Welcome, and thank you for listening to this recording, part of the Comprehensive Opioid Abuse Program (or COAP) podcast series. COAP provides financial and technical assistance to states and units of local and Indian tribal governments to plan, develop, and implement comprehensive efforts to identify, respond to, treat, and support those impacted by the opioid epidemic. Since 2017, BJA has supported innovative work on these COAP sites across the nation.

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Hello, you're listening to the comprehensive opioid abuse program podcast series on Prescription Drug Monitoring Programs. I'm your host, Meelee Kim. The topic of today's podcast is about the evolution of Prescription Drug Monitoring Programs, or what we'll keep referring to as PDMP, since their inception and get some thoughts from some of the leaders in the field about the current innovations being implemented by these programs. First, let's talk about why we're even talking about Prescription Drug Monitoring Programs. Why have they gained so much interest among policy makers, health care providers, patients, and other stakeholders? I had a chance to speak with Congressman Harold Rogers. He's the representative of Kentucky's 5th congressional district, which is quite fitting because the grant program, administered by the Bureau of justice assistance, is actually called the Harold Rogers Prescription Drug Monitoring Program. So I asked him why he's been such a champion for these programs to be expanded and enhanced for the past 15 years or so that the grant program has been in place. Here's what he said.

Well, because PDMPs have become one of the major successful efforts at trying to stem the opioid crisis. I first became acquainted with PDMPs when the OxyContin invasion hit my district, around
'01, '02. Kentucky had already started a PDMP called KASPER and I was really thrilled with the possibilities that I pleaded with Frank Wolf, who then was the chairman of the Commerce Justice State Subcommittee on Appropriations, which I had chaired before him. But I've brought this problem to Frank Wolf and requested that he include funding in a national grant program, based on my experience with KASPER back in Kentucky. Fortunately and happily, Frank Wolf agreed, and thus we started the PDMP grant program out of the Bureau of Justice and the Justice Department to allow states to, in effect, put in place a KASPER and their state. And fortunately and happily, it has succeeded. All but one state now has a PDMP program, Missouri is on the verge of having theirs to give us all 50.

Well, the problem is so pervasive, opioid abuse of course. When it started in my district, in '02 or '03, I was completely taken aback, as everyone else was. This thing sneaked up on us. But it turns out that Purdue Pharma, that makes OxyContin, had their salesman out there telling physicians about this new drug and this wonderful opportunity that that drug afforded terminally ill cancer patients, for example. This delayed pill that took over my district, and it grew to such a painful level. I remember going to, in '011, going into Harlan County, a mountain county, very rural, adjacent to Virginia and West Virginia and Tennessee, where they had been especially hard hit. And I went to a meeting of the local Boys & Girls Clubs, and, to my great sorrow, learned that, within a six-week period, 13 students had lost a parent to a drug overdose. And what's even more heartbreaking, 11 of those 13 students watched their parents die.

And so the factor—I had to develop a protocol for children while funeral arrangements were being made for their parent or parents. And it seemed like every meeting in every county leads to another story of loss, or heartbreak, hopelessness, and terrible waste. There are literally thousands of cases that I could site, but all of them are different, but with the same tragic result. So this is a horrendous disease, if you will. But we're making progress—but controlling the disbursement of the drugs illegally, or even legally, is a major part of the solution to the problem. And PDMPs are crucial to that exercise. They've been very successful. It allows law enforcement officials to spot heavy traffic at a particular doctor's office or pharmacy, and it allows them to take that information to the state medical licensing board at each state, to perhaps take away the
license of a doctor who is using the opioid prescription process. And that has worked.

Meelee: Again, that was Congressman Hal Rogers, from Kentucky's 5th congressional district. Just to clarify about Missouri, when I had talked to the congressman, it was certainly true and, it remains true that Missouri, as a state, doesn't have a PDMP. However, the current status is that the St. Louis County's department of public health is practically running a statewide PDMP, in the sense that the program covers about 85 percent of the state’s population. That wasn’t the case when I had spoken with Hal Rogers, but now that that's cleared up, let's talk about what these Prescription Drug Monitoring Programs are. Where did they come from? And talk a little bit about what they do now.

