are for more, more than the 90 morphine milligram equivalent per day threshold that's from the CDC? How many of your patients on chronic opioid therapy have had a toxicology screen in the past year? Which percentage of your patients discharged from your ED are given opioids? And how many pills are prescribed on average from your doctors?

Speaker 2 (03:34):

What's the number of pills or long-acting opioids that your patients get after common surgical procedures? And then, the opioid use disorder side. Which percentage of your patients with opioid use disorder are given medications for opioid use disorder like buprenorphine or naltrexone? And which percentage of patients who experience an overdose are prescribed naloxone? There's a lot of questions, but I think that these are, for opioid stewardship, these are really key questions, and you should be able to answer them. And I think that this is where a dashboard is really important. So, you can look at these, these questions and then you can adapt if you're not meeting your targets. And so, for us, you know, I know a lot of your are, um, have limited resources. For us, the most important tool that we developed was simply a data dump. All this was, was just, it's just a list of the prescriptions for opioids, which are generated at our system.

Speaker 2 (04:23):

And this has been so valuable for us because we basically put things like patient age, gender, language, race, ethnicity, and then the characteristic of the in, of the prescription, and then a primary diagnosis code, just so we have an indication, more or less of what it's being prescribed for. And with that, we can do an analysis, like we can show the numbers of prescriptions we have across our system. I can divvy that up, uh, based on, on the clinic site by provider, by patient age, again, race, ethnicity, gender. Um, we can do things, a lot of things just with a simple Excel dump. Uh, and just some really basic statistical software, uh, skills. Usually, a college intern will have the chops to be able to do that. You can even do some more advanced things with data. Like this was an initiative we did to reduce high-dose opiate prescriptions.

Speaker 2 (05:11):

So, the blue ones are for prescriptions less than 90 MME and the red are for, uh, red columns or for prescriptions more than 90 MME. And using that report that I showed you before, we could actually track and see how we were doing with our high-dose prescriptions. So, if at a very minimum, all you can do is a data dump of your prescriptions, that will still be helpful for you. If you're developing metrics and reports though, and you want to develop a dashboard, the first step is to determine what you want to answer. And this gets back to the questions that I, I asked you before. For us, we decided to divide things up into five domains. We looked at outpatient prescribing, uh, post-surgical prescribing, ED prescribing, and then some domains around chronic opioid use, and opioid use disorder. We basically met as a group and we decided what are all the questions we want to answer.

Speaker 2 (05:57):

So, we prioritized and we said, okay, well what are the ones that are most important for us? And we, we put those in red. And so, that was the basis of how we decided, we decided to build our dashboard. We didn't want too much information and we didn't want too little information. We wanted the things that would be high impact and

actionable. Um, and so this is what we, we did with this process and that report from the Institute for Healthcare Improvement, it also has a host of process metrics and outcome metrics that you can use for your own dashboard. So, you do not have to start from scratch on this. So, I'm going to show you a couple of examples of our dashboard. And then, I know you're going to hear some more from another system as well too. Um, this is for our ambulatory report.

Speaker 2 (06:35):

Um, we basically look at all the patients prescribed opioids, which, which percentage get opioids. And it was pretty interesting to see because you can see already that there's one there that's a, it's a longer bar, which is 14.5% of the patients in that clinic were getting opioids. Well, it turns out that that's our pain clinic. And we did know that there was a higher percentage of patients getting opioids, but the one below it that's, that's an outlier is that 11.6% that turned out to be a single primary care practice that's affiliated with our hospital. We had no idea that they were prescribing so many opioids to the patients until we had a dashboard. Now we've instituted a whole comprehensive program working with them, with a pharmacist, with a pain psychologist, working to make sure that they're, they're prescribing safely. So, just having that data was really important.

Speaker 2 (07:20):

And on this one, we actually had to standardize the opiate prescribing per 1000 office visits. Because in our system, we have a lot of academic doctors that are doing research. They're not working part, they're not working full-time, they're often working part-time. So, having a measure of standardization is much more important than just listing total numbers of prescriptions. Because if you don't have the denominator visits, you might miss some outlier prescribers. And then, this is a report we built around pres[cribing] for from common surgical procedures. You can see them on the left. We have, you know, hip, uh, hip surgery, lumbar fusion dichotomy. Also, uh, delivery c-section, also some colorectal surgery as well too. And this was really helpful for us because we could look at the, the differences in, in prescriptions that are given for patients that are getting the same procedure. And the graph basically shows the difference between all the hospitals that are in my system.

Speaker 2 (08:10):

And you can see that one of the hospitals after hip surgery is giving an average of 63 pills to some patients. And another system is another hospital in the system is giving 36 pills. So, why is it that one, one hospital is giving almost twice as many pills for the same procedure? This allowed us to answer that question and we can now address it, and we're working with those teams to see how we can write sites of prescriptions postoperative. And then finally, I'll just show you a quick dashboard we developed. It's basically built off of a registry. If a patient meets criteria to have chronic opioid use, the primary care physician provider can query a dashboard. And it shows things like if they have an opioid treatment agreement on file, they've had a toxicology screen in the past 12 months, which is the green checks.