So I spoke with our past PDMP Training And Technical Assistance Center Director, Jim Giglio, for a brief history lesson. He spent about 30 years in service to the New York State Bureau of Narcotics Enforcement, that houses their state PDMP. So it's safe to say that he's one of the top experts when it comes to PDMPs. Why don't we start off by talking about what they are, first of all? Since you have been the director of one of the oldest programs in the country, so can you kick us off by telling us what do they do? What are they?

Jim Giglio: Prescription Drug Monitoring Programs, PDMPs, or some people refer to them as PMPs, are basically programs run by the state and designed to facilitate the collection, analysis, and the reporting of information on the prescribing, dispensing, and the use of prescription drugs within a state. Now, many people think that PDMPs are a new phenomenon, but in fact they're probably a century old. What I will refer to as the first PDMP was started in New York State around 1918. Back then, drugs like cocaine and heroin were actually allowed to be prescribed by federal and state laws. So, in the early 1900s, New York State was very concerned over growing drug problem they were experiencing. And to address this concern, they passed sweeping legislation. Now, one part of the new drug laws was a requirement that special prescription forms would be issued by the state to doctors. It required that when a doctor wrote a prescription for cocaine or heroin, and certain other drugs, above a certain dosage, the prescription had to be written on a state-issued form.
The patient would then take the form to the pharmacy. And when the pharmacy dispensed the drug, the pharmacy was required to send a copy of the prescription to the state within 24 hours of dispensing the drug. Now that program was only in effect for about two or three years and then eliminated. However, to me, that set the stage, or if you will, drew up a blueprint for what other states would do, and what we now know today as PDMPs. In 1939, California established a PDMP program, and today it is the oldest continuous PDMP program in the country. After California, Hawaii became the second state, and I believe it was about 1943—and followed in the ‘60s by Illinois and Idaho. In the 1970s, Pennsylvania, New York, and Rhode Island implemented their program. So, as you can see, there were a small number of states that had PDMPs in the ’80s, and by the beginning of the 21st century, the number of PDMPs had grown to about 17 states.

Now, the early PDMPs were used primarily as a law enforcement tool—that is, to detect potential diversion of controlled substances. It was also used as a tool for regulatory and licensing boards to monitor and ensure standards of practice. The early PDMPs all had the same sort of general characteristics. So let’s talk about that. They were all a tool for enforcement of drug laws. They collected prescription information for only Schedule II Controlled Substances; required multicopy, duplicate triplicate state-issued prescription forms to prescribe and dispense the Schedule II drugs; and required sending the prescription information to the state within 30 days from the time the drug was dispensed.

Meelee:

Let’s pause here for a second. For folks who aren’t familiar with scheduled drugs and controlled substances, there’re drugs that are classified by the U.S. Food and Drug Administration, or the FDA, and the Drug Enforcement Administration, or the DEA, and they’re classified based on two factors, which are their appropriate medical use, and also for their potential for abuse or dependency. So the ones that are classified as Schedule II Controlled Substances are considered to have the most abuse potential. So these are the opioid prescription drugs. So those are in the category, such as hydrocodone, oxycodone, fentanyl, and methadone. But also on the same Schedule II category are certain stimulant drugs, like Adderall and Ritalin, that are generally used for ADHD, or attention deficit hyperactivity disorder. The higher the number in the schedule, the lower abuse potential. Now, all the state PDMPs collect information on drugs in Schedules II, III, and IV. And about 75 percent of all the
PDMPs collect Schedules II through V. So let's just head back to the history lesson.

**Jim:**

So, as I said, early PDMPs all used state-issued prescription forms. Now some states employed duplicate forms, while other states utilized triplicate forms. The forms were issued by the state to anyone authorized by law to prescribe controlled substances—physicians, veterinarians, dentists, and others. The forms the state would issue were all serialized, and the state would record what numbers were issued to what doctor. To illustrate how the prescription program would work, let's use, as an example, the triplicate prescription form. A doctor would use the triplicate prescription to write a Schedule II medication. The doctor would keep one copy and send the other two copies with the patient to the pharmacy. The pharmacist would dispense the medication, keep one of the two copies, and send the third copy to the state. The state would then data enter the information into a database. As you can imagine, data entering that information was a very labor-intensive process.

Then, in 1990, Oklahoma took advantage of existing technology and became the first state to go electronic. And by that, I mean they required pharmacies to electronically transmit the prescription data back to the state, where it was automatically stored in a database. This obviously eliminated the burden, some manual process of data entry, and proved to be an efficient and effective process—so much so that more and more states implemented PDMPs using the same kinds of technology. Also, those states that had required the official forms gradually, over the years, eliminated the forms, and today all states require electronic transmission of the data.

Another cornerstone of PDMPs was a piece of legislation enacted in the 1990s by the state of Nevada. Nevada was the first state to require all controlled substances to be reported to the PDMPs. Now, that meant that it included Schedule II, III, IV, and V Controlled Substances. Now, remember, until then, PDMPs were collecting only Schedule II Controlled Substance information. More importantly, Nevada was the first state to provide doctors with PDMP patient histories. From that point on, PDMPs would focus more of their resources and design their programs around patient care. Today, all PDMPs allow access by doctors, and some states also allow pharmacists to make queries as well.
Over the history of PDMPs, one can see that newer PDMPs, building on the experience and knowledge of earlier counterparts, were implemented much faster. They employed best practices, and they themselves broke new grounds, and bring in PDMPs to their full potential. And PDMPs today continue to evolve into one of the most efficient and effective tools in reducing prescription drug abuse and diversion. Today, 53 programs are in operation. This includes all 50 states, the District of Columbia, Guam, and Puerto Rico. And ironically, as in the very early PDMPs, all 53 programs are generally similar in their operations and functions.

Meelee:
Yes. And just to reiterate that point, there was a time when PDMPs varied greatly. The types of scheduled drugs they were collecting, how frequently they were collecting that information, whether or not they were being proactive with the information they had for public health, and so on. But just within the past several years, I think it hasn't caught on yet, but there are more commonalities across these state PDMPs than people realize. So now we see that most states collect all the schedules, from II through V. Most of these programs collect that information within a 24-hour frame, whereas in the past there was this huge variation between one month to real time. Most use that information to send some type of information proactively to physicians and other health care providers.

So next we'll hear what PDMP administrators have to say about what they think are some of the common, and even effective, characteristics PDMPs have implemented. Now, these are the folks who work behind the scenes to innovate and improve the usefulness of these programs, whether it's for public safety, public health, or as a clinical decision-making tool. We'll hear first from Meghna Patel. She's from the Pennsylvania Department of Health. She currently is in the role as Deputy Secretary for Health Innovation, but just prior to this position, she was the director of their PDMP, meaning that she's been quite instrumental in getting the Pennsylvania program to the state-of-the-art status that it is today.

Meghna Patel:
So there are multiple initiatives that are effective in the world of PDMP. It could be in the Prescription Drug Monitoring Program system itself, which we've seen many sort of alerts that PDMPs can generate when there's a patient who's identified at a higher risk, when they have opioids or benzodiazepines as an overlap
medication. And those combinations are pretty dangerous if they're not appropriately prescribed. If the patients have been going to multiple prescribers, and multiple dispensers, that sort of also shows an alert, and I think those kinds of alerts help the users of the PDMP, the physicians and the pharmacists, to identify whether there's any sort of multiple provider episodes going on—in other words, doctor shopping occurring by the patient.

And you just have to make sure that your patients, or the users of the PDMP, can just see whether the patients have been prescribed higher dosages of morphine milligram equivalent drugs as per CDC prescribing guidelines. And in Pennsylvania, we have the opioid prescribing guidelines, at least ten of these guidelines in different specialties, and they each talk about a certain limit of MME that needs to be prescribed to the patients. And if there's any higher threshold that goes beyond that, it kind of generates alerts. I think those are the clinical decision support tools that PDMPs can help with.

Meelee:

Next up is Dave Hopkins, who, until very recently, managed Kentucky's PDMP program called KASPER. Interestingly, he offered this prediction about a year ago: that states were going to start providing proactive reports in the form of what some people call prescriber report cards, or prescriber feedback reports. And, to his credit, his prediction is coming to fruition because now more than half of all of the PMPs in this country offer them.