Speaker 2 (08:53):

We look at the data, their last prescription drug monitoring program check, their current morphine milligram equivalence per day. And this information they can just pull up at, uh, on demand and they can determine if any of their patients are not meeting best practices and then address it. It's been very helpful. And I did want to spend just a minute or two just talking about the concept of unattended consequences. Once you get the answer to these questions, the next step is what are you going to do with the answers? And it can be difficult sometimes because there might be a reason why someone is an outlier. It might be that one of the surgeons that's performing a lumbar surgery prescribes many more opioids than another, another surgeon, because that particular surgeon deals with patients with, with malignant oncology pain, which is can be a lot, uh, more painful or could be, uh, lasting longer.

Speaker 2 (09:42):

There might be reasons why this occurs. And the worst-case scenario would be if you approach an outlier prescriber who is writing a lot of opioids and they abruptly cut off their patients because they feel like they're being watched. We don't want that. We know that involuntary tapers of, of patients who are on high-dose opioids are, are bad. Um, we know that they, um, they lead to increase overdose and, um, and other, uh, there was an criteria that came out should they increased crises of, of behavior health issues as well too. So, um, just be careful when you get the information and, and use it in a, in a conscientious way as well. That's very, that's patient-focused, uh, too. And then I'll just leave you with a couple quotes. The first one is, if you can't measure it, you can't manage it.

Speaker 2 (10:24):

This is a classic quote of quality improvement. And this is true: if until you have this information, you really are flying blind. Um, but to that point, the second quote is, if you don't collect any metrics, you're flying blind. But if you collect and focus on too many, they may be obstructing your field of view. So again, get to the, to the questions you want to answer, but I would cut out the ones that are not essential. And then the final one is keep in mind, measurement is not just numbers, but stories. And again, this will just show you dashboards, which will show you results. But there are patients and there are providers that are behind all of these numbers. And so it's important not to forget that.

Speaker 3 (11:01):

I am, uh, happy to introduce Tara Argo. Um, Tara is the chief pharmacist at Hopi Healthcare Center, um, and which is a critical access hospital in rural Northeast Arizona.

Speaker 4 (11:13):

Thank you, Jeff. It's really good to hear that somewhere like Brigham and Women's uses a data dump in Excel, uh, which is exactly what we use. And so I just want to reiterate, um, as Dr. Weiner did that it doesn't have to be complicated. Uh, what's most important is that it's useful to you. And so, whether you being just your system, uh, your entire organization, um, or whoever the user is, um, but it is important that it's collaborative as well because, uh, we as pharmacists had things that we wanted to look at and it wasn't necessarily what our providers were interested in. And so, in working together, uh, and, and actually using a group of individuals from across a broad spectrum of Indian Health Service, uh, units, whether they were small, uh, eight to five clinics, uh, right on up to our medical centers like, uh, Phoenix Indian Medical.

Speaker 4 (12:06):

And so, uh, we use a data dump and, uh, use pharmacy reports and use this fancy Excel that, uh, one of the, it's Captain Nick Sparrow, now. Um, but he, he built this back in 2015 and we've been using it since then and kind of refining and, and expanding on information. So, this information that we're reported to or we're required to report on a monthly basis, and it goes all the way up to headquarters. And for me, one of the things that I, I tend to look very closely at, it's kind of the percentage of, of opioids per overall prescriptions. And so, we like to keep that right in below 0.4. So when things start trending upward in general, uh, that's something that I do a little bit of a deeper dive into. And the next slide will show some of the information. Um, so this is once you run the report in that controlled substance management report, this is the information that populates.

Speaker 4 (13:12):

And so a lot of the things that we look at are across the bottom. So that CSM import is the, the larger data dump that has all of the very specific information that you can go back and look at. Uh, we also look at the daily MMEs

by division. So, some of our sites have multiple divisions. Uh, we're a single-division site, so that's, um, very simple for us. But we can also look at the daily MMEs by prescriber versus the total daily MMEs. Some of the things that we were looking at were total daily MMEs greater than 50, and we had 48 patients there. Uh, the fill date is outlined in black, so you can see when people are filling them, uh, and, and see if they're filling them more frequently than they should be. We also have our total daily morphine milli-equivalence greater than 90, which will put the patient, um, it'll red box it.

Speaker 4 (14:10):

We've got a patient who's getting 270, uh, total daily MMEs and so their information is, um, outlined in red. And then you can also see the patients who are receiving a concomitant benzo so that we can go through and evaluate, evaluate those patients and see why it is that they're getting those benzos. Um, on the third patient here, you can see that they had several, different opioids prescribed to them. Uh, all of those that are omnicele were coming out of the emergency department, so they were getting fentanyl, they were getting hydrocodone, um, and then oxy also. And so, it kind of gives us a big picture of this patient's opioid use over the course of the year. And I did go back and look 'cause it's been a while and this was not, um, a cancer patient. This was, I believe it was actually non-descript back pain.

Speaker 4 (15:13):

One of the things that we've been able to look at also, um, is with our prescribers. And, um, as Dr. Weiner said, you don't want anybody to feel like they're being targeted, whether it's the prescriber or the patient. And this was a tool that we used, um, a lot back in 2016, 2017, to look at our, uh, our chronic pain patients and those who were on contract and make recommendations towards tapering. Uh, and, and just best practices numbers have come down significantly since then, uh, pretty much across the board. And it's because of using the dashboard and going back and really doing a deep dive into individual prescribers, individual patients. And then, when you see something strange, addressing it. It's not uncommon to see somebody, uh, prescribing a large MME in your palliative care, but when your dentist is the outlier, um, it's something that it can easily be addressed and in a timely manner with the use of the dashboard.

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