Dave Hopkins:

Another really good example of this—and more and more states are taking this one on—is, for lack of a better term, what I'm going to call the prescriber report card, where prescribers can use the PDMP to actually get periodic reports on how they're doing, what their controlled substance prescribing patterns are, how they may compare with other prescribers statewide within their specialty area, and so on. This is something that I think more and more states are taking an interest in, and we've just implemented in Kentucky a very comprehensive prescriber report card that has been very well received. And we've borrowed from several other states when we developed that. We borrowed from Arizona and Wisconsin, used some of the great work that they've done to build on and develop ours. I think more and more states are going to implement some type of a prescriber report card capability.
Another common factor, or rather a common concern, across PDMPs is the issue of data quality. Now, as more users depend on information from Prescription Drug Monitoring Programs, the more important that it is that the data are reliable, valid, and complete. Now, if you talk with any PDMP administrator or manager, they'll say that the data are not perfect, but in general it's pretty good. But it's also a topic that PDMP managers spend quite a bit of their time trying to address. Here's Chris Baumgartner, from the Washington State Department of Health, who not only managed the PDMP in Washington State, but also the main program previously. And here are his thoughts about data quality issues.

I think one thing we need to address is, while our data in general is very clean and very complete, as we've had the opportunity to expand use of the data there has been—at least in our state, and I'm sure in others—areas where we've seen that the data can be improved. And so I think one area is really working more collaboratively with the pharmacy community and other dispensers, if your state collects for more than pharmacies, to really up things—for example, missing or invalid DEA numbers, or NDC codes that make it hard to utilize the data completely. We've also had just other challenges with properly capturing things like refills and dealing with duplicates. Being able to identify prescriptions from the same patient, I think, is a huge challenge that a lot of PMPs struggle with because we don't collect a unique identifier on the patient.

On that same train of thought, here's Michelle Ricco-Jonas from the New Hampshire PDMP on what they're planning to do to address data quality issues.

I think one of the bigger things is around data quality. It's something that we're really looking at, and a lot of things that I think that we get a lot of questions about, like how good is the data? And so we've positioned ourselves on a lot of committees to have those conversations with our partnering states, to look at the requirements that the systems have—like 4.2 and then now 4.2A, and what the definitions for those fields are, whether they should be situational, whether they should be required—looking at the language from state to state in how we're adopting those, because not only does it affect our state and how we're putting data in, but also because now we have the capabilities, and many states are
moving towards interoperability, the data has to be as good as we can get it.

Michelle: So we're looking at, specifically in New Hampshire, a policy and procedure for how we're going to begin reviewing that data quality, and the data integrity. There are a few other states that have paved the way. So we're fortunate that we can look to them and see their models and kind of adopt some of them and integrate that into our plans. So that's kind of, I think, one of the biggest things that we need to do. But also, with that said, we have to have a means of better, I think, communication with the vendors that we hire, or the data systems that are created, whether it's a state-run system or a purchase system, to make sure that the capacity for changing or updating the information that's being put in can be done in a timely manner as well. So those are a lot of the conversations that I think we're having.

Meelee: Now, there are many other examples of how PDMPs have been relatively quick to develop and implement new features and strategies to make the PDMP more user friendly and, overall, more effective. PDMPs continue to evolve, and I'll let Michelle give her thoughts about another area that PDMPs are looking to take on.

Michelle: We're getting to a point where we will have the capacity to be more involved in that data-driven informed piece or predictive analytics, where our data can be combined with other data in our state. And so we can be part of helping define where resources can go. And I'm excited about that. And I think that, again, shows the value of the prescription drug monitoring programs beyond just the tool for providers and pharmacies when treating their patients, but it actually can be a useful tool in predicting where problems might exist in our state, so that we can put the needed resources there.

Meelee: And, on that note, I hope listeners are able to walk away thinking that Prescription Drug Monitoring Programs continue to evolve in ways to help prevent and address the current opioid abuse and overdose crisis—and they also try to stay ahead of other prescription drugs that may be emerging issues. To learn more about these programs, please visit our website at www.pdmpassist.org or www.coapresources.org. That completes this episode of our podcast on Prescription Drug Monitoring Programs. Thank you for listening. This podcast was brought to you by Brandeis University, the Prescription Drug Monitoring Program
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